MORE GUARDIANS OF MINE SAFETY

Worker Safety and Health Representatives in the Queensland, Tasmanian and Western Australia Mining Industry



Report prepared for the Mining and Energy Union and Australian Workers' Union. Research and report prepared by Emeritus Professor Michael Quinlan (UNSW, Sydney), Dr Heather Jackson (University of Newcastle), Phillip Brandie and Emeritus Professor David Walters (Cardiff University, UK)

Dedicated to the memory of thousands of coal and metalliferous miners killed in incidents in Queensland, Tasmanian and Western Australian mines, and the many more who suffered serious injuries, death or permanent impairment because of work-related diseases such as silicosis and pneumoconiosis. The lessons of the past should be learned, re-learned and not forgotten so mines are made safer and healthier and no more families and friends must grieve for loved ones



Mount Charlotte mine disaster 1897 (top) and Eastern Goldfields Miners Memorial (bottom)

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North Mount Lyell (west coast Tasmania) 1912 mine disaster memorial (42 killed)



Fingal Valley Coalminers Heritage Wall near St Mary's Tasmania

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Chapter 1 Executive Summary

This report finds that mine-specific worker representation provides stronger protection than general workgroup-based health and safety representative arrangements. Drawing on historical and legislative analysis, previous research, incident data and interviews and focus groups with mine workers and representatives, it supports retaining and strengthening Queensland's site and industry representative systems and extending comparable arrangements to Western Australia and Tasmania. Independent, trained representatives with mine-wide access and enforcement powers are better placed to identify serious hazards, support workers who fear reprisals, and complement the work of government inspectors.

This is the second of two independent reports commissioned by the Mining and Energy Union (MEU) and the Australian Workers' Union (AWU) on legislative mechanisms for mine worker participation in health and safety. The first report examined New South Wales (NSW); this report examines Queensland, Western Australia (WA) and Tasmania.

Together, the reports assess the effectiveness of representative arrangements in coal and metalliferous mining, the consequences of winding back mine-specific provisions, and the features of best-practice legislation.

This report builds on the historical, methodological and comparative foundations established in Report 1. Rather than reproducing the full NSW analysis, it summarises that material where necessary and refers readers to Report 1 for the detailed evidence. NSW findings and data are retained in this report only where they provide a direct benchmark for assessing the Queensland, Western Australian and Tasmanian arrangements.

The report draws on historical and legislative analysis, previous research, injury and fatality data, incident investigations, high-potential incident reports, and interviews and focus groups with 49 participants. The conclusions rest on the combined weight of the evidence.

Origins and purpose of mine-specific representation

Mine worker safety representation began in Australia in the nineteenth century because workers needed trusted, independent representatives who could identify hazards without fear of victimisation. These arrangements developed into site- and industry-level systems supported by specialist mining experience, training and strong powers of inspection, access and enforcement. WA and Tasmania later removed or weakened mine-specific arrangements mainly to simplify and harmonise workplace safety laws—not because those arrangements had been shown to be ineffective. Queensland retained the strongest mine-specific model in both coal and metalliferous mining.

Key findings

The available evidence consistently favours specialist mine safety representation. Previous studies found that site and industry representatives in Queensland and NSW coal mining use their powers responsibly, focus on serious hazards and complement government inspection. Industry representatives also provide advice, support and mentoring to site representatives and can intervene where workers are reluctant to raise concerns directly.

The overall pattern of evidence supports the value of mine-specific arrangements. Comparative injury data are used as contextual benchmarks rather than proof that representative structures alone determine safety outcomes. Across the jurisdictions examined, analysis of fatal and high-potential incidents identified repeated failures to recognise warning signs, act on workers' concerns and maintain effective communication between workers and management.

Queensland's coal system remains robust. Site Safety and Health Representatives (SSHRs) and Industry Safety and Health Representatives (ISHRs) make an important contribution through mine inspections, investigation of complaints and incidents, review of safety systems, access to documents, and powers to direct or suspend unsafe operations. Even so, safety performance deteriorated after 2020–21. Possible contributing factors include inadequate ISHR coverage for the size and geographic spread of the workforce, strained relationships with the inspectorate, and the extensive use of contractors and labour hire workers in the mining industry. The report therefore distinguishes between the strength of the legislative model and pressures affecting its operation in practice.

Queensland's metalliferous system also provides stronger statutory representation than the general HSR models operating in WA and Tasmania. Its SSHRs and District Worker Representatives (DWRs) have mine-specific functions and powers broadly comparable to those in coal mining. Because fewer metalliferous workers participated in this study, further research is warranted. Nevertheless, the legislative history and available evidence support retaining the system while strengthening the independence of DWRs and ensuring they remain clearly aligned with workers' safety and health interests.

In WA, workgroup-based HSR arrangements were widely described as fragmented and ineffective. Participants reported limited contact between HSRs and mine inspectors, inadequate consultation, unresolved hazards, under-reporting of incidents and fear of reprisals. Workers were also often not consulted about new technology or changed work methods. Although individual HSRs made determined efforts, the system did not provide consistent mine-wide coverage, specialist support or effective escalation of serious concerns.

Tasmanian coal participants described better coordination between HSRs and greater confidence in raising concerns, supported by strong union organisation and limited contractor use. However, they also reported delays in resolving issues and insufficient involvement in incident investigations. This experience shows that general HSR arrangements can operate more effectively where strong workplace organisation and mine-specific practices are present, but they do not provide the consistent coverage, independence or statutory powers of the Queensland model.

Conclusion

The report concludes that the strongest model combines trained workgroup HSRs with mine-wide SSHRs and independent industry representatives. These roles are complementary rather than duplicative. Workgroup HSRs represent defined groups of workers; SSHRs address mine-wide hazards and systems; and ISHRs bring industry-wide specialist expertise, independence and the capacity to inspect across multiple mines, support site representatives and intervene where local arrangements are weak. Although the available data do not permit representative structures to be isolated as the sole cause of safety outcomes, the combined historical, legislative, incident and participant evidence does support the arguments that mine-specific representatives are beneficial and indeed represent

best practice; and does not support the argument that they would unduly complicate existing structures.

Recommendations

The report makes 10 recommendations built around three priorities: expanding mine-specific representation beyond NSW and Queensland into Western Australia and Tasmania, strengthening representative systems, and improving regulatory oversight.

Establish mine-specific representation in WA and Tasmania.

1. Appoint qualified, independent industry representatives with powers modelled on Queensland's ISHR/DWR system.
2. Appoint at least four industry representatives across WA's major mining regions, including a representative qualified to inspect Collie coal mines.
3. Appoint an industry representative for Tasmania's metalliferous mining sector, with formal access to Cornwall Colliery and any future coal mines.
4. Establish two SSHRs at each mine in WA and Tasmania, while retaining existing workgroup HSRs.

Strengthen the operation of representative systems.

5. Fund comprehensive mining-specific training for SSHRs and HSRs, covering their statutory powers, lessons from mining disasters and major mining hazards.
6. Review the number and geographic coverage of Queensland coal ISHRs to ensure representation is adequate for the size and distribution of the workforce.
7. Require regulators to notify worker safety representatives of mine inspections and support their right to accompany inspectors.
8. Strengthen worker representative involvement in risk assessments, incident investigations and communication of regulatory findings to mine workers.

Improve regulatory oversight of work practices and emerging risks.

9. Audit the use of safe work procedures, job safety analyses and personal risk-assessment tools to ensure they are being used appropriately.
10. Give greater regulatory attention to persistent and emerging risks, including dust and lead exposure, contractor use, new technology, changed work methods and staffing levels.

The detailed recommendations and their supporting rationale are set out in Chapter 10.

Chapter 2 Objectives, Methods and Ethics

Objectives

The objective of this project was to examine the site safety representative/HSR and industry safety representative regime in metalliferous and coal mining to provide evidence as to whether the regime presently operating in coal mining in NSW, and in both coal and metalliferous mining in Queensland, should be extended to (or more accurately) reintroduced in metalliferous mining in Western Australia and Tasmania.

The report was commissioned by the Mining and Energy Union (MEU) with the support of the Australian Workers' Union (AWU). The research team consisted of three research academics with expertise in mine safety and health (one formerly employed by the NSW Resources Regulator), worker representation, and a former SafeWork NSW Inspector. The unions provided logistical support for the project, and the MEU funded the costs, but the report was prepared independently.

Methods

A mixed-methods design was used to examine whether mine-specific worker representation should be retained in Queensland and extended or reintroduced in Western Australia and Tasmania. The study combined analysis of legislation and historical sources; previous research on mine safety representatives; injury, fatality, incident and enforcement data; and semi-structured interviews and focus groups. The detailed methodological approach used in Report 1 was followed where the studies were comparable. This chapter therefore focuses on the additional jurisdictions, evidence and participants examined for Report 2.

Qualitative methods are used to achieve a more detailed understanding of the experiences of a given population and the social processes that underlie the outcomes of interest, i.e., better health and safety performance. They are accepted research methods in the social sciences for addressing the 'how' and 'why' – in this case, of health and safety outcomes of interest. The qualitative data provide contextual and in-depth insights into the observed performance. In the current study, qualitative data collection techniques employed were semi-structured individual and group interviews. While the sample was not representative of the wider population, participants were typical in terms of the range of occupations, ages, and years of experience of frontline workers in the mining industry.

A third broad methodological approach employed in mixed-methods study designs is an analysis of published and unpublished documentary information. This approach was used extensively to undertake a historical analysis of the legislation presented in Chapter 3 and of the incident investigation and regulatory compliance reports presented in Chapter 5. The methods employed in each approach are described in detail below.

The legislative and historical analysis traced the origins, development and current form of mine worker representation in Queensland, Western Australia and Tasmania. It drew on legislation, parliamentary debates, government inquiries, academic research, union records and the National Library of Australia's Trove collection. The broader Australian history and the detailed NSW analysis are set out in Report 1. Chapter 3 of this report retains only the NSW material needed to explain the national development of the model or to support direct comparison with the three jurisdictions examined here.

The study also drew on earlier research into the role and effectiveness of coal mine safety and health representatives in Queensland and NSW, including the Queensland study published in 2014 and the five-country IOSH study published in 2018. As detailed in Report 1, this research found that site and industry representatives focus on serious hazards, exercise suspension powers sparingly, complement government inspectors and provide advice, support and mentoring to mine representatives. Chapter 4 summarises these findings only to establish the benchmark against which the Queensland, Western Australian and Tasmanian evidence is assessed.

Chapter 5 analyses fatality and serious-injury frequency rates for coal and metalliferous mining in Queensland, Western Australia and Tasmania, using NSW data collected for Report 1 as a consistent benchmark. The statistics were obtained from Safe Work Australia and the relevant regulators and converted to rolling five-year averages. NSW tables and discussion are not reproduced except where they are required for a direct jurisdictional or sectoral comparison. The chapter also examines 20 incidents in Queensland, 10 in Tasmania and 53 in Western Australia using the Ten Pathways model, with particular attention to ignored warning signals, prior concerns and poor management-worker communication. Finally, it analyses 24 high-potential incident forms completed by Report 2 participants and compares the resulting patterns with the more than 50 responses examined in Report 1.

Third, the sixth and final method and data set used were interviews and focus groups conducted with metalliferous and coal miners, SSHRs, HSRs, ISHRs, District Worker Representatives, and a small number of union officials in Queensland, Western Australia, and Tasmania. In total, 49 participants took part in interviews/focus groups using a standard 10-point semi-interview schedule (reproduced in chapters 6, 7 and 8) covering representative structures/practices and their relationship to the handling of safety and health issues, including their experiences and relationships with management and inspectors. Respondents' views on the most serious issues they confronted, and the effects of new technologies were also sought. Each interview typically took over an hour, while multi-party focus groups took longer (two hours). The interviews/focus groups were recorded and later analysed. The results of interviews/focus groups are to be found in chapter 6 (Western Australian findings), chapter 7 (Queensland) and chapter 8 (Tasmania). In total, we undertook 22 interviews in Western Australia, 23 in Queensland and four in Tasmania. Western Australian respondents included two females, and their ages ranged from 30 to 63 years (average 49.9). Participants had been with their current mine job an average of 5.83 years (six had been with their mine two years or less) and had an average of 13.2 years of mining experience. Queensland respondents included one female, and ages ranged from 38 years to 65 years (average 49.9 years). They had been with their current mine for an average of 16.2 years (only one less than nine years) and had an average of 24.9 years of mining experience. Tasmanian respondents (all male) were aged between 48 and 66 years (average 56.2 years). They had been with their current mine an average of 23 years (none less than 15 years) and also had an average of 23 years of mining experience. Overall, those interviewed were overwhelmingly composed of experienced mine workers. Those in Queensland and Tasmania also had, on average, considerable tenure at their current mine. Shorter average tenure was pronounced in Western Australia, partly reflecting that the research included more mine workers not holding a formal safety role, and likely reflecting rapid expansion and higher turnover in the WA mine workforce. Those interviewed undertook a wide array of roles. In Western Australia, these included production technician, training supervisor, operator D&B, dewatering operator, production operator, driller, serviceman, HD Fitter, field officer, trainer assessor, LV fitter, and HD Fitter. Queensland respondents included Open Cut

Examiner, coal mine worker, operator, deputy, diesel fitter, OB operator (underground), surface supervisor, shotfirer, electrician, ERZ controller, production operator, and drill operator. Western Australian respondents worked at more than 10 different mines/workplaces, while those in Queensland worked at more than 16 mines. Tasmanian respondents' occupations are known but not reported due to the small number interviewed and confidentiality concerns.

Ethics

Miners and SSHRs/ISHRS/HSRs recruited for the project were identified by the unions (MEU and AWU) in each location visited. They were given a verbal explanation of the project and its aims (and provided with a statement on these to read), then asked whether they were willing to participate and be recorded. Consistent with standard ethics protocols they were told that participation was voluntary, that the information provided would remain anonymous/confidential and that they could withdraw from the project at any time by simply contacting one of the lead researchers whose contact details were provided on a separate piece of paper they retained after signing the consent form (with a separate signature required with regard to their willingness to be recorded). The research team was careful to indicate that no incident or information that might help to identify an individual would be included in the final report, and that where the report referred to specific mines or incidents, this would only occur where that information was derived from publicly available sources (like inspectorate reports) and this would be made clear. The interview/focus group chapter was then circulated to key contacts with a request to check any quotes to ensure they did not reveal informants.

The research team was repeatedly made aware of mine worker concerns about potential retribution for raising OHS issues. This made a cautious approach mandatory. It was also very difficult to conduct a broader survey of mine workers' opinions, especially within the timeframe, given the legislative review. While interviews/focus groups were overwhelmingly composed of union members, the views expressed were both germane to the project and essentially consistent with other reports and inquiries into mine safety, such as *Digging Deeper*.



Collinsville and Scottville Miners Memorial Garden

Chapter 3 Origins, evolution and legal framework of mine worker safety representation

Introduction and overview

Mine worker safety representation originated in nineteenth-century coal mining and developed into site- and district-level systems across Australian coal and metalliferous mining. The first report – Guardians of Mine Safety – *Worker Safety and Health Representatives in the NSW Mining Industry* – provides the detailed history of the model's emergence in NSW. This chapter briefly identifies the common national origins before concentrating on how the model developed, operated and was later retained, weakened or removed in Queensland, Western Australia and Tasmania. NSW material is included only where it explains the source of a legislative model adopted elsewhere or provides a necessary comparator.

Table 3-1: Timeline Mine Safety and Health Representatives Legislation in Australia 1876--2013

Year	NSW	Queensland	South Australia	Tasmania	Victoria	Western Australia
1876	Provision for 2 WIs (coal)					
1879		Provision for 2 WIs at mine, Bill lapses				
1895						Provision for 2 WIs (coal)
1896						
1901	Provision for 2 WIs (metal)					
1902						Provision to appoint 2 practical miners (not engineers). Penalties for interfering
1906						Provision for 2 WIs (metal)
1909					2 WIs (coal)	

Year	NSW	Queensland	South Australia	Tasmania	Victoria	Western Australia
1910		Provision for 2 WIs (coal & metal)				
1911				Provision for 2 WIs		
1914					Provision for 2 WIs (metal)	
1915				Can employ inspectors outside mine (multi-mine)		Provision for multi-mine WIs
1916		Provision for multi-mine WIs (metal)				
1920			Provision for 2 WIs			
1925		WIs can suspend operations				
1926						
1928						WIs extend to coal
1938		District check inspectors (DCI)				
1941					Provision for DCI	
1945						
1946						Retained
1947						
1960						
1962						
1972						
1982						
1994						Revised but retained
1998						

Year	NSW	Queensland	South Australia	Tasmania	Victoria	Western Australia
1999		DCIs become ISHRs & can visit any mine. Mines Act also specifies roles (metal)				
2000						
2004	DCI/ISHR metal removed					
2013	Coal retains a separate regime now labelled SSHRs and ISHRs, but SSHRs are replaced by HSRs in metal					Removed worker inspectors

As Table 3-1 shows, worker inspection provisions developed across both coal and metalliferous mining. By 1925, every Australian state had introduced check or workmen inspector provisions in metalliferous mining, although the timing, legislative structure and method of appointing representatives varied. Queensland maintained separate coal and metalliferous mine safety laws with site- and district-level representatives. Western Australia and Tasmania initially applied worker inspection provisions across significant parts of their mining industries but later removed them during legislative harmonisation. The detailed NSW chronology is set out in Report 1 and is not repeated here.

Mine worker inspection provisions pre-dated the general health and safety representative model later associated with post-Robens OHS legislation. The Robens Committee recognised that the longstanding mining arrangements were valued for their practical contribution to cooperation and prevention. General HSR provisions were subsequently adopted across Australian OHS laws, but the mining model remained distinctive because it combined experienced site representatives with independent industry-level representatives suited to a high-hazard industry. The history and continuing NSW arrangements are examined in Report 1; this report considers how the distinction shaped later reforms in Queensland, Western Australia and Tasmania.

From the 1990s, reforms increasingly aligned mine safety laws with general post-Robens OHS legislation and, later, the national model WHS laws. In some jurisdictions this process removed mine-specific representation without evidence that it was ineffective. Queensland retained separate coal and metalliferous legislation and strong representative provisions. Western Australia retained mine-specific regulations but removed its employee inspector system, while Tasmania repealed most mine-specific legislation and relied principally on general HSR arrangements. NSW is relevant only as a comparator: it retained the stronger coal model while replacing metalliferous mine-specific representation with general HSR provisions. The following sections examine the consequences of these different approaches.

At the other extreme, Tasmania, Victoria and South Australia (all with smaller but significant mining activities) subsumed mining into OHS legislation as part of the post-Robens reforms and harmonisation process. The short-sightedness and failure to understand why mining required specific regulation, including strong worker representative provisions, was starkly revealed in the wake of the 2006 Beaconsfield mine fatality/entrapment and the 2010 Pike River Mine Disaster (29 killed). Following this, New Zealand reintroduced stringent mine safety legislation with strong representative provisions modelled on NSW and Queensland. In Tasmania, mine-specific regulations were introduced following Beaconsfield (especially 2009 and 2012), but they only partly remedied the regulatory gaps and largely ignored representative provisions. Despite the need for urgent change in the legislative framework identified by a 2014 audit of the Mines Inspectorate, deliberations on revising the legislation dragged on and remain unresolved at the time of writing. Further, the tranche of further reforms being considered does not include significant strengthening of representation provisions. Victoria relied on mine-specific provisions in the model OHS legislation, which are rather basic compared to the more comprehensive legislation found in NSW, Queensland and Western Australia. A fatality/serious injury incident at a Ballarat mine in 2024, where a contractor was using a mining method (air-legging) over which both workers and the company's safety manager had expressed

concerns before the event, should have resulted in an independent review of the adequacy of the existing legislation and the regulator, but hasn't.[1]

As background, it should be noted that the mine safety regulators in Queensland, NSW and Western Australia are funded by an industry levy. In Queensland, a levy is imposed on a sliding scale (according to size) on all mines (coal and metalliferous) and quarries. The rates are 0 to 5 workers – no levy payable; 6 to 10 workers – $128 per worker per year; 11 to 19 workers – $512 per worker per year; 20 to 99 workers – $959 per worker per year; and over 99 workers – $1279 per worker per year. The sliding scale accommodates the limited resources of smaller mines and quarries, with no levy being payable in very small operations. Fees collected by the levy fund safety and health services, including safety and health inspections and audits; investigation of mine/quarry and explosives accidents; provision of safety and health advice; collection and maintenance of mine employee health records; dissemination of mining and explosives safety and health standards; research, development and training in mining and explosives safety and health; provision of emergency services; and collection and reporting of safety and health statistics. A similar approach (or a similar proportion of royalties) has been advocated in other jurisdictions, notably Tasmania, where regulatory resourcing and understaffing have been recurring issues.[2]

The remainder of this chapter is divided into three subsections. Subsection 2 considers the history and current regulatory requirements for coal mining in each state. Subsection 3 considers the history and current regulatory requirements for metalliferous mining in each state. Subsection 4 brings together the key findings.

The development of legislation, main features and operations: Coal mining

New South Wales

NSW established statutory worker inspection in coal mining in 1876, drawing on the UK check-inspector model. The system developed in response to recurring disasters, evidence that workers feared reprisals for raising hazards, and the need for representatives with practical mining expertise and independence from mine management. Over time, legislation strengthened inspection, investigation and reporting powers and formally recognised district and specialist electrical check inspectors. These arrangements were retained when NSW adopted harmonised work health and safety legislation in 2013 and now operate through mine-wide Site Safety and Health Representatives (SSHRs), Industry Safety and Health Representatives (ISHRs) and electrical representatives. SSHRs are elected by mine workers, while experienced and qualified ISHRs may enter and inspect coal mines, review safety management systems and documents, participate in incident investigations, support and train site representatives, and direct unsafe operations to stop. The detailed legislative history, disaster evidence, training arrangements and operating costs are set out in Report 1. For this report, the NSW system is retained only as a benchmark alongside Queensland because both jurisdictions preserve complementary mine-site and industry-level representation with mining-specific expertise and powers.

[1] *ABC News* 15 March 2024. https://www.abc.net.au/news/2024-03-15/miners-call-for-stronger-regulations-ballarat-gold-mine-fatality/103588606

[2] Quinlan, M. (2014) *Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart.

Western Australia

In Western Australia, following a campaign for check inspectors by the Collie Miners Association, a provision (similar to other jurisdictions) was adopted. Section 37 (collieries part) of the 1895 *Mines Regulation Act (59 Victoria No.37)* provided that:

> The persons employed in a mine may, at their own cost, appoint two of their number to inspect the mine, and the persons so appointed shall be allowed once at least in every month to go to every part thereof, and to inspect the shafts, levels, planes, working places, return air-ways, ventilating apparatus, old workings, and machinery; and the manager (who may if he thinks fit accompany them) and all persons in the mine shall afford every facility for such inspection, and the persons so appointed shall record the result of such inspection in a book kept at the mine for the purpose, and the report shall be signed by the persons inspecting.

Section 12 (General Part) of the same Act gave miners a right to inspect if they considered conditions unsafe and gave the manager 24-hours notice. In 1902, following extended debate, the *Coal Mines Regulation Act* (1&2 Edward VII No. 25) replaced the 1895 Act. Under its regulations, rule 50 enabled persons at a mine to appoint, at their own expense, two of their number or any persons who were practical miners (but not mining engineers) to conduct inspections at least once a month. Written reports of inspections were to be kept in a book and, if identifying any apprehended danger, sent forthwith to the local government mines inspector.[3] Similar to the NSW *Coal Mines Regulation Act* 1896, Rule 52 prohibited management interference in the appointment of check inspectors and check weighmen. Rule 7 gave miners the right to withdraw if they apprehended danger due to the presence of flammable gases. Found in the laws of other jurisdictions, such as NSW, the right to withdraw from apprehended danger became a key principle of mine safety, although exercising this right could prove difficult in practice, as the Pike River mine disaster amply demonstrated.[4]

Following a prolonged struggle also involving metalliferous miners (see next subsection for detail) in 1915, the *Mines Regulation Act* was amended to provide for workmen inspectors (with at least five years' mining experience) elected by those employed 'in the mines in the several mining districts' and subject to approval by the minister. However, this legislation appears to have been confined to metalliferous mining, and an amendment in 1928 was required to extend it to coal mining. In introducing the Bill, the Minister indicated the 1915 legislation had resulted in the smoother operation of mines and the government would provide funding but not a full-time appointment 'at present.'[5] Like metalliferous mining, they were titled workmen inspectors (along the lines of the European model), and the position appears to have become permanent. The provision for elected workmen inspectors was incorporated/retained in the 1946 *Coal Mines Regulation Act*. In Collie, election to the position, which required a third-class certificate of competency, was often contested with multiple nominees seeking the appointment.[6] As elsewhere, the Collie district workmen inspectors undertook regular mine inspections, attended coronial inquests and contributed to debates about the adequacy of regulation. Further, like their colleagues in the eastern states, they (and their work) became highly

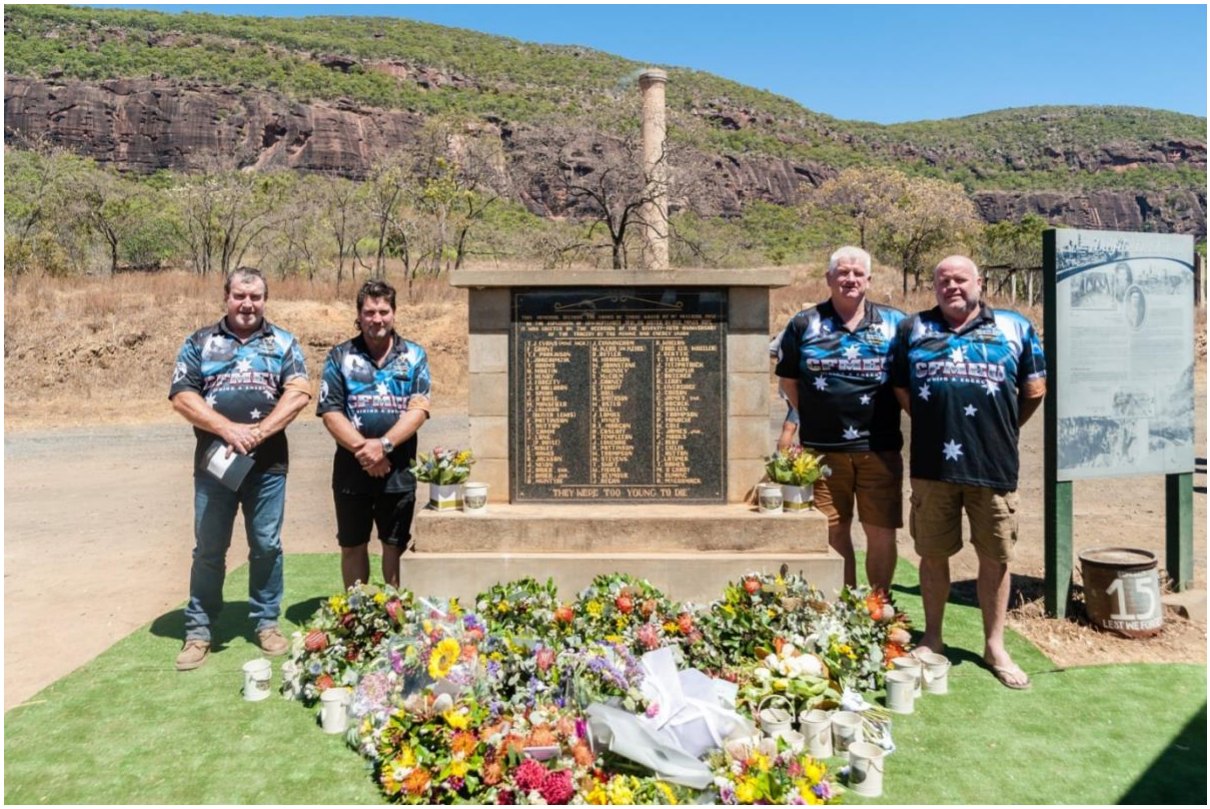
[3] *Kalgoorlie Miner* 25 March 1902; *Western Mail*, 15 February 1902.
[4] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney
[5] *Kalgoorlie Miner* 30 November 1928 and 7 December 1928.
[6] See *West Australian* 18 May 1950.

respected within the mining and wider community. Amongst other things, this was exemplified by obituaries such as the *Collie Mail's* report of 'popular mine inspector' Bernard McCabe suffering a fatal seizure aged 46 in March 1950.[7]

Queensland

In Queensland, as noted earlier, a Mines Regulation bill introduced in 1879 included provision for workmen inspectors, but it did not pass despite pressure from the member for Bundamba representing the West Moreton coalfields.[8] The first mines regulation statute was enacted in 1881. After several failed attempts, Ipswich coal mines west of Brisbane established a permanent union in 1886, with Thomas Glassey (a blacklisted Scottish union activist) as its founding secretary. By 1898, Glassey, by then an MLA, advocated including check inspector provisions like those in NSW in a mining bill before Parliament.[9] Glassey again pressed the issue as a member of the Royal Commission into the 1900 Torbanlea mine disaster (five killed). The union too continued to agitate, including a deputation to the minister for mines in 1906. The 1910 *Mines Regulation Act* (1 Geo V 24) empowered miners to elect persons to carry out inspections on their behalf; to view the mine's record book (section 9(4)); to inspect the scene of accidents (section 28(2)); to be notified by the mining warden of any inquiry into fatal accidents at the mine (section 31(2)); as well as to be notified of any special rules and lodge objections to them (sub-sections 51(2), (3) and (5)). Amendments in 1916 improved check inspectors' access to materials (*Mines Regulation Act Amendment Act*, 1916), followed by further changes in 1920 empowering them to take weekly temperature readings. A 1921 amending Act specified that check inspectors had to be elected and could be removed from office by a two-thirds majority in a ballot.[10]

[7] *Collie Mail* 30 March 1950.
[8] Queensland Parliamentary Debates (Hansard) Legislative Assembly 9 September 1879.
[9] *Queensland Times*, 1 December 1898.
[10] Walters D, and Quinlan M, (2019) Voice and resistance — Coal Miners' struggles to represent their health and safety interests in Australia and New Zealand 1871-1925, *Economic and Labour Relations Review* 30(4): 513-31.



Annual commemoration Mount Mulligan Disaster Memorial

On 19 July 1921, an explosion at the Mount Mulligan coal mine in North Queensland killed 75 miners (all those underground). Charles Kilpatrick, a Legislative Council member and district check inspector, was one of three appointed to the Royal Commission that found that neither the government nor check inspections had identified excessive coal dust, and that mishandling/storage of explosives was the most likely source of ignition. However, the latter problem had been raised by miners' representatives during a prior inspection at the mine. The union had also previously called for more stringent regulation.[11] A key outcome of the Royal Commission was recognition that coal mining involved distinctive hazards, leading to the separate *Coal Mines Act 1925*. Section 70 of the Act gave mine inspectors the power to suspend operations (Commonwealth of Australia, 1927). But appointment was still restricted to practical working miners at the mine.

There was no provision for district check inspectors, but, as in NSW, the Queensland Collieries Employees Union responded to these limitations by appointing experienced miners and senior union officials as district check inspectors. The first was David Gledson (elected union secretary in 1908 and with a mine managers' certificate) in 1911. Long-term union president Charles Kilpatrick succeeded Gledson. Both undertook regular mine inspections and prepared reports, with Kilpatrick's visits extending to mines in central and north Queensland. They also represented the union in enquiries into serious mine incidents such as a fire at the Redbank colliery in November 1919 (three miners were injured). Kilpatrick testified that he had visited the mine a day prior to the incident and, noting an ignition with no evidence of gas, had issued a warning because the circumstances were similar to those

[11] Royal Commission appointed to Inquire into and Report upon the Recent Disaster at Mount Mulligan Coal Mine, and also into the Methods of Mining carried on at such Mine, and, further, to make such Recommendations as may tend to Prevent the Recurrence of Accidents of a like nature (1922) Brisbane, QLD, Australia: Government Printer.

where another miner had been burned.[12] In 1922, Kilpatrick and two managers jointly inspected the City Colliery following miners' complaints about ventilation. As a result, a new fan was installed. Check inspectors also prepared detailed reports for the biannual meetings of the Queensland union, identifying OHS trends and issues requiring attention. It was not until 1938 that a new section (70A) was inserted into the 1925 coalmining Act provided for district check inspectors, notwithstanding clear evidence of the valuable role they played.[13] As in NSW, district check inspectors became highly respected members of the mine safety regime and the communities they interacted with, undertaking regular inspections, doing joint inspections with government inspectors (including following serious incidents such as the Collinsville State mine outburst in 1954, where seven were killed), contributing to inquests, mine safety inquiries and legislative reviews and representing miners on government mine safety advisory bodies.

As in NSW, a major revision of mine safety legislation was undertaken from the late 1990s in the wake of an explosion at the Moura No.2 mine (11 killed) along with two earlier disasters in the district (13 killed at Kianga in 1975 and 12 killed at Moura No.4 in 1986), to prevent mass-fatalities better and also align mine safety legislation more closely with post-Robens legislation. The *Coal Mining Safety and Health Act 1999 (Qld)* ss108-124 gave industry safety and health representatives the power to visit any mine within their region to conduct safety inspections, review documents, and order a cessation of work if they judge workers to be in imminent danger.

More recently, the MEU and its ISHRs played a conspicuous role in pressing for government inquiries garnering expert evidence (from the USA) and remedial interventions, including better and more localised screening following the re-identification of pneumoconiosis (black lung), helping to turn a conspicuous failure in medical/regulatory oversight into the world's best practice.[14] The Board of Inquiry into the 2020 Grosvenor mine explosion endorsed the important role of safety representatives as well as the challenges posed by labour hire arrangements in this regard (see also Chapter 5). In 2023, this was followed up by a report by the Transport and Resources Committee Queensland, which examined participatory mechanisms and other issues considered by the BOI. It made specific reference to the BOI findings:

> The BOI found that Industry Safety and Health Representatives (ISHRs) have an important role in maintaining safety and health at coal mines. ISHRs are appointed by MEU under section 109 of the CMSH Act, which provides that the union may, after a ballot of its members, appoint up to three ISHRs. The ISHR supports coal miner worker rights in the workplace including the right to be consulted, to participate in joint OH&S committees, receive information, and inspect workplaces, accidents and incidents. Evidence indicates that this type of participatory arrangement is associated with improved health and safety practices and lower rates of injuries. The BOI found that the ISHR role is additional to, and ideally complementary with, that of the SSHR.

[12] *Daily Standard*, 20 January 1920.
[13] *Coal Mining Acts Amendment Act of 1938* (Qld), section 9 (inserts section 70A). https://www.austlii.edu.au/cgi-bin/viewdb//au/legis/qld/hist_act/cmaaao19382gvn9326/ For evidence of the associated parliamentary debate see *Courier Mail* 8 September 1928 and *Brisbane Telegraph* 20 September 1938.
[14] Coal Workers' Pneumoconiosis Select Committee (2017), Black lung White Lies: Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland, Queensland Parliament, Brisbane.

> The ISHR functions and powers are provided in Part 8 of the CMSH Act. The functions of an ISHR are:
>
> (a) to inspect coal mines to assess whether the level of risk to the safety and health of coal mine workers is at an acceptable level;
>
> (b) to review procedures in place at coal mines to control the risk to safety and health of coal mine workers so that it is at an acceptable level;
>
> (c) to detect unsafe practices and conditions at coal mines and to take action to ensure the risk to the safety and health of coal mine workers is at an acceptable level;
>
> (d) to participate in investigations into serious accidents and high potential incidents and other matters related to safety or health at coal mines;
>
> (e) to investigate complaints from coal mine workers regarding safety or health at coal mines;
>
> (f) to help in relation to initiatives to improve safety or health at coal mines.
>
> ISHR powers include inquiries, inspections, examination of documents, requiring SSEs to provide reasonable help in the exercise of ISHR powers, and issuing directives. The BOI found that the existing model for appointment of ISHRs is the best available, in that it provides the opportunity for organised labour to participate democratically in the appointment process. It also guarantees that industry representatives are independent of both government and management at coal mines. Additionally, the BOI found that the ISHR function is best carried out where a cooperative arrangement exists between it and the SSHR. A 2016 study of Queensland coal mine safety representatives found that while SSHRs are focussed generally on preventing the recurrence of an incident, ISHRs are more concerned with the wider implications of the incident and investigation process.[15]

The committee's own investigations identified several challenges that mine-site representatives had to deal with, including that, notwithstanding company rhetoric of safety first and zero harm objectives, production was prioritised over safety:

> A recurring theme in worker representative submissions is that, while industry may espouse safety-first principles, coal mines sometimes depart from established safety procedures to maximise production. This is attributed to a workplace culture driven by production and to the corporate structures of coal mine operators, which impair mine managers' ability to ultimately control the allocation of that site's resources. Mr Andrew Iwers, a coal mine worker who is employed as an SSHR, provided multiple examples of ways that coal production is prioritised on mine sites. These examples included: a deterioration in the general state of haul roads when coal mine workers who would normally operate water trucks or graders are redeployed to operate production machinery; and supervisors knowingly ignoring or contravening standard operating procedures to ensure continuity of production rates. Mr

[15] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 21.

> Iwers submitted that these instances tend to occur in the lead-up to the end of the month and towards the end of the year, when production targets must be met.[16]

The potential for corporate structures to impact the safety risk of individual mines sites was observed in Chapter 6 of the BOI Part One Report. This potential was noted by the Mine Managers Association of Australia (MMAA) in its submission that:

> In many instances the SSE has no real control over the resources, those being dictated by corporate headquarters and the UMM, in some instances, has been relegated to that of a compliance manager and not even on the actual, as opposed to unofficial, management structure at the mine. This we perceive as a major concern as that type of structure could lead to a significant incident.

> While MMMA also submit that 'no substantial or hard evidence has ever been produced to verify the claims that the production of coal is priority and that safety takes a lower priority' the committee heard from individual coal mine workers who advised that mine managers exert significant pressure on statutory safety officials to ensure that production is not impeded. Mr Scott Leggett told the committee during a public hearing that:

> If you guys go out on to a mine site you will see big signs that say 'Zero harm' and 'Safety first'—all that type of stuff. That is told to us daily. Is it a reality? No. Production will always come in front of safety. Does it mean that they are going to send you down into a pit that is on fire? No, but it is the culture that is driven. That is my firm belief. I see it; I get to live and breathe it. My job is compliance. My job is to go out and find unsafe stuff and make it safe and inspect areas before coalmine workers go in there. I know the pressure I get, and it is not week to week; it is day to day, hour to hour.

> Mr Andrew Iwers submitted:

> The use of KPI's such as 'time to first coal' are used as an indicator of efficiency within the production process, yet this comes at the cost of compliance with risk management process and controls to ensure safety, such as not carrying out safety checks on vehicles prior to starting work each shift, as [coal mine workers] are encouraged to do them once they start production.

A 2019 survey of 1,010 Queensland coal mine workers (both union and non-union members) conducted by the MEU found that 80% of respondents indicated their biggest safety concern was companies valuing production over safety.[17]

Other problems identified in the report by worker representatives and others making submissions included under-reporting of incidents to minimise incident statistics, the resourcing/capacity/effectiveness of the regulator, the quality of supervision and effects of the increased use of contractors/labour hire, notably the association with a higher incidence of serious

[16] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 25-26.
[17] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 25-26.

incidents and their greater vulnerability to/fear of reprisal/victimisation for raising problems.[18] It is worth noting in passing that many of these issues were also raised in the NSW *Digging Deeper* reports (referred to elsewhere in this chapter). Overall, a key finding of the Queensland parliamentary committee was that 'ISHRs and SSHRS are the "eyes on the ground" when it comes to safety and coal mine operators and the union should ensure that the participation of these personnel in the study is appropriately resourced, facilitated, and protected.'[19]

The Committee made a number of recommendations. With regard to the regulator (Resources Safety & Health Queensland) it recommended 'RSHQ takes steps, through the consultative process provided by CMSHAC [Coal Mines Safety and Health Committee], to include a component in the generic induction for coal mine workers (Recognised standard 11: Training in Coal Mines) on the roles of the Industry Safety and Health Representative and Site Safety and Health Representative, to promote awareness of the functions of each' (recommendation 20). Recommendation 32 was that RSHQ takes steps to amend the Coal Mining Safety and Health Regulation 2017 (Qld), schedule 1B 'Site safety and health representative election process, clause 13(6), to require the returning officer for a ballot in respect of the election of an SSHR to give notice of the result of the ballot to the ISHRs.' Recommendation 38 urged the regulator 'takes steps, through the consultative process provided by the Coal Mining Safety and Health Advisory Council to include information about the importance and nature of the role of SSHRs in the generic induction for coal mine workers, Recognised standard 11: Training in coal mines.' Recommendation 31 was that the existing methods of appointing ISHRs be retained, while recommendation 33 urged 'ISHRs take a more proactive role in cultivating mutually beneficial relationships with SSHRs.' Recommendations 39 and 40 dealt with industry support for SSHRs. Recommendation 39 was that 'Coal mines use their work order system to schedule and record the completion of an SSHR inspection to assist with incorporating the inspection activity into the mine's weekly plan, and to demonstrate management support for the SSHR function.' Recommendation 40 urged that 'Industry Site Senior Executives consider whether it would be advantageous to make the SSHR role at their mine a full-time position.' Recommendation 22 addressed bonus systems commonly viewed to undermine safety, urging that industry 'reviews its production and safety bonus structures and make any necessary changes to ensure that those structures do not inadvertently discourage the reporting of safety incidents or injuries.' There was also a series of recommendations regarding labour hire and reprisals affecting mining companies, labour hire firms, and the regulator (Recommendations 21, 23-26).[20]

As in NSW, considerable attention is devoted to training SSHRs. In Queensland, the MEU ISHRs run an annual five-day course for SSHRs that serves as a refresher/update, including lectures by experts and regulators and interactive sessions/workshops (though all sessions tend to involve interaction). ISHRs must hold qualifications to be deputy or open-cut examiners, while SSHRs must have three years of mining experience. In addition to formal training, ISHRs in both jurisdictions support and mentor SSHRs. As in NSW, ISHRs' salaries and other costs are paid by the MEU, as are the costs of running the SSHR training week (including expenses for some expert speakers). Prior to 2012, the Queensland

[18] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 30-31, 36-42, 45-52.
[19] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 55.
[20] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane, 67-68.

government paid an annual sum of $24,000 to ISHRs for training and development, but the Campbell Newman government suspended this and never reinstated it. At the time of writing, the establishment is four ISHRs with provision for a relief ISHR if an ISHR is on extended leave. The salary is $222,000 plus car, overnight expenses (travel costs can be around $10,000 per year given the size of the state) and benefits.

The MEU also pays the considerable costs (including expenses of expert speakers and some overseas union officials) of running a global OHS conference. The first was held in Cairns in February 2024, focusing on dust diseases, with another to be held on the Sunshine Coast in February 2026.



Box Flat Disaster (1972) Memorial

Under the *Coal Mining Safety and Health Act 1999* (Qld) (as amended in 2024), the current legislative provisions governing SSHRs and ISHRs are as follows. Part 7 of the Act, sections 92 to 105 deal with the election of site safety and health representatives (SSHRs) and their functions and powers while sections 106 and 107 places obligations on Senior Site Executives to tell SSHRs 'certain things' (i.e. give them information) and to display the identity of the SSHR (so they can be contacted by workers or others at the mine). Part 2B 12K-12Q of the Coal Mining Safety and Health Regulation 2017 includes additional provisions relating to the election of SSHRs, including when such elections are to be held and who is to conduct such elections. With regard to SSHR functions and powers, the relevant sections state:

99 Functions of site safety and health representatives

(1) A site safety and health representative for a coal mine has the following functions—

(a) to inspect the coal mine to assess whether the level of risk to coal mine workers is at an acceptable level;

(b) to review procedures in place at the coal mine to control the risk to coal mine workers so that it is at an acceptable level;

(c) to detect unsafe practices and conditions at the coal mine and to take action to ensure the risk to coal mine workers is at an acceptable level;

(d) to investigate complaints from coal mine workers at the mine regarding safety or health.

(2) The site senior executive and supervisors at the coal mine must give reasonable help to a site safety and health representative in carrying out the representative's functions. Maximum penalty—40 penalty units.

(3) The site senior executive or the site senior executive's representative may accompany the site safety and health representative during an inspection.

(4) A site safety and health representative who makes an inspection of the coal mine must—

(a) make a written report on the inspection; and

(b) give a copy of the report to the site senior executive; and

(c) if the inspection indicates the existence or possible existence of danger, immediately—

(i) notify the site senior executive or the responsible supervisor; and

(ii) send a copy of the report to an inspector.

(5) If a site safety and health representative believes a safety and health management system is inadequate or ineffective, the representative must inform the site senior executive.

(6) If the site safety and health representative is not satisfied the site senior executive is taking the action necessary to make the safety and health management system adequate and effective, the representative must advise an inspector.

(7) The inspector must investigate the matter and report the results of the investigation in the mine record.

100 Powers of site safety and health representative

(1) A site safety and health representative for a coal mine has the following powers—

(a) to enter any area of the coal mine at any time to carry out the functions of the site safety and health representative, if reasonable notice is given to the site senior executive for the mine or the site senior executive's representative;

(b) to examine any documents relevant to safety and health held by the site senior executive under this Act, if the site safety and health representative has reason to believe the documents contain information required to assess whether procedures are in place at the coal mine to achieve an acceptable level of risk to the coal mine workers;

(c) to copy, or to obtain from the site senior executive within a stated reasonable period a copy of, a document mentioned in paragraph (b);

(d) to require the site senior executive to give the site safety and health representative reasonable help to exercise the site safety and health representative's powers under paragraphs (b) and (c).

(2) If a site safety and health representative asks to copy a document under subsection (1)(c), the site senior executive must give access to the document as soon as reasonably practicable after being asked, unless the site senior executive has a reasonable excuse. Maximum penalty—100 penalty units.

(3) A site senior executive for a coal mine who is required in a stated reasonable way to help a site safety and health representative under subsection (1)(d) must comply with the requirement. Maximum penalty—100 penalty units.

101 Stopping of operations by site safety and health representatives

(1) This section applies if a site safety and health representative reasonably believes a danger to the safety or health of coal mine workers exists because of coal mining operations.

(2) The site safety and health representative may, by written report to the site senior executive for the coal mine stating the reasons for the representative's belief, order the suspension of coal mining operations.

(3) The site safety and health representative must give a copy of the written report given to the site senior executive under subsection (2) to—

(a) an inspector; and

(b) an industry safety and health representative.

(4) If the site safety and health representative reasonably believes there is immediate danger to the safety and health of coal mine workers from coal mining operations, the representative may—

(a) stop the operations and immediately advise the supervisor in charge of the operations; or

(b) require the supervisor in charge of the operations to stop the operations.

(5) The site safety and health representative must give a written report about any action taken under subsection (4) and the reasons for the action to each of the following persons—

(a) the site senior executive for the coal mine;

(b) an inspector;

(c) an industry safety and health representative.

102 Effect of report

If the site senior executive receives a report under section 101(2), the site senior executive must stop the coal mining operations mentioned in the report. Maximum penalty—200 penalty units.

103 Site senior executive not to restart operations until risk at an acceptable level

The site senior executive must ensure that the coal mining operations stopped under section 101 are not restarted until the risk to coal mine workers from the operations is at an acceptable level. Maximum penalty—200 penalty units.

104 Site safety and health representative not to unnecessarily impede production

A site safety and health representative must not unnecessarily impede production at a coal mine when exercising the representative's powers or performing the representative's functions. Maximum penalty—200 penalty units.

105 Protection of site safety and health representatives performing functions

A coal mine operator, site senior executive, contractor or other supervisor must not—

(a) prevent or attempt to prevent a site safety and health representative from performing the representative's functions; or

(b) penalise a site safety and health representative for performing the representative's functions. Maximum penalty—200 penalty units.

Part 8 of the Coal Mining Safety and Health Act 1999, sections 108 to 124, deals with industry safety and health representatives (ISHRs), including provisions governing several matters, including their appointment/election, specifying that they are full-time, filling temporary vacancies, termination, identity cards and that they not unnecessarily impede production (s120). Section 118 deals with their functions while s119 deals with powers, stating:

118 Functions of industry safety and health representatives

(1) An industry safety and health representative has the following functions—

(a) to inspect coal mines to assess whether the level of risk to the safety and health of coal mine workers is at an acceptable level;

(b) to review procedures in place at coal mines to control the risk to safety and health of coal mine workers so that it is at an acceptable level;

(c) to detect unsafe practices and conditions at coal mines and to take action to ensure the risk to the safety and health of coal mine workers is at an acceptable level;

(d) to participate in investigations into serious accidents and high potential incidents and other matters related to safety or health at coal mines;

(e) to investigate complaints from coal mine workers regarding safety or health at coal mines;

(f) to help in relation to initiatives to improve safety or health at coal mines.

(2) The following persons may accompany the industry safety and health representative during an inspection—

(a) the site senior executive or a person representing the site senior executive;

(b) a site safety and health representative or a person representing the site safety and health representative.

119 Powers of industry safety and health representatives

(1) An industry safety and health representative has the following powers—

(a) to make inquiries about the operations of coal mines relevant to the safety or health of coal mine workers;

(b) to enter any part of a coal mine at any time to carry out the representative's functions;

(c) to examine any documents relevant to safety and health held by persons with obligations under this Act, if the representative has reason to believe the documents contain information required to assess whether procedures are in place at a coal mine to achieve an acceptable level of risk to coal mine workers;

(d) to examine safety and health management system documents, including principal hazard management plans, standard operating procedures and training records;

(e) to copy a document mentioned in paragraph (c) or (d);

(f) to require the site senior executive for a coal mine to give the representative within a stated reasonable period and by a stated reasonable way, including, for example, by email, a copy of any document mentioned in paragraph (c) or (d);

(g) to require the person in control or temporarily in control of a coal mine to give the representative reasonable help in a stated reasonable way in the exercise of a power under any of paragraphs (a) to (f);

(h) to issue a directive under section 163.

(2) A person in control or temporarily in control of a coal mine required to help the industry safety and health representative under subsection (1)(g) must comply with the requirement, unless the person has a reasonable excuse. Maximum penalty—100 penalty units.

(3) If an industry safety and health representative asks a person to give access to a document to enable the representative to examine the document under subsection (1)(c) or (d), or to copy the document under subsection (1)(e), the person must give access to the document as soon as reasonably practicable after being asked, unless the person has a reasonable excuse. Maximum penalty—100 penalty units.

In addition, ISHRs have the power to suspend coal mining operations. These powers are established under s165 – the same section granting the Chief Inspector and inspectors these powers. The details relating to this section and its use are examined in Chapter 5.

Victoria

In Victoria, the 1909 *Coal Mines Regulation Act* borrowed from NSW legislation and earlier colonial laws regulating metalliferous mines. Rule 56 required:

> The persons employed in a mine may from time to time appoint two of their number to inspect the mine at their workmen's own cost and notice of the inspection shall be sent to the mining manager within twenty-four hours of such inspection, and the persons so appointed shall be allowed once at least in every month, accompanied, if the owner or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working places, return air-ways, ventilating apparatus, old workings. Every facility shall be afforded by the owner and manager and all persons in the mine for the purpose of the inspection, and the persons appointed shall forthwith make a true report of the result of the inspection, and that report shall be recorded in a book to be kept at the mine by the mining manager for the purpose, and shall be signed by the persons who made the inspection, and if the report states the existence or apprehended existence of any danger the owner or manager shall forthwith cause a true copy of the report to be sent to the inspector of the district.

The Victorian coal miners' union viewed the 24-hour notice requirement as a serious limitation, as it enabled managers to temporarily remedy ventilation or other issues during inspections, but it was retained in the 1915 *Coal Mines Regulation Act*. The union referred check inspector reports on ventilation at the Wonthaggi State Mine to the manager and mine inspector, and urged Labor representatives in parliament to secure compensation for dust diseases. The Victorian union (now part of the Miners' Federation) combined campaigns over ventilation and removal of the 24-hour notice requirement with calls for regulatory recognition of district check inspectors, including a

deputation to the Minister for Mines in February 1920.[21] While the minister promised to present legislation to Parliament, nothing happened notwithstanding a series of fires, fatalities and serious 'near miss' incidents. In July 1923, check inspectors withdrew miners after two men were injured in a gas explosion and another strike occurred when management refused to allow check inspectors to accompany a mine inspector; the union ultimately took the case before an industrial tribunal.[22] Despite further concerns over ventilation, the 1928 *Coal Mines Regulation Act* repeated the earlier provisions (including 24-hour notice). Four miners died at Wonthaggi in 1931, but it was only in the wake of the 1937 explosion/fire (where 13 died) that legislation was amended in 1941 to establish a district check inspector position and remove the 24-hour notice requirement.[23]

Tasmania

Mine safety laws in Tasmania covered both coal and metalliferous mining, though with separate coal mining provisions as was the case in the *Mining Act 1905*. Section 23 of the *Mining Act Amendment Act 1911* empowered miners at a mine to elect two of their number (practical miners with five years of experience) to undertake inspections monthly (or sooner if conditions were considered unsafe) after giving 'reasonable notice', compile a report included in the mine's records and forwarded to the inspector in cases of apprehended danger. Interference with the appointment/activities of workmen-inspectors was prohibited. Following the 1912 Mount Lyell mine disaster (see below), the *Mines and Work Regulation Act 1915* enabled miners to elect persons outside (i.e. not employed by) the mine.

As noted in the next section on metalliferous mining, all mine safety legislation was repealed as part of the introduction of post-Robens-style OHS legislation; the only remnant was provisions on the position of Chief Mines Inspector, included in the general OHS law - the *Workplace Health and Safety Act 1995*. This Act incorporated provisions for both health and safety committees and representatives (HSRs), similar to other jurisdictions (slightly amended in 2002). The Chief Mines Inspector oversaw a small mines inspectorate within the general OHS regulator (WorkSafe Tasmania) but a number of mine inspectors chose not to move across to this when the mine-specific legislation was repealed or retired shortly thereafter. By the time of the 2006 Beaconsfield mine fatality/entrapment, the Chief Mines Inspector was the only qualified mining engineer within the unit; some other inspectors had limited mining experience, and the unit was under-resourced. Further, while the Beaconsfield mine had a safety committee, this proved short-lived and ineffective, and management had opposed the appointment of formal HSRs at the mine (the absence of HSRs was probably not confined to that mine).[24] As with a fatality at the Cornwall Colliery in 2000, warning signals and worker concerns were voiced before the incident, raising serious questions about whether these incidents might have been

[21] Walters D, and Quinlan M, (2019) Voice and resistance — Coal Miners' struggles to represent their health and safety interests in Australia and New Zealand 1871-1925, *Economic and Labour Relations Review* 30(4): 513-31.

[22] Age 10 July 1923 and 8 December 1825; Weekly Times 12 June 1925.

[23] Walters D, and Quinlan M, (2019) Voice and resistance — Coal Miners' struggles to represent their health and safety interests in Australia and New Zealand 1871-1925, *Economic and Labour Relations Review* 30(4): 513-31.

[24] Quinlan, M. (2009), *Report on OHS management at the Beaconsfield Joint Venture Gold Mine, Tasmania up to and including the time of the rock fall incident at the 925 level of the mine that occurred at around 9.23pm, resulting in the death of Larry Paul Knight and the entrapment of Todd Andrew Russell and Brant George Webb* (expert report prepared for Greg Melick SC, Independent Investigator appointed by the Tasmanian Government), 30 August 2007.

prevented had effective miner representation been on site and the inspectorate better resourced.[25] In the aftermath of the Beaconsfield incident, and following coronial recommendations to address the inspectorate's lack of knowledge of coal mining, and the representation problems already alluded to, an arrangement was made for a NSW ISHR to visit and inspect the Cornwall Colliery annually. The Tasmanian mines inspectorate saw these visits as very valuable, giving confidence that safety issues were being managed and problems were being addressed. This included identifying several significant hazards, notably the location of the major ventilation fan directly opposite the mine entrance and a build-up of coal dust in and around conveyor belts, increasing the risk of a fire/explosion.[26] Chapters 5 and 8 provide a more detailed account of developments affecting coal mining since 2000, while the metalliferous mining section of this chapter describes the current regulatory framework and government coal miner involvement in safety and health as it applies to both groups.

The development of legislation, main features and operations: Metalliferous mining

New South Wales

NSW metalliferous mining developed mine-site and district check inspector arrangements through sustained union campaigns, especially at Broken Hill. These representatives conducted inspections, investigated incidents, attended inquests, raised disease and major-hazard concerns, and provided workers with an independent channel where fear of victimisation could inhibit direct reporting. Legislative amendments progressively formalised their inspection, investigation, reporting and anti-retaliation protections. From 2004, however, site check inspector provisions were aligned more closely with general OHS representation and the district check inspector role was removed. In 2013, mine-specific site representation in metalliferous mining was replaced by the general workgroup-based HSR model, while coal mining retained mine-wide SSHRs and specialist ISHRs. This created an important divergence: metalliferous HSRs generally represent defined workgroups and do not have the same mine-wide remit, mining-specific expertise, access and investigation powers, or independent industry-level support available in coal. Later reviews acknowledged a possible case for extending ISHR coverage beyond coal but did not initially recommend reform. A 2023 NSW parliamentary inquiry subsequently recommended that the government consider extending ISHRs to metalliferous mines, and the government supported further consideration in 2024. The detailed history, legislative provisions, review evidence and cost discussion are set out in Report 1. For this report, the NSW experience is retained only as a comparator showing the consequences of replacing mine-specific, mine-wide and industry-level representation with general workgroup arrangements.

Queensland

In Queensland, coal and more especially metalliferous mining expanded significantly from the late 1860s, but the first mine safety legislation was not introduced until 1881, and this law didn't cover all mines. As in Broken Hill, there were a significant number of fatalities and serious injuries, even in

[25] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney

[26] These and other changes were noted in the independent audits. Quinlan, M. (2010) *Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2012) *Second Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2014) *Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart.

particular mining districts like Charters Towers.[27] Provisions for workmen inspectors, similar to those in NSW coal mining, had been incorporated into an 1879 mine regulation bill and another in 1889, but neither was enacted. Unions had pressed for these provisions as essential, given mine workers' fears of victimisation and concerns with the competence and impartiality of government mine inspectors, and this became part of the Labor platform in mining districts such as Mount Morgan and then at the colony/state level. A study of Queensland miner attitudes to safety in the late 19th century by Stoodley observed:

There were many cases of managers' neglect of safety precautions, but as a witness before the 1897 Royal Commission on Mining pointed out, it took a strong-minded man to set his judgment against that of the manager, and very few would do it. He was reminded that the law required men to report any dangers to the manager, but he claimed that they would still run the risk of dismissal. He quoted his own experience in reporting defective gear: the manager had insisted it was perfectly safe and warned him that if he did not think it good enough, someone else could soon be found who would use it.[28]

The Amalgamated Workers Association (later part of the Australian Workers' Union – AWU) supported the push by coal miners' unions for check inspectors in 1910, both coal and metalliferous mines being covered by the same mine regulation legislation. Sections 9, 28, 31 and 51 of the 1910 *Mines Regulation Act* empowered miners to appoint two of their number to undertake inspections and this applied to metalliferous miners. However, as elsewhere, implementing the system in districts such as Mount Morgan proved difficult because of fears of victimisation, and the union resolved to amend its rules so members would be compelled to appoint check inspectors and carry out monthly inspections at each mine. A management witness told the Cloncurry Industrial Court that, in the absence of miners appointing check inspectors, union organisers were permitted to enter the Mount Elliott mine but not to talk to or interact with the men.[29]

Unlike in coal mining and Broken Hill, where unions paid for district check inspectors, the AWU favoured the adoption of a Continental European model, adopted in France and Belgium, of workmen's inspectors elected by unions but paid for by the government.[30] Supported by several other unions with members in mining (notably the Federated Engine Drivers and Firemen's Association or FEDFA), this position became the AWU's policy plank in Queensland (and indeed nationally) and was pursued in ministerial deputations in Mount Morgan, Charters Towers and elsewhere.[31] This model appealed to the AWU whose membership extended well beyond mining (including pastoral workers, construction labourers and many other occupations). The 1916 *Mines Regulation Amendment Act* secured the AWU's objective of workmen inspectors, as well as providing other important revisions.

[27] See for example D. Menghetti, "Mine and Town: Health and Safety on Charters Towers" (paper presented to International Mining History Conference, Melbourne, August 1985).
[28] J. Stoodley, "Queensland Miners' Attitudes towards the Need for Safety Regulations in the Late Nineteenth Century," *Labour History*, no. 14 (May 1968): 28–29.
[29] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:42.
[30] For a discussion of these systems see Walters D, & Quinlan M, (2020) An International History of Coalminers' Actions to Voice Resistance to the Appropriation of their Safety and Health, 1870-1925, *Relations Industrielles*, 75(2): 376-399.
[31] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:43.

The Act improved miners' access to inspection reports (s 3 revising s 9 of the 1910–12 Act) and provided for government payment of what were designated 'miners' inspectors' who were removable by the minister (s 5 revisions s 11). In effect, miners' inspectors became departmental officers although they were appointed in elections conducted by the union. Unions were also empowered to appoint representatives to wardens' inquiries held in response to safety incidents (s 14 amending s 31). Like the UK coal miners' unions, in Australia unions rejected this approach, insisting on paying their district check inspectors to support the actual and perceived independence of such officials and the confidence amongst miners that they are working in their interests.[32]

[32] Walters D, and Quinlan M, (2019) Representing workers on occupational safety and health: some lessons from a largely ignored history, *Industrial Relations Journal*, vol.50 no.4 399-414.



Mount Morgan Monumental Tombstone and Memorial including some of those killed in 1908 disaster

By the passage of the 1916 Act, regular inspections of mines had become the norm along with involvement in investigations/inquiries and coronial inquests (indeed the latter was a legislative requirement). The union pushed for an expansion of paid district check inspectors. In July 1917, when the Minister for Mines visited central Queensland, he was informed that the government mines inspector strongly supported their appointment and there 'were many little incidents even in the

company's favour, and the appointment of a permanent check-inspector would carry more weight than the temporary check-inspector.' At the union's 1924 annual conference, delegates requesting that the Mount Morgan check inspector's salary be increased were told that district check inspectors' salaries were paid by the government.[33]

The rollout of check inspectors remained challenging in some locations, such as Mount Isa. Penrose notes that in 1935, the '*Workers Weekly* described the conditions in the mine as "treacherous". Even though there had been two fatal accidents since the mine opened, "the workers have no check-inspector".'[34] However, prior to 1935, there was a district check inspector visiting the mine. In 1931, Labor member for Flinders J Mullan complained bitterly that amendments to the *Mines Regulation Act* had abolished check inspectors, undermining efforts to combat disease that ravaged miners.[35] In 1932, the AWU had persuaded the government to appoint a check inspector for the central and northern region, with an AWU-member ballot to select the appointee.[36] As a result, Jack Real, an AWU district check inspector, was nonetheless visiting the town, conducting inspections and representing miners in coronial inquests by 1934, if not before.[37] Real continued these activities into the early 1950s.[38] In 1954, a Mount Isa Mines miner, Jim O'Brien, was appointed to replace Real as the Australian Workers' Union check inspector for the north-western mining areas, which also included Charters Towers.[39]

The role of check inspectors was periodically endorsed in the press and elsewhere, including Parliament. During a debate on the Mines Regulation Bill in 1958, member for Warrego John Dufficy stated:

> I do not claim to be an expert on mining or safety measures in mines but at one time in my early life I had the duty of assisting a mines check inspector to go through mines to see whether the safety regulations were carried out. That was an excellent provision whereby check inspectors were appointed by the union, and their wages paid by the Government. In essence they were employees of the union, which gave them a degree of freedom from direction by the employer and gave employees a great measure of protection.[40]

Under the current Mining and Quarrying Safety and Health Act 1999, the principal legislation covering non-coal mining and quarries, the Act provides for site safety and health representatives and district worker representatives, as well as site safety and health committees.[41] The legislation was amended in 2024, strengthening the capacity of SSHRs to copy or obtain copies of documents while also requiring them to document their actions if issuing a directive to stop operations. There were also revisions to the powers of District Worker Representatives. As in coal mining, the power of DWRs to

[33] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:43.
[34] Penrose, B. (1993) The Communist Party and Trade Union Work in Queensland in the Third period: 1928-1935, PhD Thesis, University of Queensland, St Lucia, 188.
[35] *Worker* 16 September 1931.
[36] *Townsville Daily Bulletin* 13 October 1932.
[37] *Townsville Daily Bulletin* 9 November 1934, 18 November 1939.
[38] See for example the *Worker* 1 June 1953.
[39] *Mount Isa Mail* 3 December 1954.
[40] Queensland Parliamentary Debates (Hansard) Legislative Assembly 27 March 1958, 2086.
[41] *Queensland Mines* Act, 1990.

suspend operations was in the general sections of the legislation, enabling the Chief Mines Inspector or inspectors to issue such directives.[42] Part 7 of the Act deals with both SSHRs and site safety and health committees. The latter ss98-103 specifies the composition, functions, timing and minutes to be kept by these committees. Sections 84-97 deal with SSHRs, including their appointment/election, necessary qualifications (certificate of competency), removal from office by the Minister, and functions and powers, including the power to stop operations. With regard to their functions and powers, the Act states:

> **91 Functions and powers for area of representation**
>
> If a site safety and health representative has an area of representation within the mine or part of the mine the representative may exercise the powers and perform the functions of a site safety and health representative for the area of representation only.
>
> **92 Functions of site safety and health representatives**
>
> (1) A site safety and health representative has the following functions—
>
> (a) to inspect parts of the operations and participate in inspections and investigations conducted by the site senior executive or a supervisor, inspector, inspection officer or authorised officer;
>
> (b) to review procedures in place at the mine to control the risk to workers so that it is at an acceptable level;
>
> (c) to review the circumstances of injuries, illnesses and high potential incidents;
>
> (d) to consult with supervisors about corrective and preventive action, and about other safety and health matters;
>
> (e) to consult with district workers' representatives, inspectors, advisers and independent experts;
>
> (f) to help in the resolution of safety and health issues;
>
> (g) to investigate complaints from workers about safety and health;
>
> (h) to refer safety and health matters to the site safety and health committee as appropriate.
>
> (2) The site senior executive and supervisors at the mine must give reasonable help to a site safety and health representative in carrying out the representative's functions. Maximum penalty—40 penalty units.
>
> (3) The site senior executive or the site senior executive's representative may accompany the site safety and health representative during an inspection.

[42] *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*, 2024, Part 4.

(4) A site safety and health representative who makes an inspection of the mine must—

(a) make a written report on the inspection; and

(b) give a copy of the report to the site senior executive; and

(c) if the inspection indicates the existence or possible existence of danger, immediately—

(i) notify the site senior executive or the responsible supervisor; and

(ii) send a copy of the report to an inspector.

(5) If a site safety and health representative believes a safety and health management system is inadequate or ineffective, the representative must inform the site senior executive.

(6) If the site safety and health representative is not satisfied the site senior executive is taking the action necessary to make the safety and health management system adequate and effective, the representative must advise an inspector.

(7) The inspector must investigate the matter and report the results of the investigation in the mine record.

93 Powers of site safety and health representative

(1) A site safety and health representative has the following powers—

(a) subject to section 91, to enter any part of the mine at any time to carry out the functions of the site safety and health representative, if reasonable notice is given to the site senior executive or the site senior executive's representative;

(b) to examine any documents relevant to safety and health held by the site senior executive under this Act, if the site safety and health representative has reason to believe the documents contain information required to assess whether procedures are in place at the mine to achieve an acceptable level of risk to workers;

(c) to copy, or to require the site senior executive to give the site safety and health representative within a stated reasonable period a copy of, a document mentioned in paragraph (b);

(d) to require the site senior executive to give the site safety and health representative reasonable help to exercise the site safety and health representative's powers under paragraphs (b) and (c).

(2) If a site safety and health representative asks to copy a document under subsection (1)(c), the site senior executive must give access to the document as soon as reasonably practicable after being asked, unless the site senior executive has a reasonable excuse. Maximum penalty—100 penalty units.

(3) A site senior executive for a mine who is required in a stated reasonable way to help a site safety and health representative under subsection (1)(d) must comply with the requirement. Maximum penalty—100 penalty units.

94 Stopping operations by site safety and health representatives

(1) This section applies if a site safety and health representative reasonably believes operations pose a serious danger to the safety and health of workers at the mine.

(2) The site safety and health representative must first notify and consult with the site senior executive or an appropriate supervisor so that action may be taken to remove the danger to the safety and health of workers.

(3) If consultation is not possible because immediate action to safeguard workers is necessary or if consultation does not lead to agreement on the action to be taken, a site safety and health representative may—

(a) stop the operations or part of the operations; and

(b) evacuate persons to a safe location.

(4) The site safety and health representative must give a written report to each of the following persons about any action taken under subsection (3) and the reasons for the action—

(a) the site senior executive;

(b) an inspector;

(c) a district workers' representative.

95 When operations may be restarted

If action has been taken by the site safety and health representative under section 94(3), the site senior executive must ensure that the operations are not restarted until the risk to workers from the operations is at an acceptable level. Maximum penalty—200 penalty units.

96 Site safety and health representative not to unnecessarily impede production

A site safety and health representative must not unnecessarily impede production at a mine when exercising the representative's powers or performing the representative's functions. Maximum penalty—200 penalty units.

97 Protection of site safety and health representatives performing functions

A mine operator, site senior executive, contractor or other supervisor must not prevent or attempt to prevent a site safety and health representative from performing the representative's functions or penalise a safety and health representative for performing the representative's functions. Maximum penalty—200 penalty units.

Section 108 deals with the nomination and appointment of district workers' representatives, providing that (1) The Minister may appoint up to four persons to be district workers' representatives from nominees for the positions. (2) The term of office of a district workers' representative must not be more than four years. (3) An industrial organisation with members in the mining industry may nominate individuals to be district workers' representatives. (4) The Minister is to appoint, from the persons nominated, persons who satisfy the Minister they— (a) have appropriate competencies and adequate experience to perform the functions of a district workers' representative; and (b) are in a position to adequately represent the safety and health interests of a majority of workers. (5) A district workers' representative is appointed under this Act and not under the Public Sector Act 2022.

Unlike coal mining, s109 provides that the government funds a district workers' representative. '(1) A district workers' representative is entitled to the remuneration and allowances decided by the Minister. (2) The representative holds office on the conditions not provided by this Act decided by the Minister.' Other provisions include

> **110** Termination of appointment (1) The Minister may end the appointment of a district workers' representative by notice if the Minister considers the representative is not performing the representative's functions satisfactorily. (2) The notice must contain the Minister's reasons for ending the appointment of the district workers' representative.
>
> **111** Appointment after termination (1) If a person's appointment as district workers' representative is ended by the Minister, the Minister may appoint another person to be district workers' representative. (2) However, the Minister must not appoint another person to be a district workers' representative unless—(a) the time for filing an appeal under part 13, division 1 has ended; or (b) if an appeal against the Minister's decision has been filed, an Industrial Magistrates Court has confirmed the Minister's decision to end the appointment of the district workers' representative. (3) The provisions of this division about nomination and appointment apply to the appointment.
>
> **112** Filling of temporary vacancy If a person is temporarily unable to perform the functions of a district workers' representative, the Minister may appoint a substitute in the way and for the term the Minister considers appropriate.
>
> **113** *Persons not to pretend to be district workers' representatives if not appointed*. A person not appointed as a district workers' representative must not pretend to be a district workers' representative. 114 District workers' representative restricted to safety and health purposes A district workers' representative must not perform a function or exercise a power of a district workers' representative under this Act for a purpose other than a safety and health purpose. 115 Functions of district workers' representatives (1) A district workers' representative has the following functions—(a) to help, represent and advise workers on matters relating to safety and health; (b) to inspect mines to assess whether the level of risk to the safety and health of workers is at an acceptable level; (c) to participate in inspections by inspectors and inspection officers; (d) to participate in investigations into serious accidents and high potential incidents and other matters related to safety or health at mines; (e) to investigate complaints from workers regarding safety or health at mines; (f) to help in relation to initiatives to improve safety or health at mines. The following persons may accompany the district workers' representative during an inspection—(a) the site senior executive or a person representing

the site senior executive; (b) a site safety and health representative or a person representing the site safety and health representative. (3) A district workers' representative who makes an inspection of the mine must—(a) make a written report on the inspection; and (b) give a copy of the report to the site senior executive and send a copy to an inspector; and (c) if the inspection indicates the existence or possible existence of danger, immediately notify the site senior executive or the responsible supervisor.

114 District workers' representative restricted to safety and health purposes

A district workers' representative must not perform a function or exercise a power of a district workers' representative under this Act for a purpose other than a safety and health purpose. Maximum penalty—40 penalty units.

115 Functions of district workers' representatives

(1) A district workers' representative has the following functions—

(a) to help, represent and advise workers on matters relating to safety and health;

(b) to inspect mines to assess whether the level of risk to the safety and health of workers is at an acceptable level;

(c) to participate in inspections by inspectors and inspection officers;

(d) to participate in investigations into serious accidents and high potential incidents and other matters related to safety or health at mines;

(e) to investigate complaints from workers regarding safety or health at mines;

(f) to help in relation to initiatives to improve safety or health at mines.

(2) The following persons may accompany the district workers' representative during an inspection—

(a) the site senior executive or a person representing the site senior executive;

(b) a site safety and health representative or a person representing the site safety and health representative.

(3) A district workers' representative who makes an inspection of the mine must—

(a) make a written report on the inspection; and

(b) give a copy of the report to the site senior executive and send a copy to an inspector; and

(c) if the inspection indicates the existence or possible existence of danger, immediately notify the site senior executive or the responsible supervisor.

116 Powers of district workers' representatives (1) A district workers' representative has the following powers—(a) to make inquiries about the operations of mines relevant to the safety or health of workers; (b) to enter any part of a mine at any time to carry out the

representative's functions; (c) to examine any documents relevant to safety and health held by persons with obligations under this Act, if the representative has reason to believe the documents contain information required to assess whether procedures are in place at a mine to achieve an acceptable level of risk to workers; (d) to examine safety and health management system documents, including standard work instructions and training records; (e) to copy a document mentioned in paragraph (c) or (d); (f) to require the site senior executive for a mine to give the representative within a stated reasonable period and by a stated reasonable way, including, for example, by email, a copy of a document mentioned in paragraph (c) or (d); (g) to require the person in control or temporarily in control of a mine to give the representative reasonable help in a stated reasonable way in the exercise of a power under any of paragraphs (a) to (f); (h) to issue a directive under section 160(2)(a). (2) A person in control or temporarily in control of a mine required to help the district workers' representative under subsection (1)(g) must comply with the requirement, unless the person has a reasonable excuse. (3) If a district workers' representative asks a person to give access to a document to enable the representative to examine the document under subsection (1)(c) or (d), or to copy the document under subsection (1)(e), the person must give access to the document as soon as reasonably practicable after being asked, unless the person has a reasonable excuse.

117 District workers' representative not to unnecessarily impede production A district workers' representative must not unnecessarily impede production at a mine when exercising the representative's powers, or performing the representative's functions.

118 Inadequate or ineffective safety and health management systems (1) If a district workers' representative believes a safety and health management system is inadequate or ineffective, the representative must advise the site senior executive stating the reasons for the representative's belief. If the district workers' representative is not satisfied the site senior executive is taking the action necessary to make the safety and health management system adequate and effective, the representative must advise an inspector. (3) The inspector must investigate the matter and report the results of the investigation in the mine record.

119 Identity cards (1) The CEO must give each district workers' representative an identity card. (2) The identity card must— (a) contain a recent photograph of the representative; and (b) be signed by the representative; and (c) identify the person as a district workers' representative under this Act. 120 Failure to return identity card A person who ceases to be a district workers' representative must return the person's identity card to the CEO as soon as practicable, but within 21 days, after ceasing to be a district workers' representative, unless the person has a reasonable excuse. 121 Production or display of identity card (1) A district workers' representative may exercise a power in relation to another person only if the representative— (a) first produces the representative's identity card for the other person's inspection; or (b) has the identity card displayed so it is clearly visible to the other person. However, if for any reason it is not practicable to comply with subsection (1) before exercising the power, the district workers' representative must produce the identity card for the other person's inspection at the first reasonable opportunity.

As with coal mining under s158 of the *Mining and Quarrying Safety and Health Act* 1999, district workers' representatives are designated as authorised officials (along with the chief inspector, other inspectors or an inspection officer) with powers to issue directives. The relevant sections state:

> **159 Directive may be given**
>
> An authorised official may give a directive under subdivision 3 or 4.
>
> **Subdivision 3 Directives relating to acceptable level of risk**
>
> **160 When directive may be given**
>
> (1) A directive may be given under this section if an authorised official believes a risk from operations at a mine—
>
> (a) is at an unacceptable level; or
>
> (b) may reach an unacceptable level.
>
> (2) The directive may require a person who has a safety and health obligation in relation to the mine to do 1 or more of the following—
>
> (a) suspend operations in all or part of the mine;
>
> (b) take action stated in the directive, including, for example—
>
> (i) to review the safety and health management system to ensure the system is effective; or
>
> (ii) to carry out a test to decide whether a risk is at an unacceptable level.
>
> (3) A directive to suspend operations under subsection (2)(a) because of a risk mentioned in subsection (1)(a) may be given by—
>
> (a) an inspector; or
>
> (b) an inspection officer; or
>
> (c) a district workers' representative.
>
> (4) A directive to suspend operations under subsection (2)(a) because of a risk mentioned in subsection (1)(b) may be given by—
>
> (a) an inspector; or
>
> (b) a district workers' representative.
>
> (5) A directive to take action stated in the directive under subsection (2)(b) may be given by—
>
> (a) an inspector; or
>
> (b) an inspection officer.

(6) Despite subsection (5), only an inspector may give a directive under subsection (2)(b) that relates to—

(a) a review of the safety and health management system; or

(b) the carrying out of a test to decide whether a risk is at an unacceptable level.

Unlike coal mining, the costs of district workers' representatives are borne by the Queensland government; this was also the case with the workmen inspectors' regime, which operated in Western Australia for much of the 20th century and until 2013, when it was removed as part of the harmonisation of OHS legislation.

Western Australia

In Western Australia, large gold discoveries in the 1890s sparked the rapid development of mining, especially on the Eastern Goldfields (Kalgoorlie, Boulder and Coolgardie), which was associated with a steeply rising toll of fatalities, serious injuries and disease, including the 1897 Mount Charlotte mine disaster (six killed). Provisions for workmen inspectors in the 1895 legislation discussed earlier were restricted to coal miners, but metal miners' unions pressed for similar provisions. The Kalgoorlie miners' union used the 1904 Royal Commission into Ventilation and Sanitation in Mines to urge the appointment of check inspectors like those operating in coal mining. Subsequently, the Commission recommended:

> In view of the importance of ventilation and good sanitary conditions in and about mines to the health of the men employed, it seems to us reasonable that they should themselves have facilities for inspection and report in metalliferous mines in the same way as they have in the collieries. To make the check-inspectors office of the most value they should be permanently engaged in the larger centres, and not merely employees of the mine told off to go round from time to time, though this might be necessary in smaller places. We are of opinion that they should be appointed and removed by the, recognised associations of miners of each district, subject to approval by the Minister for Mines, who should, however, possess full power to dismiss them if he thinks fit; that they should be paid by the associations with the aid of a subsidy from the State, and that they should report through the inspectors of mines.[43]

Following further agitation, s16 of the 1906 *Mines Regulation Act* included a more limited provision covering metalliferous miners, which harkened back to earlier statutes elsewhere:

> The majority of persons employed in any mine may, at their own cost, once in every month, or oftener if they think fit, appoint two of their number or any two practical working-miners, not being mining engineers, to inspect the mine, and the persons so appointed shall be allowed, once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine and to inspect the shafts, levels, planes, working

[43] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:45.

> places, return air-ways, ventilating apparatus, old workings, and machinery. Every facility shall be afforded by the owner, agent, or manager, and all persons in the mine for the purpose of inspection, and the persons appointed shall forthwith make a true report of the result of the inspection, and that report shall be recorded in the Record Book and shall be signed by the persons who make the inspection, and if the report states the existence or apprehended existence of any danger they shall forthwith cause a true copy of the report to be sent to the inspector.[44]

As elsewhere, implementing this provision was problematic due to fears those taking on the post would be victimised, with Labor parliamentarians arguing union secretaries should be able to act in the role in 1909. The State Mining Engineer observed miners had 'more confidence in men picked from among themselves' than government inspectors. A bill to address these issues in 1912-13, which was rebuffed by a mine owner, influenced the Legislative Council, but in 1915 a state Labor government amended the *Mines Regulation Act* to provide for workmen inspectors (with at least five years' mining experience) elected by those employed 'in the mines in the several mining districts' and subject to approval by the Minister. In justifying these changes, detailed reference was made to the toll of death, injury and serious incidents in metalliferous mines, and comparisons drawn with statistics for Broken Hill.[45]

The 1915 legislation introduced the option of district-based workmen inspectors, less susceptible to intimidation. Reflecting a more Continental European approach, s 7 of the Act designated workmen inspectors as a third category of inspector (the other two being special and district government inspectors), subject to ministerial direction. The minister determined the number of days per week they could spend on activities (which varied from mine to mine) and could remove a workman inspector from office. Under s 11, they were empowered to conduct inspections to determine compliance with the Act, to include their reports in the mine record book, and to make inquiries and interview witnesses to 'accidents.' Significantly, under s 11(d) workmen inspectors could, with the approval of a government inspector, initiate prosecutions. Interfering with or obstructing their appointment or activities was an offence (maximum penalty £50). Proposals to give them additional discretionary powers had to be abandoned. Further, a conservative-dominated Legislative Council inserted requirements that they be British subjects. As in other jurisdictions, parliamentary debates repeatedly referred to their pivotal role in enabling miners to raise OHS issues without fear of retribution.[46] Chakraborti argues that the Act gave workmen inspectors' powers superior to those bestowed on health and safety representatives under Western Australia's current (2018) OHS legislation and contributed to a significant reduction in the incidence of fatalities, which fell from 2.49 per 1,000 workers in 1903, to 1.49 per 1,000 workers in 1918.[47]

As elsewhere, workmen inspectors undertook regular inspections of mines in their districts (compiling reports then tabled at union meetings), attended coronial inquests and funerals, and contributed their

[44] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:45.
[45] *Westralian Worker* 15 October 1915.
[46] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:47.
[47] S. Chakraborti, "The Influence of Safety and Health Representatives in the Western Australian Mining Industries" (PhD thesis, Curtin University, 2018), 41.

knowledge to assessing hazards and revising regulatory standards.[48] Miners in districts without a workmen's inspector lobbied for their appointment.[49] The AWU also pressed for the appointment of check inspectors when, during the Great Depression, the government failed to fill vacant district government mine inspector positions, arguing this was a more cost-efficient option.[50] The AWU also sought to include health and safety provisions in industrial awards covering the mining industry. In 1939, the proposed Mining Award included provisions on the supply of drinking water, controlling dust in dry crushing plants, and with regard to ventilation check inspectors and a workmen's representative to be present when temperatures were taken (who were to be paid for by the company).[51]

The position of workmen's inspector was retained in the *Mines Regulation Act* 1946. As in other jurisdictions, the role of workmen inspectors periodically came up during inquiries and legislative reviews, including a major legislative overhaul in 1994. Provisions were still in force when the *Mines Safety and Inspection Act* 1994[52] were amended in 2006 and after the Kenner Review of 2009.[53] At this time, s19 provided that

> Employee's inspectors are to be appointed following their election in accordance with the regulations by a majority of persons who are employed at the mines in the regions designated for the purpose by the State mining engineer and who exercise their vote. (2) To be eligible for appointment as an employee's inspector, a person must hold a certificate of competency as an underground supervisor or, in relation to underground coal mines, a deputy and have been engaged in general practical underground mining work as a working miner for not less than 5 years, but the State mining engineer may, in respect of a particular sector of the mining industry or a particular region of the State and in special circumstances, accept the eligibility of persons with lesser qualifications or experience. (3) Every employee's inspector is to be appointed for a term of not more than 4 years and employed on such terms and conditions as are determined by the Minister after consultation with the Minister for Public Sector Management. (4) An employee's inspector is eligible for reappointment following re-election. (5) An employee's inspector may be removed from office by the Minister on the grounds of misconduct, neglect of duty or incompetence.
>
> Under s20, the Mines Minister could also appoint eligible persons to be assistant inspectors of mines (an eligible person had to have served not less than 12 years in total as an employee's inspector or a workmen's inspector). In essence, these provisions were similar to those found in NSW and Queensland.

Under s21(2)

[48] See for example *Westralian Worker* 21 August 1925, 20 January 1950, 17 February 1950.
[49] *Norseman Esperance* News 22 September 1950.
[50] *Westralian Worker* 13 October 1932.
[51] *Westralian Worker* 10 March 1939.
[52] Western Australia *Mines Safety and Inspection Act,* 1994
[53] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth.

> An employee's inspector or an assistant inspector may, for the purposes of this Act —(a) exercise any of the powers conferred on a district inspector by subsection (1) except for those conferred by paragraphs (m) and (n) of that subsection; (b) with the authority of the State mining engineer, initiate and conduct prosecutions of persons for offences under this Act; (c) if a district inspector so directs, obtain written statements from potential witnesses, and appear at inquiries held regarding mining accidents, and at inquests and call and examine witnesses and cross-examine witnesses. (3) In exercising any power under this Act, an inspector or an assistant inspector may be accompanied by any other person whose assistance the inspector or assistant inspector considers necessary…

In s23, the Act also required liaison between employees' inspectors and safety and health representatives. Under subsection (1)

> An employee's inspector who performs any function with respect to safety and health matters at a mine must liaise with the safety and health representative (if any) and the safety and health committee (if any) at the mine. (1a) In subsection (1) —"the safety and health representative" — (a) if there is more than one safety and health representative for the mine, means any such representative who has functions relevant to the matters concerned; and (b) includes a safety and health representative elected for a group of employees pursuant to a scheme under section 55A if any member of the group works at the mine. Subsection (2) also empowered the employee's inspector to report to a trade union on matters concerning safety factors and the safety of working conditions at a mine if a member of that trade union is employed at the mine and the subject matter of the report concerns the member or the member's work at the mine.

Section 51 identified the functions of safety and health representatives as:

> (1) The functions of a safety and health representative are, in the interests of safety and health at the mine for which the representative was elected — (a) to inspect the mine, or any part of the mine — (i) at such times as are agreed with the manager of the mine; or (ii) where the representative has not inspected the mine, or that part of the mine, in the preceding 30 days, at any time upon giving reasonable notice to the manager; and (b) in the event of an accident, a dangerous occurrence, or a risk of imminent and serious injury to, or imminent and serious harm to the health of, any person, immediately to carry out an appropriate investigation in respect of the matter; and (c) to keep informed as to the safety and health information provided by the manager of the mine or an employer in accordance with this Act and liaise as necessary with the department and other public sector and private bodies; And (d) immediately to report to the employer concerned and to the manager of the mine any hazard or potential hazard to which any person is, or might be, exposed at the mine that comes to the representative's notice; and (e) where there is a safety and health committee for the mine, to refer to that committee any matters that the representative thinks the safety and health committee should consider; and (f) to consult and cooperate with the manager of the mine and employers on all matters relating to the safety or health of persons at the mine; and (g) to liaise with the employees, employers, and employee's inspectors in accordance with section 25, regarding matters concerning the safety or health of persons at the mine. (2) A safety and health representative for a mine has such powers as are necessary for the carrying

out of the representative's functions under this Part and in particular, but without limiting the generality of the preceding statement, may, where requested to do so by an inspector, accompany an inspector while the inspector is carrying out, at the mine, any of the inspector's functions under this Act. (3) A safety and health representative incurs no civil liability arising from the representative's performance of, or failure to perform, in good faith any function of a safety and health representative under this Act. (4) If a scheme has been established under section 55A, the references in this section to "the mine" and "a mine" include (a) if the scheme applies to more than one mine, each mine to which the scheme applies; and (b) if under the scheme a safety and health representative is elected for a group of employees, each mine or part of a mine at which any member of the group works.

Sections 54-56 dealt with the election of SHRs while s57 specified their term to be two years and the conditions under which their term ended.

The Kenner (2009) review[54] of the *Mines Safety and Inspection Act* recommended that the position of employee's inspector be retained (with the same qualifications) though as an appointed, not elected position, and retitled Employees Mining Officer (or similar) with all the powers of government appointed inspectors (i.e., removing the omissions in the 1994 Act). It was recommended that the role be refocused on supporting HSRs, particularly in risk management principles and procedures. Kenner also recommended abolishing the position of assistant inspector. The employee inspector position appears to have been abolished not due to any particular criticism, but as part of the national harmonisation of workplace health and safety legislation in 2013, in which mining was integrated into WHS law, although a separate set of mine safety regulations was retained and revised in 2022. The 2022 Regulation included provisions on the election, powers and training of mining HSRs (sections 18-22), granting access to lead and asbestos registers as well as requiring the mine operator to provide them with copies of any regulatory notice issued and the mine record.[55] Part 10 on managing risks also required the mine operator to comply with a representative request to review a control measure.

Beyond this regulation, the mechanisms for mine worker participation in OHS in Western Australia are governed by the *Work Health and Safety Act*, 2020. As with Tasmania (see below), this is based on the model legislation adopted as part of the national harmonisation process inaugurated in 2011. Sections 47 to 49 provide a duty to consult with workers:

47. Duty to consult workers

(1) The person conducting a business or undertaking must, so far as is reasonably practicable, consult, in accordance with this Division and the regulations, with workers who carry out work for the business or undertaking who are, or are likely to be, directly affected by a matter relating to work health or safety. Penalty for this subsection: (a) for an individual, a fine of $25 000; (b) for a body corporate, a fine of $115 000.

(2) If the person conducting the business or undertaking and the workers have agreed to procedures for consultation, the consultation must be in accordance with those procedures.

[54] Kenner was a member of the Western Australian Industrial Relations Commission and chair of the Coal Industry Tribunal of Western Australia.
[55] Western Australia, *Work Health and Safety (Mines) Regulation*, 2022

(3) The agreed procedures must not be inconsistent with section 48.

48. Nature of consultation

(1) Consultation under this Division requires — (a) that relevant information about the matter is shared with workers; and (b) that workers be given a reasonable opportunity —(i) to express their views and to raise work health or safety issues in relation to the matter; and (ii) to contribute to the decision-making process relating to the matter; and (c) that the views of workers are taken into account by the person conducting the business or undertaking; and (d) that the workers consulted are advised of the outcome of the consultation in a timely manner.

(2) If the workers are represented by a health and safety representative —(a) the consultation must involve the health and safety representative so far as is reasonably practicable; and (b) without limiting paragraph (a), the person conducting the business or undertaking must make all reasonable efforts to carry out the consultation at times and places, or otherwise in ways, that are convenient for both the workers and the health and safety representative.

49. When consultation is required

Consultation under this Division is required in relation to the following health and safety matters —(a) when identifying hazards and assessing risks to health and safety arising from the work carried out or to be carried out by the business or undertaking; (b) when making decisions about ways to eliminate or minimise those risks; (c) when making decisions about the adequacy of facilities for the welfare of workers; (d) when proposing changes that may affect the health or safety of workers; (e) when making decisions about the procedures for (i) consulting with workers; or (ii) resolving work health or safety issues at the workplace; or (iii) monitoring the health of workers; or (iv) monitoring the conditions at any workplace under the management or control of the person conducting the business or undertaking; or (v) providing information and training for workers; (f) when carrying out any other activity prescribed by the regulations for the purposes of this section.

Sections 50 to 67 deal with the appointment/election of HSRs and several other matters. As noted elsewhere in this report, HSRs represent a particular workgroup. Once one, or more workers, have made a request for HSRs, sections 51-54 deal with the determination of one or more workgroups. This is undertaken through a negotiation between the person conducting the business or undertaking (PCBU) and the workers. In practice (as described in the NSW Report and as is also the case in Western Australia), the result has been the appointment of multiple HSRs at a workplace – and this is the case in Western Australian mines for which we were able to obtain information (see also Chapter 6). Sections 55 to 59 enable HSRs to be appointed to represent multiple workplaces.

Sections 68 and 69 specify the powers and functions of HSRs:

68. Powers and functions of health and safety representatives

(1) The powers and functions of a health and safety representative for a work group are — (a) to represent the workers in the work group in matters relating to work health and safety; and (b) to monitor the measures taken by the person conducting the relevant business or undertaking or that person's representative in compliance with this Act in relation to workers

in the work group; and (c) to investigate complaints from members of the work group relating to work health and safety; and (d) to inquire into anything that appears to be a risk to the health or safety of workers in the work group arising from the conduct of the business or undertaking.

(2) In exercising a power or performing a function, the health and safety representative may — (a) inspect the workplace or any part of the workplace at which a worker in the work group works — (i) at any time after giving reasonable notice to the person conducting the business or undertaking at that workplace; and (ii) at any time, without notice, in the event of an incident, or any situation involving a serious risk to the health or safety of a person emanating from an immediate or imminent exposure to a hazard; and (b) accompany an inspector during an inspection of the workplace or part of the workplace at which a worker in the work group works; and (c) with the consent of a worker that the health and safety representative represents, be present at an interview concerning work health and safety between the worker and — (i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (d) with the consent of 1 or more workers that the health and safety representative represents, be present at an interview concerning work health and safety between a group of workers, which includes the workers who gave the consent, and — (i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (e) request the establishment of a health and safety committee; and (f) receive information concerning the work health and safety of workers in the work group; and (g) whenever necessary, request the assistance of any person.

Note for this subsection: A health and safety representative also has a power under Division 6 of this Part to direct work to cease in certain circumstances and under Division 7 of this Part to issue provisional improvement notices.

(3) Despite subsection (2)(f), a health and safety representative is not entitled to have access to any personal or medical information concerning a worker without the worker's consent unless the information is in a form that — (a) does not identify the worker; and (b) could not reasonably be expected to lead to the identification of the worker.

(3A) If a person assisting a health and safety representative under subsection (2)(g) requires access to the workplace to provide the assistance, the health and safety representative must give notice of the assistant's proposed entry to —(a) the person conducting the business or undertaking for whom the representative's work group carries out the work at the workplace; and (b) the person with management or control of the workplace.

(3B) A notice under subsection (3A) must — (a) comply with the regulations; and (b) be given during the usual working hours at the workplace at least 24 hours, but not more than 14 days, before the assistant's entry.

(4) Nothing in this Act imposes or is taken to impose a duty on a health and safety representative in that capacity.

69. Powers and functions generally limited to the particular work group

(1) A health and safety representative for a work group (the ***relevant work group***) may exercise powers and perform functions under this Act only in relation to matters that affect, or may affect, workers in the relevant work group.

(2) Subsection (1) does not apply if —(a) there is a serious risk to health or safety emanating from an immediate or imminent exposure to a hazard that affects or may affect a member of another work group; or (b) a member of another work group asks for the representative's assistance, and the health and safety representative (and any deputy health and safety representative) for that other work group is found, after reasonable inquiry, to be unavailable.

(3) In this section — ***another work group*** means another work group of workers carrying out work for — (a) a business or undertaking to which the relevant work group relates; or (b) any other business or undertaking if any of the workers in the work group carry out work at a workplace at which any of the workers in the relevant work group also carry out work.

Sections 70 to 74 deal with PCBUs' obligations to HSRs. Section 70 imposes obligations to provide information to HSRs, to consult in specific circumstances, to provide resources to HSRs, and to enable them to accompany an inspector. Section 71 places a series of qualifications on s70.

70. General obligations of person conducting business or undertaking

(1) The person conducting a business or undertaking must — (a) consult, so far as is reasonably practicable, on work health and safety matters with any health and safety representative for a work group of workers carrying out work for the business or undertaking; and (b) confer with a health and safety representative for a work group, whenever reasonably requested by the representative, for the purpose of ensuring the health and safety of the workers in the work group; and (c) allow any health and safety representative for the work group to have access to information that the person has relating to — (i) hazards (including associated risks) at the workplace affecting workers in the work group; and (ii) the health and safety of the workers in the work group; and (d) with the consent of a worker that the health and safety representative represents, allow the health and safety representative to be present at an interview concerning work health and safety between the worker and — (i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (e) with the consent of 1 or more workers that the health and safety representative represents, allow the health and safety representative to be present at an interview concerning work health and safety between a group of workers, which includes the workers who gave the consent, and —(i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (f) provide any resources, facilities and assistance to a health and safety representative for the work group that are reasonably necessary or prescribed by the regulations to enable the representative to exercise the representative's powers and perform the representative's functions under this Act; and (g) allow a person assisting a health and safety representative for the work group to have access to the workplace if that is necessary to enable the assistance to be provided; and (h) permit a health and safety representative for the work group to accompany an inspector during an inspection of any part of the workplace where a worker in the work group works; and (i) provide any other assistance to the health and safety representative for the work group

that may be required by the regulations. Penalty for this subsection: (a) for an individual, a fine of $12 500; (b) for a body corporate, a fine of $55 000.

(2) The person conducting a business or undertaking must allow a health and safety representative to spend such time as is reasonably necessary to exercise the representative's powers and perform the representative's functions under this Act. Penalty for this subsection: (a) for an individual, a fine of $12 500; (b) for a body corporate, a fine of $55 000.

(3) Any time that a health and safety representative spends for the purposes of exercising the representative's powers or performing the representative's functions under this Act must be with the pay that the representative would otherwise be entitled to receive for performing the representative's normal duties during that period.

71. Exceptions from obligations under section 70(1)

(1) This section applies despite section 70(1).

(2) The person conducting a business or undertaking must not allow a health and safety representative to have access to any personal or medical information concerning a worker without the worker's consent unless the information is in a form that — (a) does not identify the worker; and (b) could not reasonably be expected to lead to the identification of the worker. Penalty for this subsection: (a) for an individual, a fine of $12 500; (b) for a body corporate, a fine of $55 000.

(3) The person conducting a business or undertaking is not required to give financial assistance to a health and safety representative for the purpose of the assistance referred to in section 70(1)(g).

(4) The person conducting a business or undertaking is not required to allow a person assisting a health and safety representative for a work group to have access to the workplace — (a) if the assistant has had the assistant's IR entry authority revoked; or (b) during any period that the assistant's IR entry authority is suspended.

(5) The person conducting a business or undertaking may refuse on reasonable grounds to grant access to the workplace to a person assisting a health and safety representative for a work group.

(5A) The reasonable grounds under subsection (5) include the failure of the health and safety representative to give notice under section 68(3A).

(6) If access is refused to a person assisting a health and safety representative under subsection (5), the health and safety representative may ask the regulator to appoint an inspector to assist in resolving the matter.

Section 72 deals with the obligation to train HSRs. This provides for generic training not one specifically focused on the needs of the high hazard mining industry. The training package must also be approved by the Work Health and Safety Commission, as required under the regulations, and chosen by HSRs. This differs from the situation in Tasmania, even though both have adopted the model WHS legislation (see below).

72. Obligation to train health and safety representatives

(1) The person conducting a business or undertaking must, if requested by a health and safety representative for a work group for that business or undertaking, allow the health and safety representative to attend a course of training in work health and safety that is — (a) approved by the Work Health and Safety Commission; and (b) a course that the health and safety representative is required under the regulations to attend; and (c) chosen by the health and safety representative.

(2) The person conducting the business or undertaking must — (a) as soon as practicable within the period of 3 months after the day on which the request is made, allow the health and safety representative time off work to attend the course of training; and (b) pay the course fees and any other reasonable costs associated with the health and safety representative's attendance at the course of training.

(3) If —(a) a health and safety representative represents a work group of the workers of more than 1 business or undertaking; and (b) the person conducting any of those businesses or undertakings has complied with this section in relation to the representative, each of the persons conducting those businesses or undertakings is to be taken to have complied with this section in relation to the representative.

(4) Any time that a health and safety representative is given off work to attend the course of training must be with the pay that the representative would otherwise be entitled to receive for performing the representative's normal duties during that period.

(5) If agreement cannot be reached between the person conducting the business or undertaking and the health and safety representative within the time required by subsection (2) as to the matters set out in that subsection, either party may ask the regulator to appoint an inspector to decide the matter.

(6) The inspector may decide the matter in accordance with this section.

(7) The person conducting the business or undertaking must then — (a) allow the health and safety representative to attend the course of training at the time decided by the inspector; and (b) pay the costs decided by the inspector. Penalty for this subsection: (a) for an individual, a fine of $12 500; (b) for a body corporate, a fine of $55 000.

Sections 84 to 86 deal with workers' right to cease unsafe work and the power of HSRs to direct a cessation of work.

84. Right of worker to cease unsafe work

(1) A worker may cease, or refuse to carry out, work if the worker has a reasonable concern that to carry out the work would expose — (a) the worker to a serious risk to their health or safety emanating from an immediate or imminent exposure to a hazard; or (b) any other person to a serious risk to their health or safety emanating from an immediate or imminent exposure to a hazard.

(2) A police officer must not cease, or refuse to carry out, work under this section if the ceasing, or refusal to carry out, work would affect adversely, or could reasonably be expected to affect adversely, a covert operation or a dangerous operation.

85. Health and safety representative may direct that unsafe work cease

(1) A health and safety representative may direct a worker who is in a work group represented by the representative to cease work if the representative has a reasonable concern that to carry out the work would expose the worker to a serious risk to the worker's health or safety emanating from an immediate or imminent exposure to a hazard.

Note for this subsection:

If the health and safety representative's concern relates to 2 or more workers in the work group, a single direction to cease work may be given to all or some of those workers as a group.

(2) However, the health and safety representative must not give a worker a direction to cease work unless the matter is not resolved after — (a) consulting about the matter with the person conducting the business or undertaking for whom the worker is carrying out work; and (b) attempting to resolve the matter as an issue under Division 5 of this Part.

(3) The health and safety representative may direct the worker to cease work without carrying out that consultation or attempting to resolve the matter as an issue under Division 5 of this Part if the risk is so serious and immediate or imminent that it is not reasonable to consult before giving the direction.

(4) The health and safety representative must carry out the consultation as soon as practicable after giving a direction under subsection (3).

(5) The health and safety representative must inform the person conducting the business or undertaking of any direction given by the health and safety representative to a worker under this section.

(6) A health and safety representative cannot give a direction under this section unless the representative has — (a) completed initial training prescribed by the regulations referred to in section 72(1)(b); or (b) previously completed that training when acting as a health and safety representative for another work group; or (c) completed training equivalent to that training under a corresponding WHS law.

(7) A health and safety representative cannot give a direction under this section if compliance with the direction would affect adversely, or could reasonably be expected to affect adversely, a covert operation or a dangerous operation.

86. Worker to notify if ceases work

A worker who ceases work under this Division must — (a) as soon as practicable, notify the person conducting the business or undertaking that the worker has ceased work under this

Division unless the worker ceased work under a direction from a health and safety representative; and (b) remain available to carry out suitable alternative work.

Sections 90 to 100 deal with the issuing of provisional improvement notices (PINs) by HSRs:

90. Provisional improvement notices

(1) This section applies if a health and safety representative reasonably believes that a person — (a) is contravening a provision of this Act; or (b) has contravened a provision of this Act in circumstances that make it likely that the contravention will continue or be repeated.

(2) The health and safety representative may issue a provisional improvement notice requiring the person to — (a) remedy the contravention; or (b) prevent a likely contravention from occurring; or (c) remedy the things or operations causing the contravention or likely contravention.

(3) However, the health and safety representative must not issue a provisional improvement notice to a person unless the representative has first consulted the person.

(4) A health and safety representative cannot issue a provisional improvement notice unless the representative has — (a) completed initial training prescribed by the regulations referred to in section 72(1)(b); or (b) previously completed that training when acting as a health and safety representative for another work group; or (c) completed training equivalent to that training under a corresponding WHS law.

(5) A health and safety representative cannot issue a provisional improvement notice in relation to a matter if an inspector has already issued (or decided not to issue) an improvement notice or prohibition notice in relation to the same matter.

91. Provisional improvement notice to be in writing

A provisional improvement notice must be in writing.

92. Contents of provisional improvement notice

A provisional improvement notice must state — (a) that the health and safety representative believes the person — (i) is contravening a provision of this Act; or (ii) has contravened a provision of this Act in circumstances that make it likely that the contravention will continue or be repeated; and (b) the provision the representative believes is being, or has been, contravened; and (c) briefly, how the provision is being, or has been, contravened; and (d) the day, no earlier than the 8th day after the day on which the notice is issued, by which the person is required to remedy the contravention or likely contravention.

93. Provisional improvement notice may include recommendations to remedy contravention

(1) A provisional improvement notice may include recommendations concerning the measures that may be taken to remedy the contravention, prevent the likely contravention, or the matters causing the contravention or likely contravention, to which the notice relates.

(2) It is not an offence to fail to comply with the recommendations in a notice.

94. Minor changes to provisional improvement notice

A health and safety representative may make minor changes to a provisional improvement notice — (a) for clarification; or (b) to correct errors or references; or (c) to reflect changes of address or other circumstances.

95. Issue of provisional improvement notice

A provisional improvement notice may be issued to a person in accordance with section 209.

96. Health and safety representative may cancel notice

The health and safety representative may at any time cancel a provisional improvement notice issued to a person by written notice given to that person.

97. Display of provisional improvement notice

(1) A person to whom a provisional improvement notice is issued must as soon as practicable display a copy of the notice in a prominent place at or near the workplace, or part of the workplace, at which work is being carried out that is affected by the notice. Penalty for this subsection: (a) for an individual, a fine of $5 500; (b) for a body corporate, a fine of $30 000.

(2) A person must not intentionally remove, destroy, damage or deface a notice displayed under subsection (1) during the period that the notice is in force. Penalty for this subsection: (a) for an individual, a fine of $5 500; (b) for a body corporate, a fine of $30 000.

98. Formal irregularities or defects in notice

A provisional improvement notice is not invalid only because of — (a) a formal defect or irregularity in the notice unless the defect or irregularity causes or is likely to cause substantial injustice; or (b) a failure to use the correct name of the person to whom the notice is issued if the notice sufficiently identifies the person.

99. Offence to contravene a provisional improvement notice

(1) This section applies if a provisional improvement notice has been issued to a person, subject to section 100(4). (2) The person must comply with the provisional improvement notice within the time specified in the notice. Penalty for this subsection: (a) for an individual, a fine of $55 000; (b) for a body corporate, a fine of $285 000.

100. Request for review of provisional improvement notice

(1) Within 7 days after the day on which a provisional improvement notice is issued to a person — (a) the person to whom it was issued; or (b) if the person is a worker, the person conducting the business or undertaking at the workplace at which the worker carries out work, may ask the regulator to appoint an inspector to review the notice.

(2) A person who makes a request under subsection (1) must, as soon as practicable, inform the health and safety representative of the request.

(3) Subsection (4) applies if a person has — (a) made a request under subsection (1); and (b) informed the health and safety representative of the request or taken all reasonable steps to do so. (4) The operation of the provisional improvement notice is stayed until the inspector makes a decision on the review.

With regard to inspection/HRs interaction, under s164(2) (2) 'An inspector must, as soon as practicable after entry to a workplace or suspected workplace, take all reasonable steps to notify the following persons of the entry and the purpose of the entry: (a) the relevant person conducting a business or undertaking at the workplace; (b) the person with management or control of the workplace; (c) any health and safety representative for workers carrying out work for that business or undertaking at the workplace.' This provision is qualified by s164(3): 'However, an inspector is not required to notify any person if to do so would defeat the purpose for which the place was entered or cause unreasonable delay.'

Taking the foregoing provisions as a whole, the following observations may be made. Compared with the SSHR provisions under Queensland mine safety legislation (and for coal miners in NSW), there are several significant differences. First, while HSRs are able to undertake inspections, their powers in this regard are not as formally stipulated, nor is there an explicit obligation for them to make reports of these inspections. This not only reflects the specific history of worker representation provisions in mining, but it also has implications for current practice, notably that such inspections are viewed as a routine practice for SSHRs, while this is not the case with HSRs, a difference which was reinforced by interview/workgroup responses described in later chapters of this report (including the chapter on Western Australia). Second, compared with SSHRs, HSRs have no explicit powers to request documentation on safety management systems or to be notified of specified information. Third, as already noted and enunciated in s69, HSRs' powers are limited to a specific workgroup, except in very particular situations, namely where there is an imminent and serious risk to workers. Fourth, the training requirements for HSRs are generic. In Queensland, by way of contrast, ISHRs run the SSHR training conferences, which are primarily funded by the MEU. This list of differences is not exhaustive. It is simply meant to illustrate the very significant differences between the powers and functions of HSRs and SSHRs. Those given to HSRs were framed to cover a wide range of work settings/sectors, while those given to SSHRs in Queensland mine-safety legislation (for example) were framed to address the specific nature and needs of the mining industry.

Tasmania

Coal mining began in Tasmania in the 1830s and grew from the 1850s, but metalliferous mining became more important following gold discoveries in Northern Tasmania and significant tin, lead and silver discoveries in the 1880s, especially on the island's west coast. Mine safety legislation was first enacted in 1881, but a concerted campaign for check inspectors only began two decades later. The campaign, pointed to check inspector regimes operating in Broken Hill and Western Australia, and argued worker-elected check inspectors would increase miners' confidence and relieve pressures on government inspectors. In 1911, the *Mining Act* was amended with section 23 enabling the majority of members in an underground mine to appoint, at their own cost, two miners with at least five years' experience to inspect any part of the mine, its machinery and workings once a month, or more often

if they were considered unsafe, and to inspect the mine's report book. A written copy of their report was to be provided to the mine owner or manager and, if it referred to apprehended danger, forwarded to the district mine inspector. Interference in check inspector elections or activities was also prohibited.

Echoing arguments elsewhere, the AMA's Zeehan branch was dissatisfied with the amendment. The branch believed that tying appointments to the mine made those elected too vulnerable to victimisation. At the west coast's large North Mount Lyell mine, General Manager Robert Sticht and Mine Manager Russell Murray continued to resist the union's push for improving hazardous conditions, and both used disparaging terms to describe miners – such as the 'usual derelicts' and 'very low life.' Mount Lyell's high fatality rate had been singled out during the union campaign for check inspectors, but even as ballots proceeded at other mines, Sticht delayed their appointment in defiance of the legislation until the Board of Directors intervened. Stitch had resisted efforts to deal with dust hazards (like water-spraying drills) or improved ground support, in June 1912, standing down the entire workforce for a 'breach of discipline' after they walked out when a miner was killed in rockfall – the 16th fatality at the mine and the fifth rockfall-related fatality at the mine. With masterful understatement, the *Age* reported the mine was plagued with 'misfortune' after a rockfall killed another three miners in September 1912. In early October, the check inspectors were denied permission to inspect the workings, and the miners struck, expressing grave safety concerns. Their concerns centred on working areas, but focus was placed on the single means of egress, which was raised both at a meeting of miners and by the two check inspectors when they eventually inspected the mine on 8 October. The dangers of a single egress had been well known since the 1862 Hartley Colliery (UK), when the collapse of an engine beam blocked a shaft, resulting in the death of 204 miners. It was prohibited by laws in other states, like the NSW *Coal Mines Regulation Act* 1902. The AMA raised the issue with the government mines inspector, C. H. Curtain, in June 1912, four months before the disaster. The check inspectors' concerns about egress influenced a mine inspector, who amended his telegrammed report to the Chief Inspector. Russell Murray, however, denied there was a danger (and continued to do so at the Royal Commission). The miners resumed work while the union sought government action over safety and the role and powers of workmen inspectors.[56]

On Saturday 12 October, a fire 700 feet underground trapped many miners. A number ultimately escaped, but 42 died of carbon monoxide poisoning. In the aftermath of the disaster, the Labor opposition accused the Tasmanian government of manifest failings. The subsequent Royal Commission heard evidence of thwarted efforts by check inspectors to raise safety concerns at the mine, including egress, before the fire. Evidence of failings by government inspectors that gave an ironic twist to the Chief Inspector's earlier discomfort with check inspectors was skated over. The Royal Commission's findings focused on the fire (and the failure to recognise this risk) rather than the well-signalled inadequacy of escape routes. Drawing on company records, Schulze argued the company's lawyers managed to manipulate the evidence in ways that minimised management's culpability.[57] The Royal Commission recommendations largely followed those suggested by the Chief Mines Inspector, with legislative changes that all but ignored the role of workmen inspectors. The

[56] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:49-50.
[57] P. Schulze, "The North Mount Lyell Disaster: A Miscarriage of Justice," *Journal of Australasian Mining History*, no. 9 (2011): 94–116.

Mines and Work Regulation Act 1915 prohibited single-shaft egress in coal mines and amended the workmen inspector provision so miners could appoint 'other persons' with at least five years' mining experience. Passed during a short-lived Labor administration, this Act provided support for district inspectors, reducing the opportunity for their intimidation by mine managers. As a sop to mine owners, a new subclause made it an offence for check inspectors to conduct inspections for any purpose other than a bona fide one.

In essence, Tasmania had opted for the coal mining model rather than the Continental European model of government-paid workmen's inspectors. These provisions survived until all mining legislation was repealed as part of the post-Robens rationalisation of OHS legislation. Mining was entirely incorporated under general OHS legislation, the only mining-specific provisions being those pertaining to the Chief Mines Inspector. The short-sightedness of this was made manifest by a series of serious incidents, but most notably by the independent investigation and coronial inquest that followed the 2006 Beaconsfield mine fatality/entrapment, and a series of biennial audits of the mines inspectorate which had been recommended by the coroner and were undertaken in 2010, 2012, 2014 and 2016-17.[58] Significant changes that followed Beaconsfield included placing the mine under what effectively amounted to a safety-case regime when it reopened, and additional resourcing for the inspectorate, including the appointment of a second mining-engineering-qualified inspector. This amounted to a definite improvement, but as the independent audits found, attracting and retaining sufficient suitably qualified and experienced mine inspectors remained a challenge. These challenges continued after the audits and required the current Chief Mines Inspector to appoint his predecessor on a series of contracts (albeit mutually acceptable to both) and to arrange for experienced Western Australian mine inspectors to visit and undertake some activities in the state (again valuable but not an alternative to addressing insufficient resources). Further, with only one coal mine, the inspectorate lacks anyone with expertise on the hazards specific to this type of mining and is reliant on periodic visits from persons with that expertise on the mainland (including the NSW ISHR just referred to and the General Vice President of the MEU, Stephen Smyth).

The independent audits addressed several serious deficiencies identified by the Beaconsfield Inquiry and Coronial Inquest, including inadequacies in mine-specific regulatory requirements, worker representation, and the need for closer collaboration of site representatives with inspectors. For example, the 2016-17 review states that 'site workers representatives should be consulted whenever an inspector attends any site.'[59] Another significant issue has been the almost glacial progress towards addressing deficiencies in legislative requirements relevant to mining. A Legislative Council Select Committee undertook an inquiry into mine safety regulation and reported in 2009, confirming the inspectorate's chronic understaffing. But the inquiry's report framed its conclusions and recommendations as slightly extending requirements for the mining industry, while still very much within the rubric and philosophy of post-Robens OHS legislation. While reference was made to district workmen's' inspectors, the report quoted extensively from industry/employers and regulatory

[58] Quinlan, M. (2010) *First Audit of Mine Safety Unit and Office of Chief Mines Inspector Workplace Standards Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2012) *Second Audit of Mine Safety Unit and Office of Chief Mines Inspector Workplace Standards Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2014) *Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart; Rowan, G (2017) Audit of the Office of Chief Inspector of Mines Tasmania, Workplace Standards Tasmania, Hobart.

[59] Rowan, G (2017) Audit of the Office of Chief Inspector of Mines Tasmania, Workplace Standards Tasmania, Hobart, 25

witnesses who emphasised the importance of OHS management systems and saw a limited role for unions (mainly safety awareness), and opposed worker inspections and concluded: 'Unions have an important role in the promotion and awareness of safety in the mining industry, but do not have a role as a regulator of the industry or as mine site inspectors.'[60]

Some mine-specific safety and health requirements were introduced by the Workplace Health and Safety Amendment (Mine Safety) Act 2010 to operate alongside the *Workplace Health and Safety Act* and the Workplace Health and Safety Amendment (Mine Safety) Regulations 2011. This legislation imposed more stringent and detailed requirements on mine operators regarding management systems, risk assessment, management structures, managerial responsibilities/qualifications, and consultation. The hazard-specific regulations were designed to ensure that basic standards were met and reinforce the effectiveness of systems in relation to well-known hazards (such as poor ventilation and rock falls). The key changes made included requiring mine operators to develop, implement, maintain, and review a documented health and safety management system to protect the health and safety of mine workers and other persons who may be exposed to risks arising from mining operations. For underground mines, where 10,000 hours or more per month are worked at a mine, the site senior officer must also have risk management training, or relevant experience, meeting the requirements of the Chief Inspector of Mines and a university mining engineering degree or equivalent qualification (if there is no person appointed with mining engineering qualifications to assist the site senior officer).

It required mine operators to develop, implement, maintain and review a documented health and safety management system to protect the health and safety of mine workers and other persons who may be exposed to risks arising from mining operations. The health and safety management system must include documentation of the management structure for the mine; major hazard management plans required by the regulations; risk management processes and procedures; an emergency response plan; provision for the review and improvement of the health and safety management system; a fitness-for-work program and a health surveillance program. The legislation/regulation also includes more detailed requirements regarding risk management and major hazard plans. With regard to risk management, existing regulatory requirements (clauses 17-19 of *Workplace Health and Safety Regulations, 1998*) are supplemented by provisions explaining the concept of systematic risk management; a requirement to consider the skills mix necessary to undertake the various steps in the risk management process and to ensure the process is led by a competent person; and a requirement to keep a written record of all risk assessments required by the regulations. Similarly, the provisions pertaining to major hazard management plan indicates this is required where a non-negligible risk of multiple or repeat fatalities arising from a hazard is identified in the hazard identification/risk assessment process; if required by an inspector (subject to similar criteria); or where required by a regulation relating to a specific hazard (inrush and flooding, airborne dust, powered mobile plant, and electricity). Finally, requirements for systems/major hazard plans are augmented by hazard-specific regulations dealing with ground control and geotechnical considerations (including seismicity); inrush and flooding; shafts and winding equipment; atmosphere, airborne dust and ventilation; vehicles and powered mobile plant; and electricity. Taken as whole, the revised regulatory regime in Tasmania clearly targeted deficiencies revealed by the Cornwall Colliery, Renison and Beaconsfield mine incidents in terms of providing more detailed requirements with regard to safety management

[60] Legislative Council Select Committee (2009) Mining Industry Regulation, Parliament of Tasmania, Hobart.

systems/major hazard plans (including accountabilities), risk assessment (including documenting the process), and reinstituting hazard specific regulations (to address well known hazards and require the reporting/notification of incidents, events or information pertaining to these hazards). In 2012, the *Mine Work Health and Safety (Supplementary Requirements) Regulation* was introduced, which included more detailed requirements for risk assessment, the preparation of major hazard plans, and OHS management systems.[61] The *Mine Work Health and Safety (Supplementary Requirements) Regulation 2025* further amended the requirements regarding OHS management systems.

These changes were an important step toward improving mine safety regulation in Tasmania, but, in line with the 2009 Legislative Council report, they did not appreciably strengthen the role of worker representation, despite positive references to mainland experiences with check inspectors in most audits. Overall, Tasmania still fell well short of having adequate mine safety and health legislation, something noted in both 2012 and more especially the 2014 audit, which pointed to the dire lessons of the Pike River Mine Disaster, where New Zealand had followed a similar path to Tasmania in repealing most mine safety regulations as part of the post-Robens OHS reforms. In New Zealand, it was recognised that even small mining jurisdictions required comprehensive mine safety legislation, including significantly stronger mechanisms for miner representatives. By 2013, New Zealand had introduced a comprehensive legislative package modelled on NSW and Queensland, which were seen as world's best practice in this area. The author of the 2010, 2012 and 2014 audits had direct knowledge of the lessons to be drawn from New Zealand, having prepared reports on mine safety for the NZ Department of Labour following the disaster. He had ,also been a member of the Expert Reference Group that oversaw the legislative package that followed after the Pike River Royal Commission had tabled its findings and subsequently served as an expert member on the Extractives Industry Advisory Group that monitoring implementation of the legislative and mine safety (2014-2020). The 2014 audit identified several serious deficiencies with regard to the Tasmanian regulatory framework when compared to New Zealand, notably:

- the degree to which the nature and content of major hazard plans are specified
- the absence of requirements with regard to certified competencies of key personnel working in mines
- gaps in prescriptive requirements relating to known hazards, including those pertaining to coal mining
- much weaker provisions relating to the role of worker representatives
- less prescription/guidance with regard to emergency/rescue procedures
- failure to require independent auditing of mine safety systems to help ensure these systems are robust and working as designed.

This was not exhaustive. The New Zealand regime also contained significantly more comprehensive and robust provisions regarding the certification/accreditation, training, and examination of

[61] *Mine Work Health and Safety (Supplementary Requirements) Regulation 2012*
https://www.legislation.tas.gov.au/view/whole/html/inforce/2020-12-13/sr-2012-134

managers, shotfirers, and other specialists. Regarding worker representation mechanisms, the 2014 Audit observed:

> Another area where Tasmania compares unfavourably to 'best practice' jurisdictions is with regard to worker involvement mechanisms. In NSW and Queensland, mine safety legislation (especially that relating to coal mining) establishes both industry and site safety representatives with powers of inspection, rights to information and to take action in situations of immediate danger that are beyond those found in the *Work Health and Safety Act*. For example, these representatives (who are experienced miners and receive both training and annual updates) undertake regular inspections, file reports that become part of the mine record book, and have access to the inspection reports of government inspectors (indeed reports are exchanged between both parties by email). These arrangements are longstanding and were introduced in recognition that given the serious hazards mine workers encountered they required meaningful mechanisms to protect their safety.[62]
>
> The principle that workers in high hazard industries deserve greater participatory and rights to safeguard themselves has been extended to other high hazard industries like offshore oil production. During the course of the audit a number of concerns were raised with regard to current site safety representatives in mines, including an inability to access training at some mines because the representatives were not duly appointed under the legislation. Duly appointed, trained and empowered safety representatives are more likely to have the confidence of mine workers, including allaying their concerns on occasion. The increasing use of contract mining operations also raised concerns in this regard. Another issue was the absence of shared access of representatives (including unions) to electronic copies of incident and inspection reports. The latter issue was raised in the 2012 audit, and given that this already occurs in Queensland indicates the practice is entirely workable and beneficial to all concerned (and the model for a regulatory infrastructure to secure this already exists). Previous audits noted that the situation with regard to worker involvement in safety and health had improved since 2006, but the situation still seems far from optimal. The audit recommends that serious consideration be given to following the New Zealand approach of introducing industry and site safety and health representatives in the mining industry, modelled on those currently operating in NSW and Queensland.[63]

Apart from some valuable though essentially minor changes currently under consideration at the time of writing (and described in Chapter 5), nothing has changed since the 2014 audit. At present, the statutory rights of Tasmanian mine workers to participate in safeguarding their own safety, health and wellbeing remain governed by general OHS legislation, namely the Work Health and Safety Act, 2012. Sections 47-49 establish a duty to consult with workers:

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[62] Indeed, the arrangements have existed at one time in almost all states, including Tasmania, where legislation was proposed in the aftermath of the Mount Lyell mine disaster in 1912.

[63] Quinlan, M. (2014) *Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart, 46-47.

47. Duty to consult workers

(1) The person conducting a business or undertaking must, so far as is reasonably practicable, consult, in accordance with this Division and the regulations, with workers who carry out work for the business or undertaking who are, or are likely to be, directly affected by a matter relating to work health or safety. Penalty: In the case of – (a) an individual, a fine not exceeding $20 000; or (b) a body corporate, a fine not exceeding $100 000.

(2) If the person conducting the business or undertaking and the workers have agreed to procedures for consultation, the consultation must be in accordance with those procedures.

(3) The agreed procedures must not be inconsistent with section 48.

48. Nature of consultation

(1) Consultation under this Division requires –(a) that relevant information about the matter is shared with workers; and (b) that workers be given a reasonable opportunity –(i) to express their views and to raise work health or safety issues in relation to the matter; and (ii) to contribute to the decision-making process relating to the matter; and (c) that the views of workers are taken into account by the person conducting the business or undertaking; and (d) that the workers consulted are advised of the outcome of the consultation in a timely manner.

(2) If the workers are represented by a health and safety representative, the consultation must involve that representative.

49. When consultation is required

Consultation under this Division is required in relation to the following health and safety matters: (a) when identifying hazards and assessing risks to health and safety arising from the work carried out or to be carried out by the business or undertaking; (b) when making decisions about ways to eliminate or minimise those risks; (c) when making decisions about the adequacy of facilities for the welfare of workers; (d) when proposing changes that may affect the health or safety of workers; (e) when making decisions about the procedures for – (i) consulting with workers; or (ii) resolving work health or safety issues at the workplace; or (iii) monitoring the health of workers; or (iv) monitoring the conditions at any workplace under the management or control of the person conducting the business or undertaking; or (v) providing information and training for workers; (f) when carrying out any other activity prescribed by the regulations for the purposes of this section.

Sections 50 to 67 deal with the appointment/election of HSRs and several other matters. As noted elsewhere in this report, HSRs represent a particular workgroup. Once one or more workers makes a request for HSRs, sections 51-54 deal with the determination of one or more workgroups, which is undertaken through a negotiation between the person conducting the business or undertaking (PCBU) and the workers. In practice (as described in the NSW Report and as is also the case with Tasmania and Western Australia) the result has been the appointment of multiple HSRs at a workplace – and the case with Tasmanian mines for which we were able to obtain information. Sections 55 to 59 enable HSRs to be appointed to represent multiple workplaces.

Sections 68 and 69 specify the powers and functions of HSRs:

68. Powers and functions of health and safety representatives

(1) The powers and functions of a health and safety representative for a work group are –(a) to represent the workers in the work group in matters relating to work health and safety; and (b) to monitor the measures taken by the person conducting the relevant business or undertaking or that person's representative in compliance with this Act in relation to workers in the work group; and (c) to investigate complaints from members of the work group relating to work health and safety; and (d) to inquire into anything that appears to be a risk to the health or safety of workers in the work group, arising from the conduct of the business or undertaking.

(2) In exercising a power or performing a function, the health and safety representative may – (a) inspect the workplace or any part of the workplace at which a worker in the work group works – (i) at any time after giving reasonable notice to the person conducting the business or undertaking at that workplace; and (ii) at any time, without notice, in the event of an incident, or any situation involving a serious risk to the health or safety of a person emanating from an immediate or imminent exposure to a hazard; and

(b) accompany an inspector during an inspection of the workplace or part of the workplace at which a worker in the work group works; and

(c) with the consent of a worker that the health and safety representative represents, be present at an interview concerning work health and safety between the worker and – (i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and

(d) with the consent of 1 or more workers that the health and safety representative represents, be present at an interview concerning work health and safety between a group of workers, which includes the workers who gave the consent, and –(i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (e) request the establishment of a health and safety committee; and (f) receive information concerning the work health and safety of workers in the work group; and (g) whenever necessary, request the assistance of any person.

Note

A health and safety representative also has a power under Division 6 of this Part to direct work to cease in certain circumstances and under Division 7 of this Part to issue provisional improvement notices.

(3) Despite subsection (2)(f), a health and safety representative is not entitled to have access to any personal or medical information concerning a worker without the worker's consent unless the information is in a form that – (a) does not identify the worker; and (b) could not reasonably be expected to lead to the identification of the worker. (4) Nothing in this Act imposes or is taken to impose a duty on a health and safety representative in that capacity.

69. Powers and functions generally limited to the particular work group

(1) A health and safety representative for a work group may exercise powers and perform functions under this Act only in relation to matters that affect, or may affect, workers in that group.

(2) Subsection (1) does not apply if –(a) there is a serious risk to health or safety emanating from an immediate or imminent exposure to a hazard that affects or may affect a member of another work group; or (b) a member of another work group asks for the representative's assistance – and the health and safety representative (and any deputy health and safety representative) for that other work group is found, after reasonable inquiry, to be unavailable.

(3) In this section –***another work group*** means another work group of workers carrying out work for a business or undertaking to which the work group that the health and safety representative represents relates.

Sections 70 to 74 deal with PCBUs' obligations to HSRs. Section 70 imposes obligations to provide information to HSRs, consult in specific circumstances, provide resources to HSRs, and enable them to accompany an inspector. Section 71 places a series of qualifications on s70.

70. General obligations of person conducting business or undertaking

(1) The person conducting a business or undertaking must – (a) consult, so far as is reasonably practicable, on work health and safety matters with any health and safety representative for a work group of workers carrying out work for the business or undertaking; and (b) confer with a health and safety representative for a work group, whenever reasonably requested by the representative, for the purpose of ensuring the health and safety of the workers in the work group; and (c) allow any health and safety representative for the work group to have access to information that the person has relating to –(i) hazards (including associated risks) at the workplace affecting workers in the work group; and (ii) the health and safety of the workers in the work group; and (d) with the consent of a worker that the health and safety representative represents, allow the health and safety representative to be present at an interview concerning work health and safety between the worker and –(i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (e) with the consent of 1 or more workers that the health and safety representative represents, allow the health and safety representative to be present at an interview concerning work health and safety between a group of workers, which includes the workers who gave the consent, and – (i) an inspector; or (ii) the person conducting the business or undertaking at that workplace or the person's representative; and (f) provide any resources, facilities and assistance to a health and safety representative for the work group that are reasonably necessary or prescribed by the regulations to enable the representative to exercise his or her powers or perform his or her functions under this Act; and (g) allow a person assisting a health and safety representative for the work group to have access to the workplace if that is necessary to enable the assistance to be provided; and (h) permit a health and safety representative for the work group to accompany an inspector during an inspection of any part of the workplace where a worker in the work group works; and (i) provide any other assistance to the health and safety representative for the work group that may be

required by the regulations. Penalty: In the case of – (a) an individual, a fine not exceeding $10 000; or (b) a body corporate, a fine not exceeding $50 000.

(2) The person conducting a business or undertaking must allow a health and safety representative to spend such time as is reasonably necessary to exercise his or her powers and perform his or her functions under this Act. Penalty: In the case of – (a) an individual, a fine not exceeding $10 000; or (b) a body corporate, a fine not exceeding $50 000.

(3) Any time that a health and safety representative spends for the purposes of exercising his or her powers or performing his or her functions under this Act must be with the pay that he or she would otherwise be entitled to receive for performing his or her normal duties during that period.

71. Exceptions from obligations under section 70(1)

(1) This section applies despite section 70(1) .

(2) The person conducting a business or undertaking must not allow a health and safety representative to have access to any personal or medical information concerning a worker without the worker's consent unless the information is in a form that – (a) does not identify the worker; and (b) could not reasonably be expected to lead to the identification of the worker. Penalty: In the case of – (a) an individual, a fine not exceeding $10 000; or (b) a body corporate, a fine not exceeding $50 000.

(3) The person conducting a business or undertaking is not required to give financial assistance to a health and safety representative for the purpose of the assistance referred to in section 70(1)(g) .

(4) The person conducting a business or undertaking is not required to allow a person assisting a health and safety representative for a work group to have access to the workplace –(a) if the assistant has had his or her WHS entry permit revoked; or (b) during any period that the assistant's WHS entry permit is suspended or the assistant is disqualified from holding a WHS entry permit.

(5) The person conducting a business or undertaking may refuse on reasonable grounds to grant access to the workplace to a person assisting a health and safety representative for a work group.

(6) If access is refused to a person assisting a health and safety representative under subsection (5) , the health and safety representative may ask the regulator to appoint an inspector to assist in resolving the matter.

Section 72 deals with the obligation to train HSRs. This provides generic training, not one specifically focused on the needs of the high-hazard mining industry. It is also worth noting that the training package needs to be determined in negotiation with the PCBU.

72. Obligation to train health and safety representatives

(1) The person conducting a business or undertaking must, if requested by a health and safety representative for a work group for that business or undertaking, allow the health and safety representative to attend a course of training in work health and safety that is – (a) approved by the regulator; and (b) a course that the health and safety representative is entitled under the regulations to attend; and (c) subject to subsection (5), chosen by the health and safety representative, in consultation with the person conducting the business or undertaking.

(2) The person conducting the business or undertaking must – (a) as soon as practicable within the period of 3 months after the request is made, allow the health and safety representative time off work to attend the course of training; and (b) pay the course fees and any other reasonable costs associated with the health and safety representative's attendance at the course of training.

(3) If –(a) a health and safety representative represents a work group of the workers of more than 1 business or undertaking; and (b) the person conducting any of those businesses or undertakings has complied with this section in relation to the representative – each of the persons conducting those businesses or undertakings is to be taken to have complied with this section in relation to the representative.

(4) Any time that a health and safety representative is given off work to attend the course of training must be with the pay that he or she would otherwise be entitled to receive for performing his or her normal duties during that period.

(5) If agreement cannot be reached between the person conducting the business or undertaking and the health and safety representative within the time required by subsection (2) as to the matters set out in subsection (1)(c) and subsection (2) , either party may ask the regulator to appoint an inspector to decide the matter.

(6) The inspector may decide the matter in accordance with this section.

(7) A person conducting a business or undertaking must allow a health and safety representative to attend a course decided by the inspector and pay the costs decided by the inspector under subsection (6) . Penalty: In the case of – (a) an individual, a fine not exceeding $10 000; or (b) a body corporate, a fine not exceeding $50 000.

Sections 84 to 86 deal with the right of workers to refuse unsafe work and the power of HSRs to direct unsafe work to cease.

84. Right of worker to cease unsafe work

A worker may cease, or refuse to carry out, work if the worker has a reasonable concern that to carry out the work would expose the worker to a serious risk to the worker's health or safety, emanating from an immediate or imminent exposure to a hazard.

85. Health and safety representative may direct that unsafe work cease

(1) A health and safety representative may direct a worker who is in a work group represented by the representative to cease work if the representative has a reasonable concern that to

carry out the work would expose the worker to a serious risk to the worker's health or safety, emanating from an immediate or imminent exposure to a hazard.

(2) However, the health and safety representative must not give a worker a direction to cease work unless the matter is not resolved after –(a) consulting about the matter with the person conducting the business or undertaking for whom the workers are carrying out work; and (b) attempting to resolve the matter as an issue under Division 5 of this Part.

(3) The health and safety representative may direct the worker to cease work without carrying out that consultation or attempting to resolve the matter as an issue under Division 5 of this Part if the risk is so serious and immediate or imminent that it is not reasonable to consult before giving the direction.

(4) The health and safety representative must carry out the consultation as soon as practicable after giving a direction under subsection (3).

(5) The health and safety representative must inform the person conducting the business or undertaking of any direction given by the health and safety representative to workers under this section.

(6) A health and safety representative cannot give a direction under this section unless the representative has – (a) completed initial training prescribed by the regulations referred to in section 72(1)(b); or (b) previously completed that training when acting as a health and safety representative for another work group; or (c) completed training equivalent to that training under a corresponding WHS law.

86. Worker to notify if ceases work

A worker who ceases work under this Division must – (a) as soon as practicable, notify the person conducting the business or undertaking that the worker has ceased work under this Division unless the worker ceased work under a direction from a health and safety representative; and (b) remain available to carry out suitable alternative work.

Sections 90 to 100 deal with powers of HSRs to issue provisional improvement notices (PINs):

90. Provisional improvement notices

(1) This section applies if a health and safety representative reasonably believes that a person – (a) is contravening a provision of this Act; or (b) has contravened a provision of this Act in circumstances that make it likely that the contravention will continue or be repeated.

(2) The health and safety representative may issue a provisional improvement notice requiring the person to – (a) remedy the contravention; or (b) prevent a likely contravention from occurring; or (c) remedy the things or operations causing the contravention or likely contravention.

(3) However, the health and safety representative must not issue a provisional improvement notice to a person unless he or she has first consulted the person.

(4) A health and safety representative cannot issue a provisional improvement notice unless the representative has – (a) completed initial training prescribed by the regulations referred to in section 72(1)(b) ; or (b) previously completed that training when acting as a health and safety representative for another work group; or (c) completed training equivalent to that training under a corresponding WHS law.

(5) A health and safety representative cannot issue a provisional improvement notice in relation to a matter if an inspector has already issued (or decided not to issue) an improvement notice or prohibition notice in relation to the same matter.

91. Provisional improvement notice to be in writing

A provisional improvement notice must be in writing.

92. Contents of provisional improvement notice

A provisional improvement notice must state – (a) that the health and safety representative believes the person – (i) is contravening a provision of this Act; or (ii) has contravened a provision of this Act in circumstances that make it likely that the contravention will continue or be repeated; and (b) the provision the representative believes is being, or has been, contravened; and (c) briefly, how the provision is being, or has been contravened; and (d) the day, at least 8 days after the notice is issued, by which the person is required to remedy the contravention or likely contravention.

93. Provisional improvement notice may give directions to remedy contravention

(1) A provisional improvement notice may include directions concerning the measures to be taken to remedy the contravention or prevent the likely contravention or the matters or activities causing the contravention or likely contravention to which the notice relates.

(2) A direction included in a provisional improvement notice may – (a) refer to a code of practice; and (b) offer the person to whom it is issued a choice of ways in which to remedy the contravention.

94. Minor changes to provisional improvement notice

A health and safety representative may make minor changes to a provisional improvement notice – (a) for clarification; or (b) to correct errors or references; or (c) to reflect changes of address or other circumstances.

95. Issue of provisional improvement notice

A provisional improvement notice may be issued to a person in accordance with section 209

96. Health and safety representative may cancel notice

The health and safety representative may at any time cancel a provisional improvement notice issued to a person by written notice given to that person.

97. Display of provisional improvement notice

(1) A person to whom a provisional improvement notice is issued must as soon as practicable display a copy of the notice in a prominent place at or near the workplace, or part of the workplace, at which work is being carried out that is affected by the notice. Penalty: In the case of – (a) an individual, a fine not exceeding $5 000; or (b) a body corporate, a fine not exceeding $25 000.

(2) A person must not intentionally remove, destroy, damage or deface a notice displayed under subsection (1) during the period that the notice is in force. Penalty: In the case of – (a) an individual, a fine not exceeding $5 000; or (b) a body corporate, a fine not exceeding $25,000.

98. Formal irregularities or defects in notice

A provisional improvement notice is not invalid only because of – (a) a formal defect or irregularity in the notice unless the defect or irregularity causes or is likely to cause substantial injustice; or (b) a failure to use the correct name of the person to whom the notice is issued if the notice sufficiently identifies the person.

99. Offence to contravene a provisional improvement notice

(1) This section applies if a provisional improvement notice has been issued to a person and an inspector has not been required under section 101 to attend at the workplace.

(2) The person must comply with the provisional improvement notice within the time specified in the notice. Penalty: In the case of – (a) an individual, a fine not exceeding $50 000; or (b) a body corporate, a fine not exceeding $250 000.

100. Request for review of provisional improvement notice

(1) Within 7 days after a provisional improvement notice is issued to a person – (a) the person to whom it was issued; or (b) if the person is a worker, the person conducting the business or undertaking at the workplace at which the worker carries out work – may ask the regulator to appoint an inspector to review the notice.

(2) If a request is made under subsection (1) , the operation of the provisional improvement notice is stayed until the inspector makes a decision on the review.

With regard to inspection/HRs interaction under s164(2) (2) 'An inspector must, as soon as practicable after entry to a workplace or suspected workplace, take all reasonable steps to notify the following persons of the entry and the purpose of the entry: (a) the relevant person conducting a business or undertaking at the workplace; (b) the person with management or control of the workplace; (c) any health and safety representative for workers carrying out work for that business or undertaking at the workplace.' This provision is qualified by s164(3): 'However, an inspector is not required to notify any person if to do so would defeat the purpose for which the place was entered or cause unreasonable delay.'

Taking the foregoing provisions as a whole, the following observations may be made. Compared with the SSHR provisions under Queensland mine safety legislation (and for coal miners in NSW), there are several significant differences. First, while HSRs can undertake inspections, their powers in this regard

are not as formally stipulated, nor is there an obligation to report on these inspections. This not only reflects the specific history of worker representation provisions in mining, but it also has implications for current practice, notably that such inspections are viewed as a routine practice for SSHRs. But this is not the case with HSRs, a difference which was reinforced by interview/workgroup responses described in later chapters of this report (including Chapter 8 on Tasmania). Second, compared with SSHRs, HSRs have no explicit authority to request documentation on safety management systems or to be notified of specified information. Third, as already noted and set out in s69, HSRs' powers are limited to a specific workgroup, except in very particular situations, namely, where there is an imminent and serious risk to workers. Fourth, the training requirements for HSRs are generic, and the package must be decided in negotiation with the PCBU. In Queensland, by way of contrast, ISHRs run the SSHR training conferences, which are primarily funded by the MEU. This list of differences is not exhaustive. It is simply meant to illustrate the very significant differences between the powers and functions of HSRs and SSHRs. Those given to HSRs were framed to cover a wide range of work settings/sectors, while those given to SSHRs in Queensland mine safety legislation (for example) were framed to address the specific nature and needs of the mining industry.

Victoria

Metalliferous mining expanded rapidly in Victoria following large gold discoveries in the early 1850s, and the colony was the second (after NSW) to introduce mine safety legislation in 1873. As in Western Australia, the check inspector provisions granted to coal miners in 1909 did not extend to metalliferous miners. Metalliferous miners' unions had campaigned on the issue for some years, but the 1912 Mount Lyell mine disaster resonated strongly in Victoria. The Victorian Amalgamated Mine Employees Association (AMEA) sent a deputation to the Minister for Mines, urging amended legislation to enable the appointment of check inspectors, stating that 12,362 members had been involved in serious accidents over the past six years. In September 1912, a Bendigo miners' deputation told the Minister that more frequent inspections via check inspectors would minimise risks that cost the union's accident fund £80–90 per fortnight for 'petty' injuries. A bill extending check inspectors to metalliferous mining was stalled by the state's upper house (Legislative Council) in December 1912. In the meantime, the union implemented a check inspector system in districts such as Daylesford and Ballarat in conjunction with safety campaigns, including one calling for two operators for drilling machines as in Broken Hill. In February 1914, the *Mines Amendment Act* (r 50) extended the workmen inspector provisions in the 1909 Coal Mines Regulation Act, empowering metalliferous miners to appoint two practical working miners from their number to conduct monthly inspections after giving 24 hours' notice and to notify the mines inspector of any apprehended dangers. Interference in their appointment and activities was prohibited. The union remained dissatisfied. The union's 1914 annual conference renewed calls for union-appointed district check inspectors while simultaneously labelling government mine inspection as a farce.

Responding to the Minister for Mines' contention that check inspectors would interfere with government inspectors, AMEA branch official T. Hewitt argued 'inspectors want interfering with in the passage of so many miners to eternity by miner's complaint and "accidents".' This was not hyperbole. A 1907 report prepared by Dr Walter Summons found that in the Bendigo district alone, 1,402 miners had died of miners' phthisis and another 272 in 'accidents' between 1875 and 1906.[64] The silicosis and

[64] 'Miner's Phthisis' at Bendigo, The Lancet 3 August 1907, 303-305..

other disease-related death toll of metalliferous miners in Victoria (and elsewhere) between 1870 and 1920 probably represents Australia's worst industrial disaster.[65] Another union deputation (in April 1914) asked the Minister for Mines for eight check inspectors to be appointed to enforce mine 'regulations in respect to ventilation, sanitation, and the suppression of dust to be more stringently enforced," and raised the problem with mines being 'massaged' once 24 hours' notice was given. Once again, their concerns were rebuffed, with statements that check inspectors would interfere with the entirely adequate work of government inspectors. Within days of this ministerial pronouncement, seven miners died in an explosion at the Hustler Extended mine near Bendigo. Expressing sympathy for the widows and children of those killed, the union's executive reiterated the need for check inspectors, arguing they would have discovered if detonators were being stored contrary to regulations. As in other states, another factor in the union push for union-appointed district check inspectors was the lack of check inspectors in non-union mines and fears of victimisation amongst those elected in unionised mines where they were employed, even when the union was present. The union continued campaigning through parliamentary questions and proposals, securing candidate commitments, and making repeated deputations to the Minister for Mines. In January 1919, a joint deputation to the Minister for Mines by the AMEA and Coal and Shale Employees' Federation (now the MEU) urged stricter regulations to prevent/minimise miners' phthisis (tuberculosis) and the removal of the 24 hours' notice requirement. Mine owner interests fiercely resisted the measure, and Victoria lagged other states in terms of political mobilisation by Labor, only securing three short-lived minority Labor governments between 1924 and 1929.[66]

Things did not significantly improve for metalliferous miners after this time. In 1937, Bendigo miners convinced the AWU to send a deputation to the Minister requesting that air testing for dust be made mandatory in all mines and that a check inspector be appointed to the district.[67] This apparently failed, so a year later, the secretary 'was directed to approach the Minister of Mines with a view to having the regulations altered so that this Union may provide check inspectors.'[68] A month later (August 1938), the union was told the request to appoint check inspectors could not be met, as the Department did not have the money to make any additional staff appointments.[69]

Like several other states, Victoria ultimately repealed much of its mine safety legislation and merged mining under the harmonised model workplace health and safety legislation, relying on residual mine provisions in the model legislation.[70] These are relatively sparse and do not include worker representation requirements like those found in NSW or Queensland.

South Australia

South Australia was the last state to regulate. Section 12 of the *Mines and Work Inspection Act 1920* empowered miners to appoint two of their number to conduct inspections, provided they notified the manager. The Act also included clauses on management facilitation, reporting, 'apprehended-danger',

[65] B. Penrose, "The State and Gold Miners' Health in Victoria, 1870–1910," *Labour History*, no. 101 (November 2011): 35–52.
[66] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:52-54.
[67] *Australian Worker* 21 July 1937.
[68] *Australian Worker* 20 July 1938.
[69] *Australian Worker* 17 August 1938.
[70] https://www.WorkSafe.vic.gov.au/safe-working-environment-mines

and workers' compensation coverage, similar to those in other states. In 1925, the Royal Commission on Plumbism recommended the appointment of check inspectors at the Port Pirie smelter, which processed lead from the Broken Hill mines.[71]

Concluding Observations

The creation of miner check inspectors/workmen inspectors was pioneered in coal mining by NSW in 1876. Although the 1876 provision mirrored that of the UK, its introduction was based on a local struggle by the coal miners' union, not simply copying of British legislation. The NSW provision served as a model for other Australian colonies/states, but in each case these changes were adopted and revised/improved following often prolonged campaigns. The coal mining provisions were sought by metalliferous miners, and for much the same reason: the need to more effectively deal with the serious hazards miners faced and to give miners some say or direct input into safeguarding their health, safety and wellbeing. Over the 19th and 20th centuries, the system was revised to address significant issues, including the vulnerability of site-based check inspectors to victimisation. In both sectors, it became apparent that district check inspectors were necessary to overcome this problem and provide a more overarching input into mine safety at the district and state levels. Legislative recognition of this was ultimately secured, while union involvement remained critical in supporting both. In coal and metalliferous mining, historical records attest to the value of mine- and district-level appointments as knowledge activists, enabling miners to better safeguard their health, safety and wellbeing and to ensure that legislation was enforced. One significant difference between district check inspectors in coal mining and their equivalents in most metalliferous mining jurisdictions (often initially termed workmen's inspectors) was that, in coal mining, the MEU paid their salaries, whereas in metalliferous mining (except Broken Hill) they were paid by the government. The latter arrangement was, as history has shown on various occasions, more vulnerable to the whims of governments and shifting budget circumstances. This became a factor in the demise of these positions in some states.

In metalliferous mining, the provision for workmen's inspectors/district check inspectors disappeared from regulatory requirements in the late 1990s and early 2000s. The primary reason for this was not manifest failings in this system, but rather it was associated with a rationalised OHS legislation associated with the post-Robens reforms whereby mine-safety legislation was either entirely repealed/supplanted (as in Tasmania and Victoria and New Zealand) or made subordinate to, or an adjunct of, general OHS legislation, which included provisions for employee (later worker) health and safety representatives. To a large degree, this was done without formal explanation or justification, but it seems to have been carried out on the grounds of uniformity/consistency. The manifest limitations of removing mine-specific legislation, including worker inspector provisions, were starkly revealed by the 2006 Beaconsfield mine fatality/entrapment in Tasmania and the 2010 Pike River mine disaster in New Zealand. In both jurisdictions, it was necessary to reintroduce mine-specific legislation that addressed the particular hazards of mining and the potential for multiple fatalities, including stronger worker representation. It might be suggested that given the HSR requirements in general workplace health and safety legislation (WHS, the designation adopted under Australian model legislation), special representative mechanisms in mining that had long predated this were no longer

[71] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119:54-55.

necessary and, further, the functions of district/full-time mine worker inspectors could be undertaken by union officials who had rights of entry to the workplace. However, even ignoring the restrictions on union officials' rights of entry (such as those imposed by the Howard government), this contention rests on a fundamental misunderstanding of both the historical and contemporary roles of these representatives. Both mine site and district miner representatives originated from the need to address serious fatality risks (injury and disease) in mines, and that has remained the key focus of their activities, even though they can and do address other issues like routine injuries and psychosocial hazards. In other words, the role addressed the needs specific to a high-hazard industry, and both mine site and district/general miners' inspectors had the experience and qualifications to do this, and the regulatory requirements specific to principal hazards and other fatality/serious impairment risks in mining. In contrast, the HSR provisions in general WHS legislation and the principal or general duties in that legislation address a more generic set of OHS/WHS hazards/risks, as they must, sometimes augmented by industry-specific codes, regulations and guidance notes. Further, mine-site safety representatives cover the entire mine, while HSRs are appointed to represent specific workgroups, which may or may not entail the entire site and all workers. This difference matters when dealing with principal hazards, site-wide fatality risks, or the operations of contractors or others undertaking non-mining activities like installation or maintenance (note the higher incidence of fatalities in these activities).[72] In short, there are significant differences in the roles and legislative frameworks that worker representatives in mining operate under, compared with those in other industries (with the possible exception of the oil and gas industry, which is also subject to high-hazard-specific legislation).

Similarly, there is simply no equivalence between a union organiser/official often having to deal with WHS in an array of different work settings, together with other industrial relations responsibilities, and a specialist full-time mine safety and health representative who was/is required to have both experience and qualifications specific to mining and who is explicitly precluded from undertaking non-WHS-related activities. In addition to this, both site safety and health representatives and industry safety and health representatives have statutory rights and powers specific to their roles in mining, powers and rights that evidence from coal mining indicates they use astutely and effectively (see Chapter 4). Union officials, while they may give warnings, do not have the power to issue notices (including suspension orders), to make a report that must be lodged in the mine's safety records or to take a role in incident investigations.

The two-tier model is a feature that has distinguished the form of health and safety representation in coal mining throughout its 150-year history (and metalliferous mining until 2004 in NSW and 2013 in WA) in Australia and was a similar distinguishing feature of the model of representation in coal mining in the UK, on which it was originally based.

As discussed, this model is not the only way to support representation and consultation on work health and safety, nor indeed the most widely adopted in other sectors. More generic HSRs in Australia and elsewhere, as well as other trade union and regulatory approaches to representing miners' health and safety arrangements, are resourced from different mixes, involving, for example, duties on employers to make provision for time off without loss of pay, for facilities, and for training, and alongside provision from the state for resourcing some of these too. These work in tandem with the

[72] Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review, *The Economic and Labour Relations Review*, 35(3):576-613.

specific statutory rights of worker representatives to have access to such support. While in individual cases, these different ways of supporting worker representation and consultation can result in positive outcomes, generally, where trade unions have gone one step further in helping to make the representation of workers' interests in their health and safety *more* effective (such as with regional health and safety representatives in Sweden, Italy and Norway), the additional mileage thus achieved has, more often than not, been resourced either in whole or in part, by financial support from unions or from their capacity to exercise control of this resource. Further, in coal mining, such resourcing is one reason for the strong sense of independent, autonomous authority that ISHRs can bring to their role. In understanding how these knowledge activists achieve their effectiveness and how they support and transfer knowledge to SSHRs, it is important to acknowledge the extent to which, in coal mining, their existence is not dependent on state funding or the largesse of employers. And thus, their role is characterised by their capacity to *resist* what some employers seem to regard as their managerial prerogatives – to determine what constitutes acceptable risks to miners' health and safety. The mode of operation of representation in coal mining differs fundamentally in this respect from the consensus-based arrangements in place for HSRs, both in mining and elsewhere, which are often influenced by notions of co-operation with management and thus limited to pursuing activities condoned and endorsed by managers over which employers also exercise a degree of control. This is not to say that HSRs cannot be effective, but that they face considerable challenges in labour relations scenarios where notions of 'consensus' do not reflect an equitable sharing of power. While ISHRs and SSHRs also face many challenges in the mining labour relations context, there is no doubt that the support they receive from the resources the MEU commits to their roles is a major factor in determining their effectiveness.

In sum, treating the general WHS HSRs and mine-specific SSHRs as equivalents amounts to nothing short of diluting the role and value of the latter and arguably ignoring the bitter lessons of history (some not too distant). The same point applies when comparing the role of union officers and ISHRs. If anything, a more persuasive argument might be that other high-hazard industries should copy the regulatory regime targeting fatal hazards and the representative regime adopted in mining (as has arguably occurred in offshore oil and gas production). Indeed, calls for such expansion can be traced back to the 19th century, including railway unions arguing for the appointment of workmen inspectors, resolutions of intercolonial trade union congresses (such as the 1891 Ballarat ITUC), and a policy plank of the Labor Party well into the 20th century.[73] Further, there is a historical precedent in which this principle has been adopted in at least one other hazardous industry. In Western Australia, the 1926 *Timber Industry Regulation Act* (Part 7 ss68-85) included provisions for workmen inspectors very similar to those in mining (including union involvement).[74] The Western Australian timber workers' check inspector system operated into the 1940s, if not later.[75] In sum, extending the SSHR/ISHR model to other high hazard industries warrants serious consideration, particularly as part of Safe Work Australia's review of national harmonisation in OHS legislation.

In conclusion, in both coal mining and metalliferous mining, the District Check Inspector/ISHR position emerged in response to recognised limitations in mine safety representation, including vulnerability

[73] See for example *Newcastle Morning Herald* 16 September 1889.
[74] *Government Gazette of Western Australia* No.41 2 September 1927, especially 1989-1990.
[75] *Government Gazette of Western Australia* No.41 2 September 1927, especially 1989-1990 and 'Timber Industry', *The West Australian*, (Perth, 9 December 1946), 10.

to victimisation, and to provide more overarching representation (as well as supporting mentoring mine safety representatives). Historical evidence indicates this system worked well in both, and the needs remain. It was retained in metalliferous mining in Queensland, and its removal in NSW was not based on substantive evidence of any kind but was driven by the harmonisation push in OHS legislation (as occurred in other jurisdictions), notwithstanding recommendations to consider its reintroduction in 2023 and 2024. As this chapter has indicated, the challenges to worker representation in mining identified a century ago essentially remain, especially where the safeguarding statutory protections that were introduced after long and bitter struggles have been removed.

Chapter 4 Evidence on the effectiveness of mine worker safety and health representative arrangements in coal mining

Introduction

One reference point for considering changes to representative structures in metalliferous mining, moving them closer to those operating in the coal sector, is found in evidence of how effective such arrangements are in coal mining. While detailed research on workplace safety and health representatives is limited and fragmented in Australia, two detailed studies of the role and effectiveness of health and safety representatives have been undertaken in coal mining. This chapter considers evidence of the effectiveness of the arrangements for representing and consulting mine workers on work health and safety in coal mining, largely drawn from these two studies.

Arrangements in coal mining are based on longstanding regulatory provisions. These and their development have been described in detail in the previous chapter. The primary interest of the present chapter concerns the effectiveness of the arrangements put in place in coal mines to implement these provisions for representing miners' health and safety interests, and what research has shown to support their effectiveness. One important element of this support is obviously to be found in the content of regulatory provisions themselves and the means of securing compliance with them. But it has long been evident that regulatory provisions alone do not secure best practice in the representation and consultation of workers on matters of their health and safety. Nor indeed is compliance and the means of securing it in relation to these provisions a straightforward matter in the labour relations of work health and safety. The present chapter, therefore, considers research evidence on how regulatory support operates as one of several factors influencing the effective operation of arrangements for worker representation and consultation on health and safety in coal mining. In particular, it seeks to understand how the regulatory provisions for both ISHRs and SHSRs work together with other elements of support to provide an effective system.

To achieve this, the chapter discusses:

- the findings of previous studies concerning 'what works' in representing miners' interests in their health and safety in coal mining in NSW, Queensland and elsewhere; and
- reviews what evidence there is that helps to explain 'what makes it work'.

This discussion and the conclusions that emerge from it would seem to be necessary prerequisites in taking forward the wider aims of this report, to investigate what would constitute an evidence-based, appropriate and workable regulatory framework for the future development of a best practice model for the operation of worker representation and consultation on health and safety for the mining industry as a whole in Australia.

The chapter begins with a summary of the industry's current position, its safety and health risks, and the regulatory provisions that seek to provide a framework for supporting representation and consultation on health and safety matters for miners in NSW. This is followed by an outline of the key

findings from previous research on the activities of workplace health and safety representatives (known as MSHRs in NSW and SSHRs in Queensland) and on those of the statewide ISHRs that support them in both states. This brief outline focuses on what previous studies indicate about their effectiveness and how they deliver the functions and use the powers conferred upon them by the relevant regulatory frameworks. The chapter goes on to offer an understanding of the research findings on the operation of these arrangements in terms of what works, why it works, and what this might mean for the possible further development of regulatory provisions in support of worker representation and consultation on health and safety in mining generally in Australia.



Historic photo of underground mining attached to coal skip at miners' memorial near St Mary's Tasmania [photograph by research team 2026]

Evidence of operational practice

Until relatively recently, systems for representing mine workers on safety and health in coal mines were relatively little studied. However, growing concern about the apparent slowing of the trajectory of improvement in safety outcomes (as measured by injury and fatality data), along with multiple fatality incidents and subsequent inquiries in Australia, prompted research attention to how safety management systems operate in mines.[76] Several studies were carried out in the first decade of the

[76] Quinlan, M. (2014) *(2014) Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press: Sydney.

current millennium, including a major report into safety management in NSW mines[77] and a detailed comparative study of the same practices in mining companies across three Australian jurisdictions.[78] [79] In addition, a degree of international comparison was afforded by a study contrasting the safety management systems in Australia with those in the United States (Yang, 2012), as well as by Quinlan's study of fatal accidents in mining and other high-hazard industries (Quinlan, 2014). All these studies address the situation in NSW, either exclusively (as in Shaw et al. 2017), as part of more nationally focused accounts (Gunningham and Sinclair 2012), or in internationally focused accounts (Yang 2012; Quinlan 2014). They all report favourably on the role of systems for representation of miners' interests. But none studied them in detail or produced much more than anecdotal evidence of their effectiveness.

This was remedied in 2014 and 2018 with two studies that focused specifically on these arrangements in coal mines. The first of these was undertaken for the MEU and investigated practices in Queensland,[80] while the second revisited Queensland and conducted new field investigations along similar lines among work representatives in coal mines in NSW as part of a global comparative study funded by the Institution of Occupational Safety and Health (IOSH) in the UK.[81]

Both studies used robust research methods that, following a detailed review of the relevant literature, combined extensive documentary analysis with the collection of quantitative data and qualitative data from in-depth interviews, discussion groups, and participant observation of training. The researchers analysed this material using social science analytical methods appropriate to the data. The studies and the several papers the researchers subsequently published in peer-reviewed journals therefore represent the outcomes of detailed research into how arrangements operate to represent miners' health and safety interests. This work compares well with research undertaken on these arrangements in other sectors and countries. The findings outlined in the following sub-sections are drawn from the reports of these two studies.

a) *Operational practices analysed in the Queensland study — evidence from documentary analysis*

The Queensland study examined some 1,165 written inspection reports from 12 open-cut and seven underground mines between 1995 and 2013, held by the then MEU. They were a mixture of reports of inspections undertaken by ISHRs (47%), SSHRs (4%) and MI (Mines Inspectorate) inspectors (52%). All the SSHR reports were written following an on-site inspection. Most of the ISHR and MI reports were written as a result of a site visit (85% and 92% respectively — with those that were not being predominantly postal mine records, for example, reviewing documents supplied, arising from

[77] Shaw, A., Blewett, V., Stiller, L., Aickin, C., Cox, S., Ferguson, S., and Frick, K. 2007. *Digging Deeper: Wran Consultancy Project Final Report*. NSW Department of Primary Industries, Sydney.

[78] Gunningham, N. (2007). *Mine Safety: Law Regulation and Policy*. Federation Press: Sydney.

[79] Gunningham, N., Sinclair, D. 2012. *Managing Mining Hazards: Regulation, Safety & Trust*. Federation Press: Sydney

[80] Walters, D., Wadsworth, E., Johnstone, R., Quinlan, M. 2014. *A Study of the Role of Workers' Representatives in Health and Safety Arrangements in Coal-Mines in Queensland*. Available at: http://cfmeu.com.au/the-role-of-worker-representatives-inhealth-and-safety-in-qld-coal-mines-new-study

[81] Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries,* IOSH Leicester.

correspondence or contact from mine managers or workers, or following an incident at a similar mine elsewhere).

As part of the analysis of inspections, particular attention was given to hazards that may give rise to single- and multiple-fatality incidents (including disasters) in mines. That is, 'fatal hazards'. Such hazards in mining have been extensively documented and are well known, with many recorded over hundreds of years.[82] They are outlined below in Box 4.1

Each mechanism leading to fatality in mines was recorded separately in the database. This was important in assessing the extent to which inspections considered or focused on hazards known to lead to serious and, more especially, fatal injury.

Box 4-1: Fatal hazards in mining [83]

Fatal hazards

- *Fire and explosions (including both machinery fires as well as methane and coal dust fires).*
- *Inundation/inrush of water (often from old workings but also due to excessive rain or breaking into bodies of water like rivers or underground aquifers) into mine workings — though mainly associated with underground mines, the failure of tailings dams are a hazard in open cut mines.*
- *Falls of ground (also known as rock falls), including rocks spat out horizontally from the face by intense pressure underground and falls of material from the high walls in open cut mines.*
- *Outburst of poisonous gas (or dangerous accumulations of gas) in underground mines, although exposure to toxic fumes can also be an issue in confined spaces in open cut mines.*
- *Machinery incidents in both underground and open cut mines (including contact with moving machinery, catastrophic machinery failure, and traffic incidents such as collisions between vehicles or vehicles hitting pedestrians).*
- *Electrocution through contact with live cables, water or machinery in both open cut and underground mines.*
- *Falls from height, including failure of winding gear in underground mines; falls from platforms or machinery; or falls associated with trucks etc. tipping over inclines, especially in open cut mines.*
- *Entrapment in confined spaces in both underground workings or confined spaces in open cut workings. This hazard can become fatal when associated with fire, toxic gases, lack of oxygen or rising water levels.*

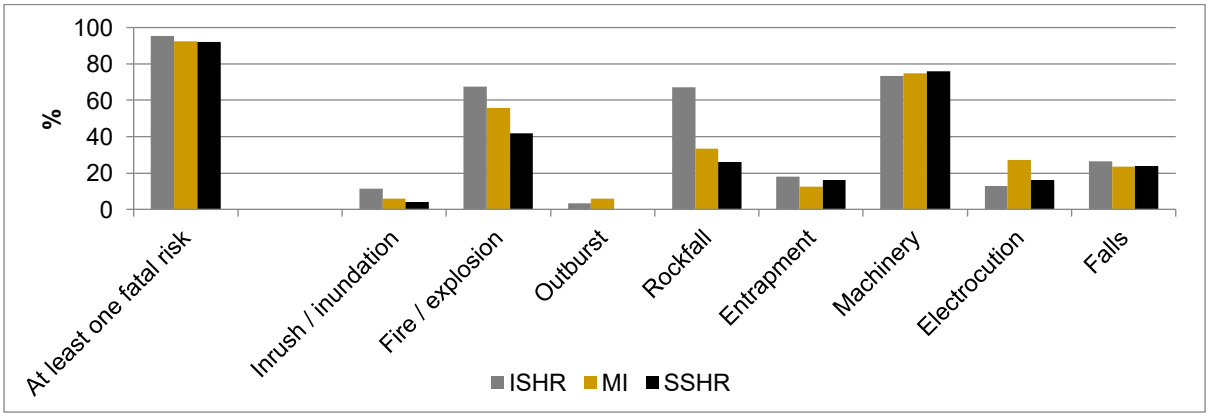
[82] See for example, Biswas, K. and Zipf, R. (2000) *Root Causes of Ground Fall Related Incidents in US Mining Industry*, National Institute of Occupational Safety and Health; Brune, J. and Goertz, B. (2013) *Lessons Learned from Mine Disasters: New Technologies and Guidelines to Prevent Mine Disasters and Improve Safety*. Colorado School of Mines: Colorado; Burgess-Limerick, R. (2011) '*Injuries Associated with Underground Coal Mining Equipment in Australia'*, The Ergonomics Open Journal, 4 (Suppl 2-M2):62-73; Donoghue, A. (2004) 'Occupational health hazards in mining: an overview', *Occupational Medicine*, 54:283-289; Groves, A., Kecojevic, V. and Komljenovic, D. (2007) *'Analysis of fatalities and injuries involving mining equipment'*, Journal of Safety Research, 38:461–470; Hopkins, A. (1999) '*Repeat disasters: The lessons of the Moura coal mine'*; in Peterson, C. and Mayhew, C. (eds.) Occupational Health and Safety in Australia. Allen and Unwin: Sydney; Karra, V. (2005) *'Analysis of non-fatal and fatal injury rates for mine operator and contractor employees and the influence of work location'*, Journal of Safety Research, 36:413-421; Saleh, J. and Cummings, A. (2011) '*Safety in the mining industry and the unfinished legacy of mining accidents: Safety levers and defense-in-depth for addressing mining hazards'*, Safety Science, 49:764-777; Szwedzicki, T. (2001) *'Geotechnical precursors to large-scale ground collapse in mines'*, International Journal of Rock Mechanics & Mining Sciences, 38:957–965;Towsey, C. (2003) *Proactive Measures for Fatality Prevention in the Mining Industry— Why Fatalities Persist While Lost Time Injuries Decline*. Mining Risk Management Conference, 9-12 September, 1-9.

[83] Walters et al 2014: p. 31.

Documentary analysis showed overall that both the site and industry representatives made strong and positive contributions towards effective approaches to safety and health in Queensland coal mines and that they did so in several main ways in fulfilment of their functions and powers:

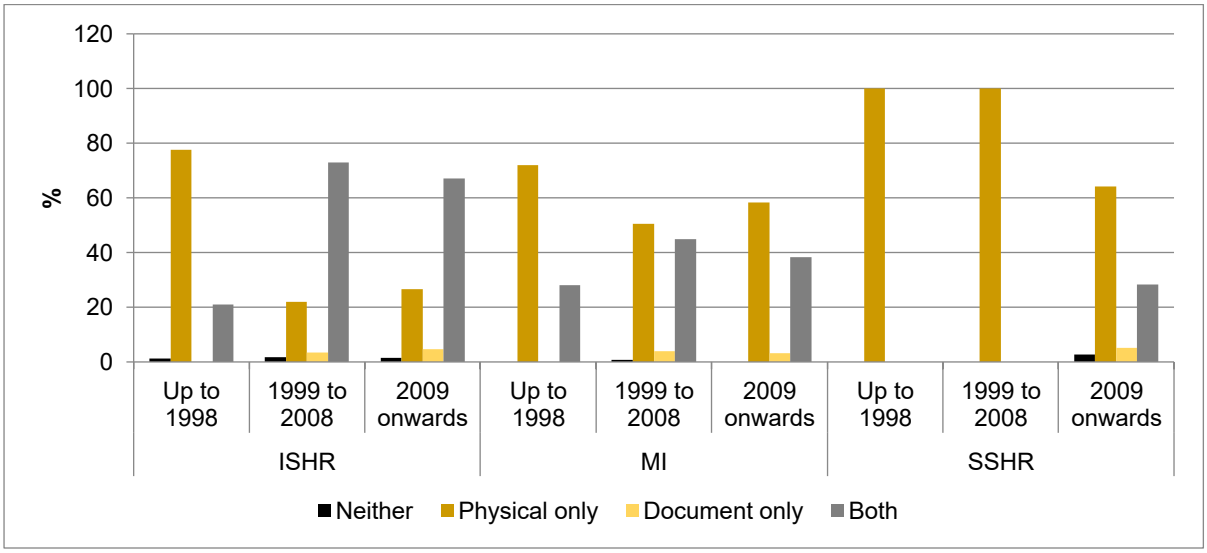
- Firstly, the vast majority of the site inspection reports (94%), regardless of whether they were undertaken by the health and safety representatives or the MI, referred to inspection of at least one fatal risk. Machinery, fire or explosion and rock fall were most commonly reported, and interviews suggested representatives were aware of the potentially serious nature of the hazards they were there to prevent.
- Secondly, the analysis of documented inspections showed that review of safety and health management systems (SHMS) featured prominently in industry representatives' site visits, with similar patterns of documentary inspection between industry representatives and the mines inspectorate.
- Thirdly, almost all mine inspection reports (96%) referred to the inspection of something physical (work areas, equipment, etc.), but reference only to physical inspection was most common among the SSHR reports, reflecting their preference, clearly demonstrated in the interviews, for a 'hands-on' health and safety role.

Figure 4-1: Inspection of fatal hazards and risks



Machinery, fire or explosion, and rock fall were the most commonly reported fatal hazards (Figure 4-1). There was some variation between ISHR and MI reports: more ISHR reports referred to the inspection of inrush/inundation, fire/explosion and rock fall, and more MI reports referred to outburst and electrocution. Binary logistic regression showed that most of these differences were significant independent of mine type, with ISHR reports more likely to refer to inrush/inundation, fire/explosion, rock fall and entrapment, SSHR reports more likely to refer to inrush/inundation and entrapment, and MI reports more likely to refer to electrocution. In addition, mine type was independently associated with reference to all the fatal hazards except electrocution, with underground mines more likely to have reports referring to inrush/inundation, fire/explosion, outburst, rock fall and entrapment, and open cut mines more likely to have reports referring to machinery and falls.

Figure 4-2: Comparing relative levels of physical and documentary inspection among ISHRs, SSHRs and MI inspectors over time: before the Coal Mining Safety and Health Act 1999, and between 1999 and 2008,2009 and 2013



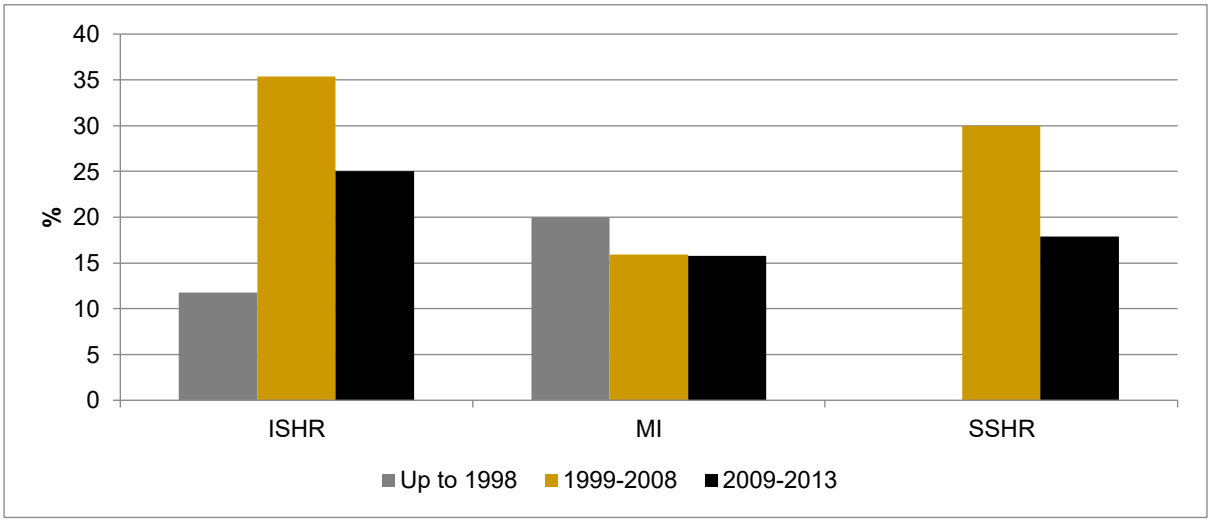
The differences between the ISHRs' and the SSHRs' focus in the inspection reports were best explained by the different roles played by the two types of representatives. As provided for in the regulatory requirements, the ISHRs had a wider role in reviewing OSH management, determined by their jurisdiction and position external to the mines they visited. As interviews with both them and the site representatives made further clear, industry representatives often visited mines in response to requests for support from the site representatives. Inspection records also showed that the balance between examining physical features, documents, or both, had changed significantly over time, with physical and documentary inspection increasing during the period from 1999 to 2008. The researchers concluded that this change reflected the effects of the 1999 Act, which emphasised OHS management. Another illustration of this change was that High Potential Incidents (HPIs) were a recurring theme in representatives' reports, with fatal risks as the main focus of their references to these HPIs. These incidents are widely seen as indices of increasing importance in health and safety practice in high-risk industries like mining — and this is strongly reflected in the risk-based coal mining regulation implemented in Queensland in 1999.[84] Thus, the high profile of such incidents in ISHR reports is evidence of the representatives' engagement with serious OHS issues in the mines.

Analysis of the documentary material further showed that, during inspections, the most frequent exchanges occurred with a mine manager. More than 90% of the inspections undertaken by the mine inspectors involved discussions with management, and 80% of those undertaken by ISHRs did so, while the SSHRs' documented engagement with managers was somewhat less, featuring in only 30% of their inspections. This was probably because the SSHRs worked within the mine they were inspecting and could therefore undertake many of their inspections without needing to contact management. ISHRs and SSHRs spoke to workers more frequently than the mine inspectors did, as might be anticipated, given that they are tasked with representing their interests. ISHRs engaged with SSHRs considerably more frequently than mine inspectors did. Again, this might be anticipated, given that the ISHRs were generally visiting the mines to support the activities of the SSHRs working there. However,

[84] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney.

communication with worker representatives is supposed to be an important element of the mine inspectors' visit, and documentary evidence suggests this may not have been the case in practice (Figure 4-3).

Figure 4-3: Comparing relative levels of physical and documentary inspection among ISHRs, SSHRs and MI inspectors over time: before the Coal Mining Safety and Health Act 1999, between 1999 and 2008, and between 2009 and 2013



References to discussions with workers, managers, and representatives also show changes over time, with ISHR discussions with both SSHRs and managers increasing over time (Figures 4-4 and 4-5). The analysis in the 2014 report suggests that the rise may reflect the effects of the 'risk-based' provisions of the 1999 Act, which seem to have stimulated greater engagement between inspectors, representatives and management. It may be that subsequent instructions to inspectors to be more active in seeking out representatives helped sustain communication between these two groups.

Figure 4-4: Differences in discussion with managers among ISHRs, SSHRs and MI inspectors over time

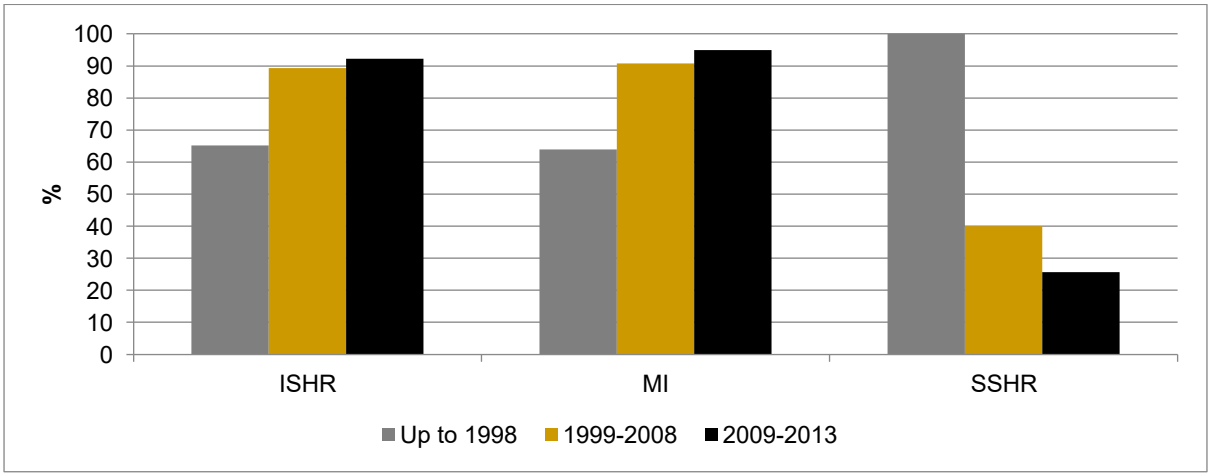
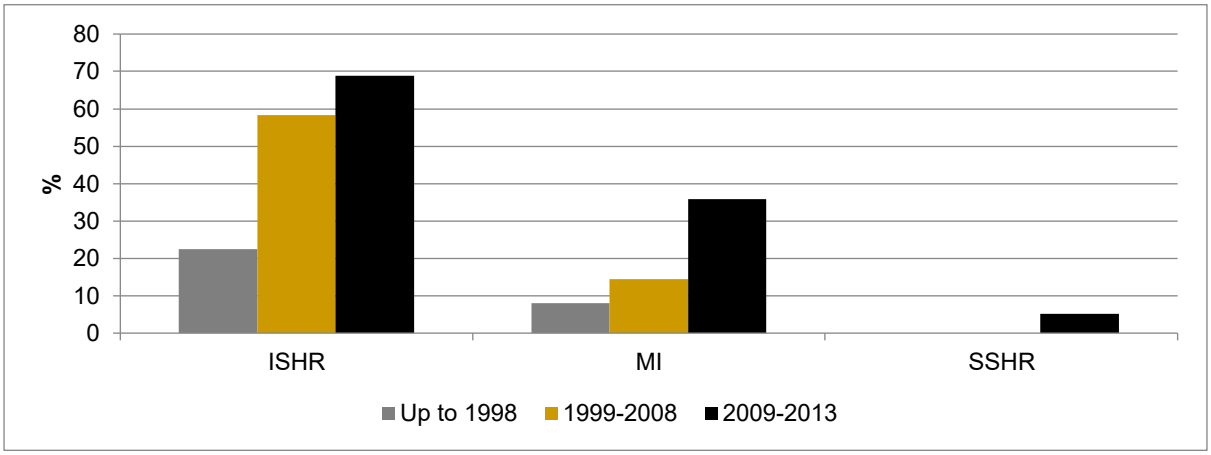


Figure 4-5: Differences in discussion with representatives among ISHRs, SSHRs and MI inspectors over time



The Queensland study of the documentary evidence also focused on the representatives' use of their statutory powers in relation to deficiencies in safety management systems, and their powers to order work cessation, since these were controversial at the time of the study, attracting much opprobrium and claims of their misuse from employers and their political supporters. However, the study showed that when formal notifications were used, they were always to address significant OSH risks, including inadequacies in emergency response procedures and equipment, ventilation, gas monitoring, machinery hazards, and so on. Further, these powers were generally used to identify the link between the risks posed by these failings and the health and safety management system in place. That is, they identified specific risks as symptomatic evidence of inadequacies in the management systems that should ameliorate and control them. This kind of feedback is a procedure widely accepted as good practice in OSH management and risk prevention.

Therefore, the documentary evidence analysed in the 2014 study supported the conclusion that representatives used their formal powers to suspend operations responsibly and in relation to serious OSH management system failings. Moreover, there was no evidence in the documentation that referral of these matters to the mines inspectorate resulted in any substantial change in the actions taken. That is, the documentary evidence indicated that the representatives behaved responsibly. This was also clear from the representatives' responses. In interviews, they indicated they used these powers when there was no other recourse – often in situations where they had previously engaged with management concerning specific risks but found the response had failed to remedy the situation. On other occasions, they were used when representatives believed there was an immediate risk of serious harm if the process or operation continued.

The researchers further noted that, while appeals against such notices were rare, most suspension notices were upheld following appeal, or the mines inspectorate issued a directive under section 166 of the Act in their place,[85] which requires remedial action but allows the process in question to continue while such action is taken. It was also clear from interviews that the representatives were aware of the strictures placed on their powers to serve notices or suspend operations by the regulatory requirements on them not to 'perform a function or exercise a power ... for a purpose other

[85] Representatives do not have this power. In interviews, however, ISHRs pointed out that had such a course of action been available to them, they would have taken it themselves.

than a safety or health purpose' or 'unnecessarily impede production'. As a priority, they always sought to ensure this was the case before resorting to such actions.

In addition to the analysis of documentary evidence, the Queensland study also analysed the content of detailed qualitative interviews with 18 SSHRs, three current and two past ISHRs and a senior regulatory inspector; used observations of training events for the SSHRs; and undertook a wide-ranging review of the literature. We now turn to the findings from these interviews in the following subsections, along with those from the later (2018) study in NSW.

b) Practice in NSW

The global study published by IOSH in 2018[86] reports a further investigation in Queensland and an additional investigation based on interviews with coal mining MSHRs and ISHRs in NSW and on participant observations during training sessions for the workplace representatives. Limited resources for this research in Australia (the study included four other countries in addition to Australia) meant that researchers were unable to analyse documentation on the practice of representation in NSW, as was done in the previous study in Queensland, although their analysis of the interviews indicated that had they been able to do so, they would have been most likely to come to similar conclusions as the previous study had done concerning such evidence.

In both Queensland and New South Wales, the representatives participating in the studies shared features similar to those noted in the previous study. Mine level health and safety representatives ranged from experienced representatives who had held the position for many years to those who were more recently elected. All had some experience of training. Their motives for becoming health and safety representatives were also similar to those identified in the previous study: they shared a desire to help prevent injuries, fatalities, and work-related ill-health, which many had witnessed among colleagues in the mines where they had worked. Others said they were already known to be willing to engage with supervisors and managers on matters that concerned them or their workmates, prompting their colleagues to put them forward as suitable candidates. They were committed to the position of health and safety representative, viewing it as a long-term engagement. Indeed, several pointed out that they were more likely to be in this position for a lot longer than the senior managers to whom they made representations in the mines where they worked.

The industry-level representatives were also experienced miners. They were all men in the same age range as the site representatives but had usually held other representative positions in their trade union before becoming ISHRs. There were requirements concerning their qualifications —in NSW they were required to possess 'qualifications set out in the regulations' (at the time of the study, this meant they had to be qualified to be a deputy or open cut examiner, and the completion of accredited training (Regulation 168(1)). Some of the ISHRs had held office for a considerable time and were experienced not only in addressing OHS matters in support of the SSHRs but also in liaising with the mines inspectorate and sitting on various industry-level regulatory and policy-making committees. Trade unions regarded the positions as senior and important appointments, as illustrated by former

[86] Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries,* IOSH Leicester.

ISHRs continuing in their trade union roles and, not infrequently, being elected to key senior roles within the trade union hierarchy.

As previously mentioned, the NSW legislation distinguishes between two types of mine safety and health representatives (MSHRs) – electrical (ESHR) and other site health and safety representatives (SSHR). In a few coal mines, a third type of representative — mechanical safety and health representatives — was also sometimes present. These usually resulted from agreements between the mining company and the union. The origins of these state differences were not entirely clear, but regulatory inspectors interviewed in the 2018 study believed they may have been a legacy of the former public ownership of mines in NSW, whereas those in Queensland have always been privately owned.[87]

At the time of the 2018 study in NSW, the implementation of revised regulatory arrangements on representation in health and safety was relatively recent. As outlined in the previous section, the changes to general provisions on worker representation brought about by the Model WHS Act prompted changes to provisions that applied specifically to mine workers, so that both systems could operate in relation to coal mines without detriment to one another. One consequence of this was that health and safety representatives appointed under the separate provisions might operate alongside each other in the same mine. Although it was clear from the interviews conducted in the 2018 study that the NSW MHSRs appointed under the mining provisions were aware of the situation thus created, none seemed unduly bothered by this or by the possible complications it might imply in practice.

Not surprisingly, there were far more similarities than differences in the findings on how representatives conducted their activities in NSW and Queensland coal mines. In NSW, the mine-level representatives reported engaging in the same kinds of inspections, investigations, and representations as those in Queensland, with broadly the same experiences of varied but often limited co-operation from supervisory and middle management in the mines. Although there was a further specialised division between electrical, general mine-site representatives, and mechanical (in some cases) representatives in NSW, this did not seem to affect the overall performance or activities of the representatives, other than influencing the nature of the risks each type of representative investigated. They generally regarded themselves as effective in their actions, and the similarity to the Queensland experience would suggest they were probably correct in this assessment.

But they also highlighted some challenges. For example, some representatives expressed concern about a tendency among middle-level mine managers to move around frequently, which made it difficult to form consistent working relationships at this level in some mines. In regions where the mines were situated quite close together, they said, ‘everyone knows each other’, and ‘people don’t move around a lot’. In these situations, they indicated that consultation worked well because of

[87] Although it was beyond the brief of the 2018 study to explore the historical antecedents of these different types of representatives, it seems, as with the history of worker inspectors more generally discussed in Chapter 3, that their origins may also be linked to trade union demands. For example, the position of electrical check inspector in NSW was influenced by a specific campaign by the then Electrical Trades Union, which was supported by the CFMEU. It may have also been influenced by the Appin colliery (Illawarra) disaster in 1979, where the likely cause of the explosion that killed 13 miners, was found to be an inadequately sealed fuse box. At a more general level, this is also an interesting example of an initiative of a non-skilled workers’ union being taken up by craft unions and the spread of this model of worker representation on safety to other trade unions in coal mines.

longstanding relationships and trust. But in other mines, they said middle managers were frequently relocated and, although they were well educated, they often had little practical experience. This, combined with unfamiliarity with the details of the mines where the representatives worked, posed considerable challenges. One New South Wales ISHR explained that in NSW coal mines:[88]

> A lot of the problems that come up in our areas are probably due to lack of consultation. … A lot of processes and management plans are developed by middle management who just go and do it… [they] try to implement the plan and then usually it falls over and then there's a dispute. The legislation says "when developing", or "when identifying it", but they usually get through most of the process and then say "have a read of this." … [A] lot of the issues could have been resolved by good consultation, good communication, a collaborative approach…'

The representatives also pointed to the tendency of such managers to develop their OHS plans through discussing them with people of their choice rather than through consulting mine-level representatives and ISHRs, thus giving rise to disputes. Representatives in Queensland also reported this, linking it to mining companies' preferences for behaviour-based safety management systems and deliberate attempts to marginalise representatives by discussing safety management procedures with individual mine workers of their choice rather than following agreed consultative procedures.

Regarding their use of statutory powers to review safety and health management, NSW ISHRs interviewed in the 2018 study reported experiences similar to those identified in Queensland in the previous study. That is, ISHRs inspected safety management documents with roughly the same frequency as regulatory inspectors, but SSHRs did so to a lesser extent, preferring a more 'hands-on' approach, while ISHRs acknowledged dealing more with safety and health management systems. If anything, this pattern appeared more pronounced in NSW coal mines than it had in Queensland.

In NSW, mine-level representatives reported experiencing quite challenging demands on their knowledge, which they said resulted from the greater attention being paid to safety and health management systems approaches and caused mine managers to often ask the representatives about changes that might be required to procedures. ISHRs in NSW said that while the mine-level representatives were 'great on the floor, they sometimes found such discussion with managers about these changes in safety management procedures to be quite demanding, and said they 'need to consult ISHRs about these issues.'

The ISHRs themselves acknowledged that the demands of process standards legislation required them to know more, read more, and spend more time on consultation and reviewing SHMSs, leaving them less time for inspections of the physical safety and health issues in the different mines in their jurisdiction, although it was indicated that they still tried to undertake two such inspections per week, and a minimum of one per fortnight.

[88] Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study* Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries, IOSH Leicester, 24.

In relation to their use of statutory powers to require the cessation of dangerous operations, the NSW representatives' appreciation of the value of their powers to stop dangerous work was much the same as that outlined above for the Queensland representatives. That is, in both states, representatives reported that these powers were important in conferring both legitimacy and respect for their role. They therefore took them very seriously and used them carefully and sparingly, often finding alternatives through efforts to achieve more effective consultation with managers. As in 2014, evidence from interviews with senior mines inspectors indicated that where representatives had used their powers to require the cessation of dangerous operations, they were generally upheld by the inspectorate, and inspectors said that the ISHRs were good at sticking to safety issues and being able to distinguish them from issues that were 'really industrial'.

However, while in NSW both ISHRs and MHSRs may issue provisional improvement notices (PINs) under the WHS Act, in practice the ISHRs strongly discouraged MSHRs and ESHRs from issuing PINs. Under Section 30 of the *Work Health and Safety (Mines and Petroleum Sites) Act 2013*, ISHRs also had the power to give directions to suspend mining operations. Under the provisions, in certain circumstances— such as when an ISHR was either not available, or it was not practicable for them to attend at short notice (section 32) they could delegate this power to a trained mine-level representative (MSHR or ESHR). But here again, ISHRs reported that they rarely did so and expressed a strong preference not to do so.

The explanation offered by mine-level representatives when asked about what happened in practice was that, by relying on the ISHRs to undertake such enforcement actions, they were less vulnerable to punitive reprisals from their employer, either at the time or in the future. As one ESHR quoted in the 2018 study said:

> For us to issue notices puts us under the spotlight. The legislation is there but for us to use those powers we tend to ask the Industry guys.[89]

The ISHRs further suggested that because SSHRs were employed at the mines – rather than acting on behalf of the trade union from outside the mine – they were far more vulnerable to reprisal by mine management or the mining company. The strategy they therefore advocated for the mine-level representatives was to raise issues and consult directly with management, but to take issues to the ISHRs if the management did not respond favourably. In this way they would not put their present or future employment prospects at risk. That said, it was also fairly clear from interviews with the ISHRs and the Mines Inspectorate that the ISHRs rarely felt the need to exercise their powers to direct suspensions or issue PINs. Indeed, they reported that 99% of issues were resolved through consultation.

Both types of representatives in both states were therefore aware of the contentious and serious nature of their powers to stop dangerous work, and of the objections to these powers from the mining companies. As a result, they used them strategically and sparingly, typically preferring to find solutions through consultation or negotiation with managers rather than resorting to these formal, legally supported actions. Nevertheless, they were also strongly convinced of the importance of having such

[89] Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries,* IOSH Leicester, 26.

powers and the seriousness of the message this conveyed to both their fellow mine workers and mine management.

What works?

In short, the findings from the studies in Queensland and NSW describe comparatively effective systems for representing the health and safety interests of coal miners in an industry with substantial risks and a long history of conflictual labour relations. The studies found that systems for worker health and safety representation in coal mines were implemented effectively, and that the two levels of representation, at the site and industry levels, worked well together to provide the necessary trade union organisation and support to make representation effective. There were far more similarities than differences in how representatives conducted their activities in the two states and in the extent to which they were effective. In NSW, the mine-level representatives reported engaging with the same kinds of inspections, investigations and representations as in Queensland, with broadly the same experiences of varied but often limited co-operation from supervisory and middle management in the mines. Although NSW had a further specialised division among general, electrical, and (in some cases) mechanical health and safety representatives, this did not appear to affect the representatives' overall performance or activities. In NSW, by using essentially the same approaches as those studied in Queensland, the miners' representatives were able to address OSH issues of concern to them in ways that both they and the regulatory inspectors who observed them found effective. In doing so, in both cases, they were careful to stay within the boundaries of the legitimacy they believed the regulatory provisions gave them to represent the interests of miners on 'health and safety' issues, and they consciously avoided straying into territories they believed to be more appropriately covered by other types of representative and labour relations procedure.

In developing this approach, mine-level representatives were encouraged by the more experienced industry-wide ISHRs, who not only followed the same parameters themselves but also worked to ensure that the mine-level representatives understood the nature of these boundaries and acted within them. In NSW this support extended to the ISHRs' use of powers to stop dangerous work, for although the mines level representatives held similar powers, their use was regarded as contentious by their employers and, rather than they risk possible reprisals against them, the advice from the ISHRs was to leave such actions to them to carry out, and to seek their intervention if the management did not respond favorably to any other of the issues that the mine level representatives had brought to their attention.

It is therefore a demonstrably effective system, and the most obvious support for the autonomous activity of mine-level safety and health representatives in both states was their relationship with the ISHRs. Without exception, mine-level participants from both states talked positively about the role of the industry-level representatives, both in relation to their interventions in issues at the mines in which the representatives worked and held office and, more widely, in relation to their competence, their availability and provision of advice, information and training for the representatives. Training was probably the most frequently mentioned form of support for the autonomous activities of the mine-level representatives in both states. They attributed their knowledge, confidence, and sense of the legitimacy of their role to the training they had received, especially training delivered by the trade

union and most often by the ISHRs themselves.[90] In this respect, their comments reflected the widely held research finding that competent and active health and safety representatives perceive this form of training not only as a powerful support for the development of their technical skills, but also as an important means of awareness raising in relation to their representative role and in their consciousness of a shared experience of this with representatives from other mines.[91]

That said, representatives in both states and at both site and industry levels also talked at length about the challenges they faced in 'getting things done' on work health and safety issues. Most frequently, they identified limited support and a lack of trust from mine management, often coupled with a perception that some managers lacked awareness of the features of both individual coal mines and the health and safety procedures that routinely applied in them. Often, this lack of awareness was attributed to managers' inexperience in particular mines, brought about by company practices that encouraged their continual movement and relatively short stays in management of the coal mines in question. Representatives' frustration with managers was further aired in what they perceived as a company preference for behaviour-based safety management systems, in which procedures often served to marginalise their consultative role. As previously noted, they felt that sometimes such procedures led managers to deliberately 'consult' individual workers about safety issues rather than acting in concert with their representatives.

A further organisational issue that both industry and site-level representatives found challenging was the increasing use of contract labour in coal mines. In most cases, contract workers' insecure work arrangements made them less likely to raise complaints about health and safety issues. However, if they did, they were more likely to want to remain anonymous. ISHRs frequently recounted such complaints in relation to their dealings with contract workers.

As elsewhere, reassertion of the strength and dominance of capital in the Australian mining industry in recent decades has led to considerable restructuring of the organisation of work and employment.

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[90] In this respect it is perhaps worth noting some parallels with another unique form of representation of workers interests in their health and safety, also supported by specific regulatory requirements and shown to be particularly effective in research studies — the system for regional health and safety representation in place in Sweden. Here, union appointed 'regional safety representatives' act as external agents to support the introduction, development and operation of representative arrangements within small workplaces. Thus, like the miners, delivering a 'two tier system' of support for representation is widely acknowledged to be effective. See: Frick, K. and Walters, D. (1998). Worker representation on health and safety in small enterprises: lessons from a Swedish approach. *International Labour Review*, 137(3), pp. 367–389. Also: Walters, D, Frick, K. and Wadsworth, E 2018. *Trade union initiatives to support improved safety and health in micro and small firms*: Available at: chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://istas.net/sites/default/files/2018-10/Final%20report%20TUPAs%20project.pdf

[91] There is a rich seam of research findings on the role of trade union/labour education and the relevance of its Freirean pedagogy to the needs of worker representatives generally, including those with a health and safety function. See for example: Robson, L.S., Stephenson, C.M., Schulte, P.A., Amick III, B.C., Irvin, E.L., Eggerth, D.E., Chan, S., Bielecky, A.R., Wang, A.M., Heidotting, T.L. and Peters, R.H., 2012. *A systematic review of the effectiveness of occupational health and safety training. Scandinavian journal of work, environment & health*, pp.193-208; Walters, D. 1997. *"Trade unions and the training of health and safety representatives: Challenges of the 1990s."Personnel Review26*, no. 5 (1997): 357-376; Bennett, T., 2020. Countering the pedagogic hegemony of neo-liberalism in the workplace: a Freirean analysis of the contribution of union-led learning to enhanced worker participation in the UK. *Journal of Participation and Employee Ownership*,*3*(1), pp.67-85; Luskin, J., Somers, C., Wooding, J. and Levenstein, C., 1992. *Teaching health and safety: Problems and possibilities for learner-centered training. American Journal of Industrial Medicine*, *22*(5), pp.665-676.

In coal mining, the use of contractor labour has increased considerably. It is well-established that the fractured work arrangements that result pose challenges for managing health and safety (Johnstone et al 2001; Quinlan and Bohle 2008). At the same time, they pose significant challenges for trade union organisation too. Indeed, in certain cases, moves towards the greater use of contractors have been shown to be part of a deliberate strategy of mining companies to reduce the influence of trade unions. While there is little doubt about these additional challenges, it is equally clear that both the ISHRs and the SSHRs found a variety of ways to address them, given contract workers' desire to avoid drawing attention to themselves for fear of possible reprisal from their employers. Evidence of these strategies emerged from interviews with the representatives and was also supported by the documentary analysis.

What makes it work?

In most advanced economies, statutory measures place duties on employers (or persons controlling business undertakings) to consult their workers on health and safety matters, and these measures also usually provide workers and their organisations with rights to appoint/elect representatives and support their OHS functions within their workplace, including rights to be consulted, participate in joint health and safety committees, receive information, inspect workplaces, accidents and incidents, and to receive training and time to undertake these tasks. Similar provisions are outlined in supra-national measures such as ILO Convention 155 and the EU Framework Directive 89/391.

These participatory arrangements have been widely studied in the past 50 years, and the consensus of findings on their operation indicates they are associated with improved health and safety. Such improvement generally holds for both direct performance indicators, such as injury or illness rates, and indirect measures, such as health and safety management practices.[92] In sum, the weight of evidence indicates that better outcomes are likely when employers manage health and safety with representative worker participation and that joint arrangements, trade unions and worker representation at the workplace are positively associated with these outcomes. Set in this context, the findings on the effectiveness of the system for worker representation on health and safety in coal mining in NSW and Queensland outlined here are not surprising. In terms of effective outcomes, they are in line with what might be expected if account is taken of the broad findings of research on worker representation on health and safety in other sectors and countries.

[92] See for example: EU-OSHA (2017). *Worker participation in the management of occupational safety and health: qualitative evidence from ESENER 2. European Risk Observatory EU-OSHA*, Bilbao: https://osha.europa.eu/en/tools-and-publications/publications/workerparticipation-management-occupational-safety-and-health; Hall A, Forest A, Sears A, et al. (2006) Making a difference: Knowledge, activism and worker representation in joint OHS committees. *Relations Industrielles* 61(3): 408–435. Hall A, Oudyk J, King A, et al. (2016) Identifying knowledge activism in worker health and safety representation: A cluster analysis. *American Journal of Industrial Medicine* 59(1): 42–56; Robinson, A. and C. Smallman (2013), 'Workplace Injury and Voice: A Comparison of Management and Union Perceptions', *Work, Employment and Society*, 27, 4, 674–693; Walters D and Nichols T (2007) *Worker representation and workplace health and safety*. Basingstoke: Palgrave Macmillan; Yassi, A., K. Lockhart, M. Sykes, B. Buck, B. Stime and J. M. Spiegel (2013), 'Effectiveness of Joint Health and Safety Committees: A Realist Review', *American Journal of Industrial Medicine*, 56, 4, 424–438; Yassi et al., 2013

However, they are something more than simply this. Wider research demonstrates that to be effective, arrangements for representation on health and safety require a set of preconditions to support their implementation and operation, central among which are:

- a regulatory steer,
- competent, motivated, autonomous worker health and safety representatives,
- their support from trade union organisations and
- the facilitating support of competent organisational management, committed to participative approaches to work health and safety management.[93]

Detailed research exploring the operation of these supports rarely finds them present in their entirety and concludes that their underdevelopment or absence may limit the effectiveness of arrangements in place to support workers' representation and consultation on health and safety in practice.

Moreover, recent studies have cast some doubt about the resilience of such measures to withstand wider change. These well-documented changes have included those in the structure and organisation of work and employment, in state support for securing compliance with regulatory measures, and in trade union membership, influence and power, and are further seen in a marked shift away from the pluralist approaches to labour relations and human resource management that dominated the period following the post-war consensus.[94] In its place, more unitarist trends in business management have emerged, as employers have grown increasingly confident about their managerial prerogatives within neo-liberal economic and political contexts that overtly support deregulatory (or re-regulatory) strategies to achieve growth and remove 'barriers to business'.

Not surprisingly, in these contexts, Walters and Wadsworth found in their qualitative follow-up study to the 2nd European Survey of New and Emerging Risks (ESENER 2) that even where arrangements were in place to provide representation and consultation with workers in line with statutory requirements, in practice in workplaces in many EU Member States, frequently these arrangements had been 'captured' by management. In these situations, they functioned not as means by which workers' autonomous interests in health and safety were addressed, but instead as extensions of the organisation's safety management system, dominated by managerial leadership, prerogatives, and interests.[95]

[93] See Walters and Nichols, 2007 *op cit.*)

[94] And not coincidentally, the period in which regulatory provisions on worker representation and consultation on health and safety at work were introduced in most countries.

[95] See Walters D and Wadsworth E (2019) Participation in safety and health in European workplaces: Framing the capture of representation*, European Journal of Industrial Relations.* DOI:10.1177/0959680119835670



Collinsville and Scottville Miners Memorial: source MEU

Placed in these contexts, the significance of the features of the system in place in coal mining in NSW and Queensland becomes clear. Research in both states showed that, to make their presence effective, representatives used strategies deeply embedded in their trade union organisation at mine, state, and national levels in their relations with the management of the mining companies in which they operated. In three further accounts (Walters et al, 2016, a, b and c), the researchers responsible

for the 2014 and 2018 studies analysed their findings from a labour relations perspective and showed that the hostile labour relations that largely characterised the contexts in which the representatives operate in Australia caused them to place a strong reliance on the statutory support of their actions.[96] While previous scholars, such as Gunningham and Sinclair (2012), concluded that these hostile labour relations led to mistrust between managers and union representatives, which potentially undermined participative engagement in OSH management, stalling progress on OSH, Walters et al (2016 b and c) suggest that such an interpretation rather misses the point. Instead, they argue that their findings indicate that although hostile relations and limited trust between workers and their representatives and managers were endemic in the coal mines they studied, seen from a pluralist perspective, representatives worked quite successfully within these contexts to give voice to their constituents' OHS interests. By carefully using their statutory powers, they were able to identify and request corrections to address fatal risks; review and suggest modifications to OHS management systems; and occasionally order the stoppage of work when consultative approaches had failed or serious and immediate risks were evident.

These authors conclude that the representatives' actions, therefore, cannot be explained by arguments concerning the 'limitations of trust' in achieving effective co-operation in jointly managing OHS because such arguments assume an identity of interest, which was not supported by workers' experience of their employers, their corporate values or their means of implementing them in the coal mines of Queensland and NSW. Instead, they suggest that, in fact, the strategies of representation on OHS observed in these mines are better understood as expressions of organised resistance to the experience of unsafe and unhealthy work that occur in labour relations contexts in which corporate values promoting production and profit are perceived by mine workers to have been prioritised by the mine ownership at the expense of the safety, health and wellbeing of mine workers.

Moreover, as Chapter 3 shows in considerable detail, the regulatory provisions and the arrangements they support in coal mining are not the consequence of legislative changes of the last fifty years, for their origins predate these developments by almost a century. The practices observed in the recent studies, therefore, have their roots in autonomous trade union strategies to represent miners' safety and health interests, deeply embedded in the culture of trade union representation in mining. In the case of coal mining and the MEU, such autonomy has, from its origins, included the resourcing of the activities of ISHRs by their trade union itself which, as Chapter 3 makes clear, not only demonstrates the commitment to this form of representation by the union, but itself is a powerful indication of how closely and strongly they are embedded in the culture and ethos of the MEU in NSW and Queensland. So much so that it is difficult to imagine either them or the MSHRs they support being 'captured' by the managerialist strategies of employers in ways identified by the previously mentioned recent research in other sectors in the Member States of the European Union.[97]

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[96] Walters, D., Quinlan, M., Johnstone, R., Wadsworth, E. (2016a) Cooperation or resistance? Representing workers' health and safety in a hazardous industry *Industrial Relations Journal*, 47(4):379-395; Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016b) Safeguarding Workers: A Study of Health and Safety Representatives in the Queensland Coal Mining Industry, 1990-2013. *Revue Relations Industrielles/Industrial Relations*, 71(3):418-441; Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016c) Representing miners in arrangements for health and safety in coalmines: A study of current practice. *Economic and Industrial Democracy*, DOI: 10.1177/0143831X16679891.

[97] See Walters D and Wadsworth E (2019) Participation in safety and health in European workplaces: Framing the capture of representation, *European Journal of Industrial Relations.* DOI:10.1177/0959680119835670.

Are the arrangements in coal mining a model for mining more generally in Australia?

From a trade union perspective, the research discussed in this chapter presents a strong argument for treating the situation in coal mining in both NSW and Queensland as a 'gold standard' for best practice that could be extended to other types of mining in these states and elsewhere in Australia more generally. The two-tier system that has been embedded in the policy priorities of the MEU and the culture of the coal mining industry in these two states for nearly one hundred and fifty years, which is currently supported by the regulatory framework for coal mining in both states, has been shown to be demonstrably effective in its support of representation and consultation on health and safety in coal mines. This can be seen in terms of:

- the focus of the actions it generates upon serious health and safety risks; and on systematic health and safety management
- the procedures in place for drawing issues to the attention of the mine management; and for seeking their resolution
- the liaison of the union representatives with the mines' regulator
- the support provided by the ISHRs for the knowledge activism of trained, competent and committed mine level representatives
- the support from the trade union underpinning the role and expertise of the ISHRs at mine level and beyond; and last, but by no means least
- the skills displayed by the ISHRs in navigating their own actions and their support for the actions of the MSHRs through the Scylla and Charybdis, often presented by the embedded hostility of the mine management and mining industry to issues or actions they perceive as potentially threatening productivity.

Examining these achievements in light of factors that research in other sectors and countries has shown to be important in supporting the implementation and operation of arrangements for representing further suggests that the practice in coal mining ticks these boxes too. It provides:

- a strong regulatory steer
- competent, motivated, trained and autonomous worker health and safety representatives
- their support from their trade union organisation in the form of the ISHRs and the prioritisation of health and safety in the union's national and global self-image.

However, as in many other cases of worker representation in other sectors today, worker representation on health and safety in coal mining cannot be said to enjoy the further precondition usually associated with effectiveness: facilitative cooperation from competent organisational management committed to participative approaches to work health and safety. The studies on which this chapter draws show that operating in a labour relations climate that was neither facilitative nor co-operative led representatives to rely heavily on regulation in support of their actions. They did so, in part, to protect themselves in a hostile climate, but also to achieve their desired ends. This gave rise to a form of activism in which representatives found the means to address their role successfully, despite unsupportive labour relations contexts. In such situations, their strategies are perhaps best understood less as examples of the worker-management co-operation more commonly associated with consultation on health and safety, but instead as efforts to resist the perceived harmful effects of corporate power. Evidence from the two previous studies in coal mining indicates that, far from

being unsustainable, these strategies in coal mines in NSW and Queensland contributed to 'getting things done' to improve work health and safety. We have suggested elsewhere that this responds to the realities of workers' experience.[98] And actions of representatives offering the strongest possibility for protecting workers' interests in these situations were often more in line with organised resistance than with notions of trust and co-operation.

What is critical, with regard to coal mining, is that supportive/empowering statutory provisions on representation, combined with a strong union commitment to safety, have resulted in a system that operates effectively even in the absence of employer support. This includes ISHRs helping to deal with locations where worker organisation is weaker – a point reinforced by evidence presented in Chapter 6, and something metalliferous workers interviewed clearly wanted. If ISHRs do this in coal, it is reasonable to presume their equivalents in metalliferous will play the same role in situations where management is hostile to effective representation. Further, it is worth noting that some prominent companies operate in both the coal and metalliferous sectors. Finally, another point worth considering is the respective roles of HSRs and SSHRs. As discussed in Chapter 6, the current HSR representative regime in metalliferous mining is fractured and weak, whereas in coal mining there is a collaborative relationship. It is arguable (and respondents made this point) that the presence of ISHRs improves relations with the inspectorate as well as management's willingness to act more cooperatively on safety and health issues. This is consistent with previous research and interview responses in Chapter 6. We also suggest that SSHRs in metalliferous mining are more likely to be effective on both fronts (i.e., securing more cooperation from employers and closer ties to the inspectorate) than the HSR regime, given their very different powers, including the capacity to represent the entire mine and prepare inspection reports.

This, of course, raises interesting questions about the transferability of the system of worker representation to other mining sectors where the trade union position may be weaker than in NSW coal mining. The consequences of this difference in NSW metalliferous mines require further exploration.

Previous research did point to challenges to the regime in coal mining, notably increased use of contractors. As we will see in the following chapters, the same trends are at least as prevalent in metalliferous mining. Such challenges have also been clearly demonstrated in recent research on health and safety in mining.[99] Several points can be made about this. First, contracting is used extensively in coal and metalliferous mining, although it appears several factors, including the same-job-same-pay principle in recent federal IR legislation, have slowed, if not reversed, this trend (Chapter 6). Second, as the cited research shows, evidence indicates a negative association between extensive

[98] See Walters, D., Quinlan, M., Johnstone, R., Wadsworth, E. (2016a) Cooperation or resistance? Representing workers' health and safety in a hazardous industry *Industrial Relations Journal,* 47(4):379-395; Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016b) Safeguarding Workers: A Study of Health and Safety Representatives in the Queensland Coal Mining Industry, 1990-2013. *Relations Industrielles/Industrial Relations*, 71(3):418-441; Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016c) Representing miners in arrangements for health and safety in coalmines: A study of current practice. *Economic and Industrial Democracy*, DOI: 10.1177/0143831X16679891.

[99] See Nygren, M. 2025 Mining industry approaches to risk and responsibility: managing safety in outsourced environments, *Mineral Economics*, https://doi.org/10.1007/s13563-025-00555-1;Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review *The Economic and Labour Relations Review.* 35(3):576-613 doi:10.1017/elr.2024.32.

contracting and worse OHS outcomes, which incidents like Grosvenor suggest warrant more regulatory action. Third, the adverse effects of contracting on worker representation are another reason for action in this area, not a justification for allowing it to undermine key provisions in legislation and legislative intent.

To date, there has been little independent study of the arrangements for representing the work health and safety interests of miners in metalliferous mines in NSW or how the experience of miners and their representatives in these mines might compare with those based on studies of arrangements in place in coal mines that have been outlined in the present chapter. This is remedied in Chapter 6 of this report, which presents and discusses the results of the current investigation among metalliferous miners and their representatives in NSW, as well as in coal mines in the state. It offers considerable insight into how metalliferous miners attempt to represent their interests in the absence of a regulatory framework comparable with that in coal mining and discusses their views on how support for representation of workers' interests on work health and safety might be improved in metalliferous mines, together with their implications for future possible legislative reform. Before this, however, the following chapter analyses serious incidents and enforcement in mining in NSW during the first quarter of the present century.

Chapter 5 Mine health and safety performance

Introduction

The safety performance of the mining industry across Australia has improved over the last half-century, with a significant reduction in multiple fatality incidents associated with principal mining hazards such as explosion, fall of ground, or inundation. As outlined in Chapter 3, major mining incidents in Queensland and NSW in the 1990s (Moura No 2, Gretley and Northparkes) provided a catalyst for legislative review. Mining disasters and the need to develop process/risk-based legislation provided the impetus.

In this chapter we examine health and safety performance in the context of legislative change, particularly that associated with representative frameworks and regulatory programs developed in response to industry performance. A primary focus is how effective the different jurisdictions have been in achieving the objectives of their respective Acts, in relation to worker consultation and participation, and cooperation with stakeholders, including workers and their representative unions.

The *Work Health and Safety Act 2011* (WHS Act) states that its main object is to provide a balanced and nationally consistent framework to secure the health and safety of workers and workplaces. Two of the approaches outlined for achieving this objective relate to worker representation and participation by:

> (b) providing for fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety, and
>
> (c) encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices, and assisting persons conducting businesses or undertakings and workers to achieve a healthier and safer working environment.

Experts on the matter of worker representation described this tripartite arrangement as a 'prevention triangle':

> The systematic management of health and safely operates through a 'prevention triangle' whose vertices comprise 'competent employer engagement, with responsibility for evaluating and controlling risks; worker representation contributing practical knowhow and monitoring management functions, and state regulation and inspection.[100]

A significant legislative change was driven by two national harmonisation strategies, namely the National Mine Safety Framework (NMSF) and development of model OHS legislation. Before

[100] D Walters, M Quinlan, R Johnstone and E Wadsworth, (2019) 'Representing miners in arrangements for health and safety in coalmines: A current study of practice', *Economical and Industrial Democracy* Vol. 40(4) pp 976996.

proceeding to the review of performance a brief overview of the implications of these processes for worker representation is outlined.

Harmonisation and the National Mines Safety Framework

As explained in Chapter 3, historically representative arrangements in the Australian mining industry were initially modelled on the UK mining legislation. This model provided for a site-based representative (SHSR) supported by an industry (district) representative (ISHR). One imperative for establishing an industry representative was that representatives employed by a mine were often subject to reprisals for raising safety concerns. In this respect, the representative arrangements under the current harmonised laws fall short of the protections and support provided to site-based representatives, which were a critical aspect of the historical mining representative provisions on which it was modelled. Although the post-Robens model was based on UK mining, its translation into harmonised OHS laws represented a levelling down of the original UK mining provisions that provided a two-tier representative model.

In 2002, before the general OHS harmonisation process commenced, the Council of Australian Governments (COAG), established the National Mines Safety Framework (NMSF). The issue of national consistency in OHS laws was also addressed by a Productivity Commission Inquiry in 2004,[101] indicating that industry saw the lack of consistency as a hindrance to productivity. At the time, the mining industry was regulated under state-based legislation. Although the provisions for worker health and safety representation stemmed from the historical mining legislation, each state developed slightly different provisions for worker representation and responded differently to national harmonisation efforts. In 2008, when both the NMSF and general OHS harmonisation processes were underway, the legislative provisions for worker representation in the major mining states were as follows:

- Queensland coal mining and mineral mining and quarrying had separate legislation, which was not subordinate to the general OHS legislation. It provided district check inspectors who had the power to suspend operations and mine site check inspectors.
- NSW coal mining and metalliferous mining had separate legislation, which was subordinate to the general OHS laws. NSW representative arrangements were similar to Queensland, with district check inspectors who had the power to suspend operations and mine site check inspectors.
- WA had consolidated mining legislation that was not subordinate to the general OHS laws. Under the *Mine Safety Inspection Act* 1994 (MSIA), safety and health representatives elected by workgroups did not have the power to issue a direction to cease work.
- Tasmanian mining was regulated under the general OHS legislation.

The NMSF developed legislative principles and example clauses that states integrated into their OHS/WHS or mining-specific laws. The NMSF contained seven primary goals and an implementation plan with seven strategies. In 2005, the tripartite steering committee published three strategy documents – (1) Strategy 1 - Nationally Consistent Legislative Framework; (2) Strategy 5 - Nationally Consistent Data Set; and (3) Strategy 6 -Consultation Framework. The Legislative Framework addressed, among other things, a risk-based safety management system, genuine consultative

[101] Productivity Commission Inquiry Report *National Workers Compensation and Occupational Health Safety Framework* No 27, 6 March 2004.

arrangements, employees' ability to collectively select health and safety representatives, and a workforce empowered to identify and report potential hazards without discrimination or retaliation. The NMSF preserved the more robust worker representative functions already provided by the NSW and Queensland mining-specific legislation, as noted above. Major mining states aligned the NMSF legislative principles and clauses with the model *Work Health and Safety Act 2012* but kept unique state-based provisions.

Under the general OHS harmonisation process, the model WHS Act included a clause giving worker representatives the power to direct workers to cease work in the event of an imminent threat to health and safety, which was not unanimously accepted. Industry peak bodies (and the Western Australian Government) opposed the clause, arguing that the common law right already existed,[102] and expressed concerns that unions could exploit this provision as an industrial weapon. However, the right to cease work was supported by the South Australian, Victorian, NSW, and Queensland Governments but not by the Western Australian Government.[103] The Queensland Government stated:

> The principal right to direct that work cease if it is an immediate and significant risk to health and safety, should be a collective right vested in the relevant health and safety representative. This collective right should supersede any individual right to refuse dangerous work exercised by an individual worker leading up to the health and safety representative's work cessation direction.[104]

The Kenner Review of the WA MSIA reported that the Chamber for Minerals and Energy argued that 'ample ability already exists under MSIA in s 72 for employees to refrain from working in circumstances where there is a risk of serious and imminent injury or harm to the health of an employee'.[105] Historically, the mines and coal mines regulation laws did not empower workers' representatives to stop work and only empowered inspectors to do so in 1974.

State-based developments towards harmonisation

In NSW, coal mining and metalliferous mining adopted different models of worker representation. In the early 2000's, when the mining-specific laws were being reviewed and modernised, coal mining retained the mining-specific two-tier model with district and site check inspectors while metalliferous mining omitted the provisions pertaining to district check inspectors. As discussed elsewhere, legislators argued that industrial entry permit holders could fulfil the role of district check inspector. In 2013, when mining legislation was consolidated under one act, the *Work Health and Safety (Mines and Petroleum Sites) Act 2013*, mining-specific representative arrangements were only applied to coal

[102] National Review into Model OHS Laws. (2009). *National review into model occupational health and safety laws: Second report to WRMC (January 2009)*. Department of Education, Employment and Workplace Relations. 142 https://catalogue.nla.gov.au/catalog/4694056

[103] National Review into Model OHS Laws. (2009). *National review into model occupational health and safety laws: Second report to WRMC (January 2009)*. Department of Education, Employment and Workplace Relations. 143. https://catalogue.nla.gov.au/catalog/4694056

[104] Submission by the Queensland Government to the National Review into Model OHS Laws. (2009). *National review into model occupational health and safety laws: Second report to WRMC (January 2009)*. Department of Education, Employment and Workplace Relations. 143. https://catalogue.nla.gov.au/catalog/4694056

[105] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth. 23.

mining, and metalliferous mining took its representative provisions from the WHS Act and implemented the workgroup-based HSR model.

There are some parallels between WA and NSW metalliferous mining regarding the levelling down of representative arrangements. Although the initial underlying models were drawn from different traditions i.e., NSW legislation was modelled on the UK mining legislation while WA adopted the continental model after an amendment in 1915. The WA legislation provided regionally based workmen's (later the employees') inspectors who were elected by the majority of workers but employed by the [mining] department rather than the union. In 1990, this system expanded and, in addition to employees' inspectors, provided for site-based worker representatives called Safety and Health Representatives (SHRs), creating a two-tier model. In 1994, coal mining and minerals mining and quarrying were consolidated under a single piece of legislation, the *WA MSIA 1994*. This legislation retained the employees' inspector and workgroup-based SHRs.

The MSIA and mine safety was subject of several reviews during the first decade of the 2000s. The MEU made a submission to the Hooker Review, which concluded that there were some ambiguities about the circumstances in which consultation was required.[106] The MEU submitted that the consultation provisions in the MSIA were inadequate and emphasised that (1) the safety management system approach in NMSF required genuine consultation to identify and control hazards and that (2) the MSIA did not provide for mandatory consultation. The Kenner Review in 2009 assessed the adequacy of the regulatory framework giving regard to the national harmonisation processes. Recommendation 81 of the Kenner Review recommended amending the MSIA in line with the NMSF Consultation Framework.[107] However, regarding worker health and safety representatives, Kenner recommended retaining the SHRs model rather than adopting the 'check inspector' model operating in NSW and Queensland and retaining employees' inspectors. However, in 2014, the WA government omitted the provision on employees' inspectors. WA mining transitioned to the *Work Health and Safety Act in 2020*. There are parallels between NSW metalliferous mining and WA mining regarding the gradual scaling down of representative arrangements over time.

Queensland is the only state to retain standalone and separate coal mining and minerals mining-specific legislation. These laws were reviewed and aligned with post-Robens style legislation in the *Coal Mining Safety Health Act* 1999 and *Mining and Quarrying Act* 1999. Mining legislation operated in parallel to the Queensland OHS Act. Queensland retained mining-specific representative arrangements, which were clarified and updated by regulations in 2012 and, in 2024, after the Queensland Coal Mining Board of Inquiry following the Grosvenor mine fire and explosion. Currently in Queensland coal mining, the industry health representative (ISHR) is employed by the Mining and Energy Union, while in metalliferous mining, the district workers representative (DWR) is employed by the government.

Tasmania was the first state to transfer mining regulation to general OHS laws, doing so in 1995 before harmonisation. In 2010, after several mining fatalities including the Beaconsfield disaster, mining-

[106] Final Report Review of the Occupational Health and Safety Act 1984 Mr Richard Hooker 6 December 2006 Chapter 6.
[107] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth. 292

specific provisions were included in the *Workplace Health and Safety Amendment (Mine Safety) Act* 2010. The amendment mirrored the NMSF objectives and mandated worker consultation in identifying and controlling mining hazards.

Methods

In this chapter, health and safety performance was assessed using Safe Work Australia's national workers' compensation claims data, state-based mining regulators' notifiable injury and incident data, health and safety performance reports, commissioned research and other government inquiries, and a review of coronial inquiry and regulatory investigation reports. The sources and methods were:

1. Quantitative analysis of Safe Work Australia and state regulator fatal and serious injury numbers and incident frequency rates.
2. Qualitative review and evaluation of regulatory compliance assessments and other government reviews of health and safety performance.
3. Analysis of regulatory and coronial investigation reports using the Ten Pathways model to identify recurrent failure points, particularly those associated with worker perspectives.
4. Worker and worker representative assessment of a high potential incident (HPI) using the Ten Pathways model.

We first examined Safe Work Australia's fatality and serious claims data for coal and metalliferous mining in NSW, Queensland, WA, and Tasmania. Safe Work Australia's data was drawn from the National Data Set (NDS) for compensation-based statistics and provides a comparable measure. 'Serious claims' are defined as accepted workers' compensation claims that involve one or more weeks' absence from work, excluding fatalities.[108] The second part of this analysis used fatality and serious injury/accident data collected by various state mining regulators. The serious injury/accident definitions are based on the legislation in effect at the time.

The safety literature well documents that the lost-time injury (LTI) frequency rate is not a valid indicator of health and safety performance. It is a lagging indicator and a poor predictor of serious incidents and is open to manipulation when 'selected duties' are used to keep workers at work, sometimes for valid reasons, but often to reduce the number of LTIs. For example, in 2001-02 the WA regulator stated in its safety performance report that various parties alleged that LTIs are 'managed' to provide favourable accident reporting data. Consequently, the regulator initiated a program to collect 'Disabling injury' (DI) statistics to establish a more effective safety performance indicator than the LTI-based system.

In this report we have elected to present fatality and serious injury (SI) data (serious accidents in Queensland), and fatal and serious injury frequency rates (FIFRs/SIFRs). Where possible, we used rolling five-year average frequency rates so trends could be reviewed over a 10-year or longer time span. SIs/SAs data are limited as a measure due to differences in definitions across state jurisdictions and over time, driven by legislative changes in each jurisdiction. In NSW, after harmonised mining-specific legalisation was enacted, the NSW Mine Safety Performance Report 2015-16 stated, 'Serious bodily injuries are not directly comparable to other mining jurisdictions.' See Table 5-1 for comparative definitions of SIs across jurisdictions and other data reporting categories developed by the various

[108] Safe Work Australia, National Data Set for Compensation-based Statistics (NDS), 2023-24 (preliminary) Safe Work Australia, Traumatic Injury Fatalities Database (TIF).

regulators for the purpose of reporting performance.[109] Health and safety performance reports, inspector compliance reports, and other government reports on mine health and safety were reviewed to provide a context for performance evaluation.

Following the incident data analysis, we examine fatal (and some serious incident) investigation reports to understand more about the surrounding circumstances and, using the Ten Pathways model, identify causal and contributing factors. Regarding regulatory and coronial investigation reports, unlike the NSW report, which confined itself to regulator investigations, incidents in Queensland, Western Australia and Tasmania were examined using both investigation and prosecution reports and findings of coronial inquiries. There are several reasons for this. First, while relatively detailed investigation reports were available for virtually all serious/fatal incidents, this was not the case with the other three jurisdictions. For example, Tasmania coronial inquest findings were available for all mine fatalities from 2000 onwards, but investigation reports were not published. There was an independent investigation into the 2006 Beaconsfield mine fatality (producing three reports), but even here this was a report to the Coroner, and this information was drawn on for this report. While coronial inquests and regulator investigations differ in scope and purpose, coronial inquests are wide-ranging in their inquiry into the causes of death and often draw on regulator evidence/reports, making them a useful source of information. Regarding Queensland and Western Australia, it is necessary to draw on both sources because detailed investigation reports were not always available. Unlike Tasmania, not all mine fatalities were the subject of a coronial inquest: less than half in the case of Queensland and only a few in the case of Western Australia. Investigations and coronial inquests vary in the comprehensiveness of their analysis and, because Ten Pathways is not used to guide either, evidence relating to particular pathways may depend on whether questions were asked or avenues explored. For example, apart from particularly detailed investigations, like that at Grosvenor, there is rarely evidence that mine workers were asked if they held safety concerns prior to the incident. This should be borne in mind when considering observations about incident investigations in NSW, Queensland, Western Australia and Tasmania.

Finally, we analysed the worker/worker representative respondents' HPI assessment forms based on the Ten Pathways model to provide a worker perspective on recurring failures.

Safe Work Australia claims data

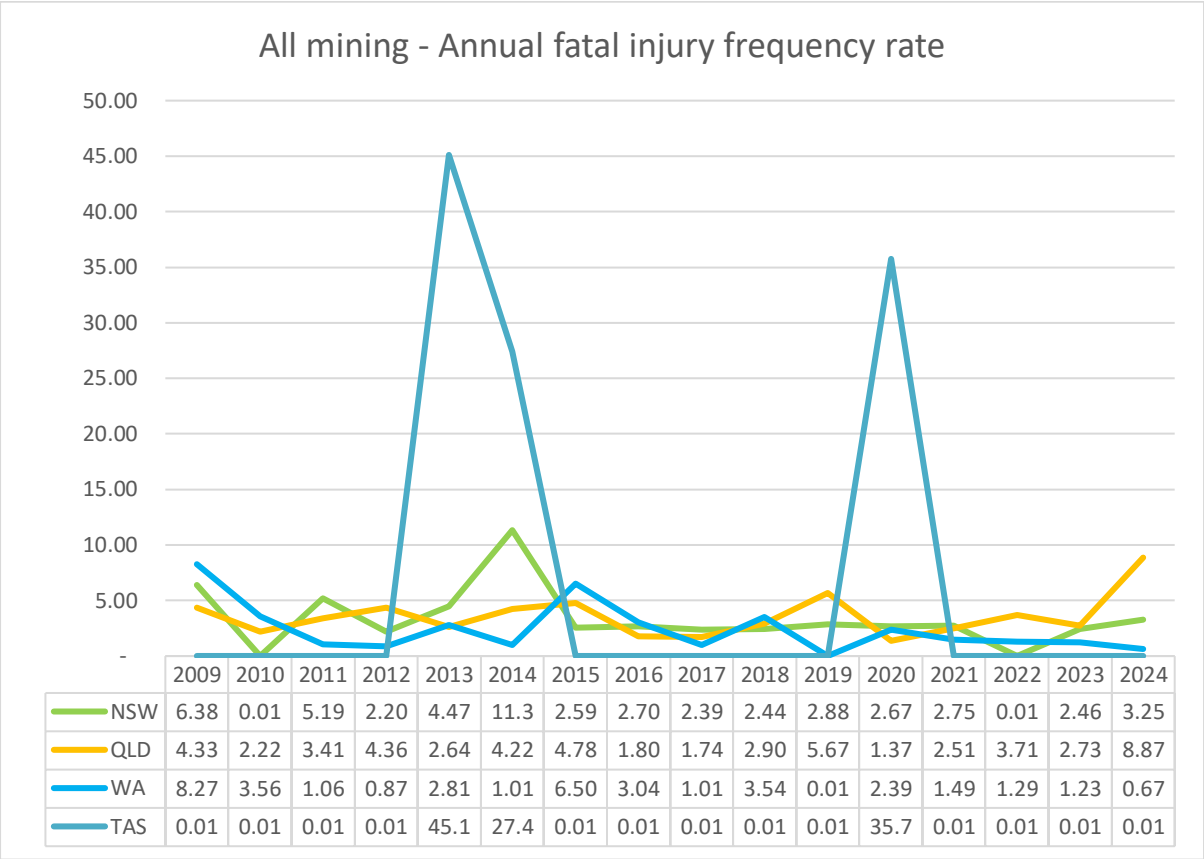
Fatalities

Figure 5-1 shows the annual fatal injury frequency rate (FIFR) for NSW, Queensland, WA, and Tasmania. State-based mining health and safety performance reports published by state mining regulators indicate that incident rates differ by sector (metalliferous/minerals or coal mining) and operation type (underground or surface mining). The NDS for workers' compensation claims does not collect information on operation type and appears not to include contractor employee fatalities. Mining regulator data indicates underground mines have higher FIFRs than surface mines. Observations on comparative health and safety performance should consider the proportion of surface to underground mines in each state. Figure 5-1 shows state peaks in the annual FIFR between 2012 and 2015 by state. In NSW, the increase in 2013-14 reflects four fatalities in coal and metalliferous mines. In Queensland, the increase in 2019 and 2024 reflects six fatalities that occurred

[109] Note- Tasmania is not included in the table but their WHS Act (Tasmania) adopts the WHS Act definition.

in 2018-20 and four between 2022-25 and 2025-26 in both coal and minerals mines. In WA, the upturn in 2008-09 reflects seven fatalities, while the increase over 2013-16 reflects 13 fatalities that occurred over this time. The spikes in Tasmania reflect the Mt Lyell copper mine fatality in 2013-14 and Mt Henty gold mine fatalities in 2020. Many of the workers fatally injured in Queensland and WA were contractors and therefore may not be reflected in Figure 5-1. The peaks of upticks in the Tasmanian FIFR are due to fewer hours worked.

Figure 5-6: Australian mining annual fatal injury frequency rate by state – 2009 to 2024



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NSW	6.38	0.01	5.19	2.20	4.47	11.3	2.59	2.70	2.39	2.44	2.88	2.67	2.75	0.01	2.46	3.25
QLD	4.33	2.22	3.41	4.36	2.64	4.22	4.78	1.80	1.74	2.90	5.67	1.37	2.51	3.71	2.73	8.87
WA	8.27	3.56	1.06	0.87	2.81	1.01	6.50	3.04	1.01	3.54	0.01	2.39	1.49	1.29	1.23	0.67
TAS	0.01	0.01	0.01	0.01	45.1	27.4	0.01	0.01	0.01	0.01	0.01	35.7	0.01	0.01	0.01	0.01

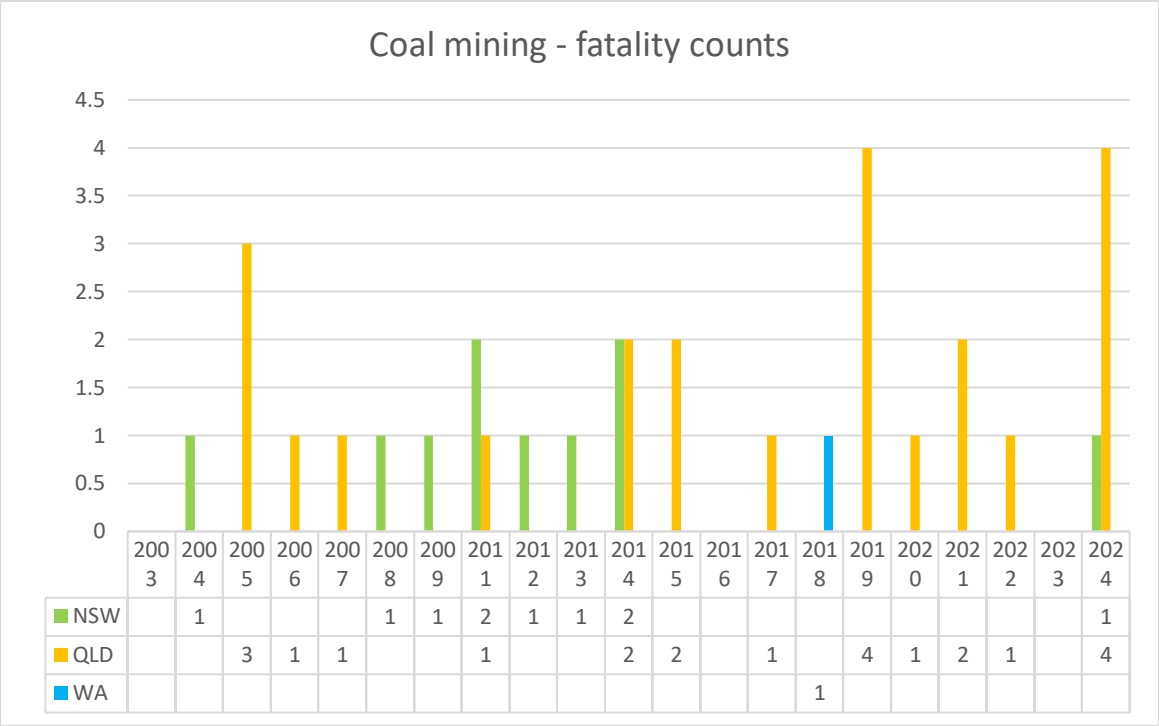
Figures 5-2 and 5-3 show coal mining fatality counts and annual FIFRs in NSW, Queensland and WA. The coal mining industries in WA and Tasmania are relatively small, compared to NSW and Queensland. There are two active coal operations (one with multiple sites) in WA and two active coal mines in Tasmania. The last fatality in the Tasmanian coal industry occurred in 2000. There was one coal mining fatality in WA in 2018. A review of the NSW Resources Regulator's Mine Safety Performance Reports shows there were six additional fatalities in coal mines involving contractors in 2004, 2006, 2009, 2014, 2016, and 2018.

Figure 5-3 displays metalliferous mining fatality counts in NSW, Queensland and WA. WA had higher metalliferous mining fatalities than NSW and Queensland, but WA has more metalliferous mines, and there are substantially more hours worked. Tasmania had seven fatalities in this period, but the industry is significantly smaller, with only four large metalliferous mining operations.

A review of NSW Mine Safety Performance Reports shows three additional fatalities involving contractors in metalliferous mines in 2014, 2017 and 2018. A review of Tasmanian coronial inquest reports shows an additional fatality in Tasmania in 2017. Queensland mining and quarrying safety

performance and health reports indicate that 18 of the 28 coal mining fatalities and 16 of the 31 minerals and quarrying fatalities that occurred between 2001 and 2025 involved contractors.

Figure 5-2 Australian coal mining fatalities by state – 2003 to 2024



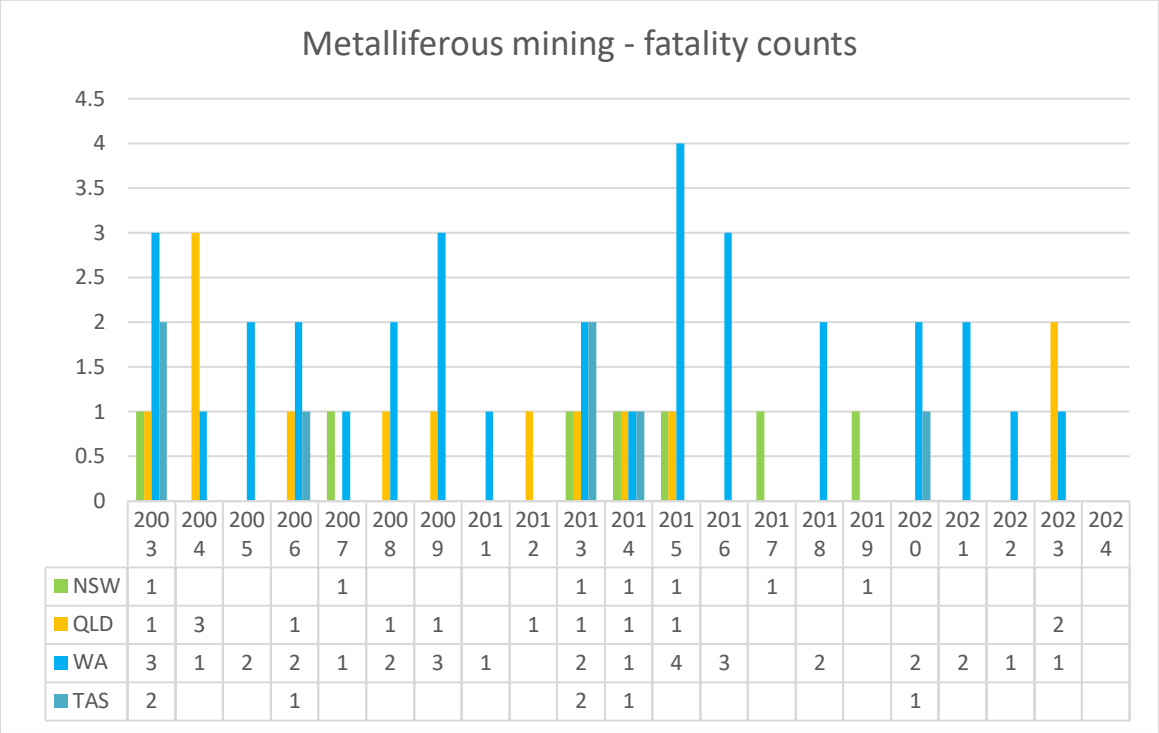
	2003	2004	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NSW		1				1	1	2	1	1	2										1
QLD			3	1	1			1			2	2		1		4	1	2	1		4
WA															1						

WA Department of Mines and Petroleum Resources' Safety performance reports identify numerous fatalities involving contractors performing work on mine sites. Several WA contractor fatalities occurred at processing plants/refineries or rail/port facilities. For example, there were five fatalities recorded in 2013-14, four in 2014-15 and four in 2015-16, indicating there were three more fatalities than shown in Figure 5-3.

This is concerning as it indicates contractor fatalities are coded against the contractor's industry classification rather than mining. A 1995 Swedish study found that an apparent improvement in safety in the Swedish mining industry was due to the growing contractor workforce that was not counted as mining employees.[110]

[110] Blank, V. Andersson, R. Linden, A. and Nilsson, B. (1995) Hidden Accident Rates and Patterns in the Swedish Mining Industry due to the Involvement of Contract Workers, *Safety Science*, 21(1):23-35.

Figure 5-7: Australian metalliferous mining fatality counts by state – 2003 to 2024



	2003	2004	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NSW	1				1					1	1	1		1		1					
QLD	1	3		1		1	1		1	1	1	1								2	
WA	3	1	2	2	1	2	3	1		2	1	4	3		2		2	2	1	1	
TAS	2			1						2	1						1				

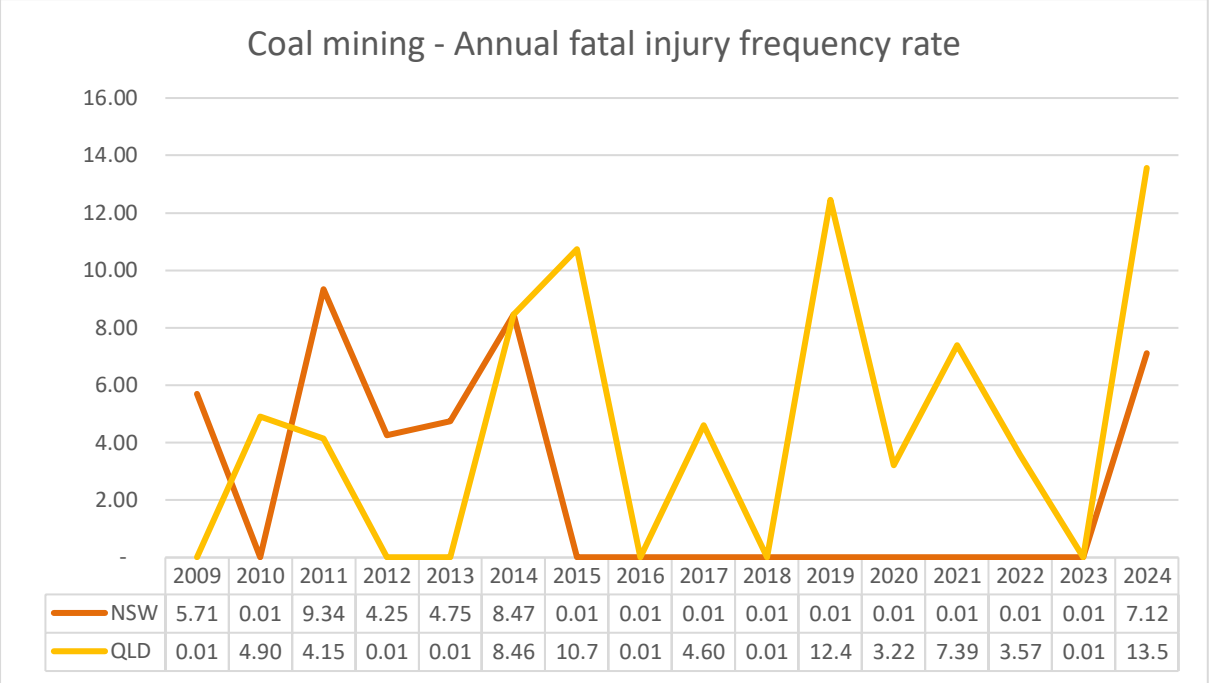
Safe Work Australia noted, 'There are significant differences in the number of hours worked by different groups of workers at different points in time. Variance in the number of hours worked indicates workers' exposure to work-related risks varies considerably. A frequency rate accounts for these differences and allows more accurate comparisons between different groups of workers.' The 'claims frequency rate' is defined as the number of claims per million hours worked, based on estimates of the working population covered by workers' compensation schemes.

The FIFR in NSW coal mining decreased after 2014 (Fig 5-4), coinciding with the introduction of the Work Health and Safety (Mines and Petroleum Sites) Act in 2013. A review of NSW performance, based on state-based mining performance data, suggests this reduction could reflect the impact of representative arrangements that essentially delivered a three-tier system with workgroup health and safety representatives (HSR), site-based safety and health representatives (SSHR), and Industry Health and Safety Representatives (ISHR) (see NSW focus group findings). Following the fatalities in 2013-14, the NSW regulator commissioned a review (Wilkinson Fatality Review) to identify underlying causes of the incidents. In response to the review, NSW embarked on a program of proactive compliance assessments targeting critical controls for principal mining hazards. Likewise, the Queensland Department of Natural Resources, Mines and Energy commissioned a review of mine and quarry fatalities in 2018 (Brady Review) following the death of eight mine workers over an 18-month period. In WA in 2012, the Department of Mines and Petroleum undertook a review of fatal incidents between 2000 and 2012 following the spike in 2009.

As noted, the coal mining industries in WA and Tasmania are relatively small. The last fatality in Tasmania occurred in 2000, and in WA the only coal mining fatality occurred in 2018. The FIFRs for these states have not been shown in Figure 5-4.

The NSW coal mining annual FIFR has been lower than Queensland's since 2014. The decrease in the annual FIFR in NSW coal mining in 2014 coincides with a legislative change that strengthened worker representation in coal mines.

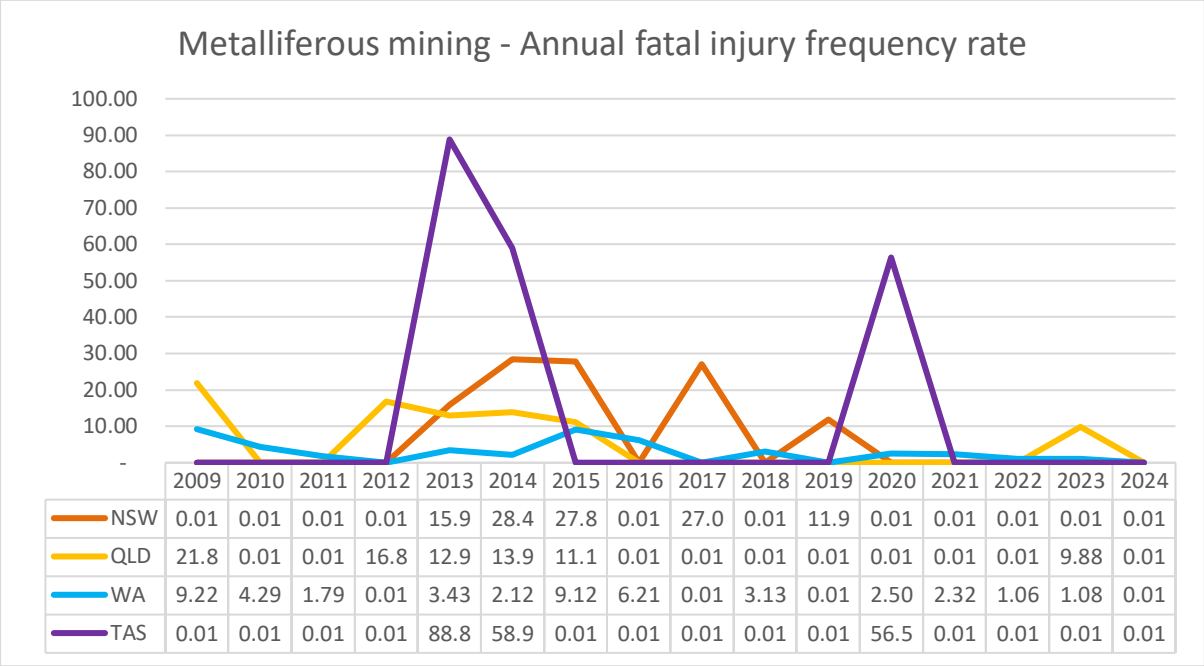
Figure 5-8: Coal mining annual FIFR – 2009 to 2024



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NSW	5.71	0.01	9.34	4.25	4.75	8.47	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	7.12
QLD	0.01	4.90	4.15	0.01	0.01	8.46	10.7	0.01	4.60	0.01	12.4	3.22	7.39	3.57	0.01	13.5

Figure 5-5 shows the WA metalliferous mining annual FIFR rate was lower than NSW. The impact of operation type (more hours worked at surface operations) and autonomous mining technology on frequency rates needs to be considered. Queensland government safety data indicates a higher prevalence of surface metalliferous mines than underground mines. In NSW, the proportion of underground and surface metalliferous mines is roughly balanced, although surface operations (including large quarries) are slightly more numerous. Metalliferous mining in Tasmania is largely carried out underground.

Figure 5-5: Metalliferous mining annual FIFR – 2009 to 2024



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NSW	0.01	0.01	0.01	0.01	15.9	28.4	27.8	0.01	27.0	0.01	11.9	0.01	0.01	0.01	0.01	0.01
QLD	21.8	0.01	0.01	16.8	12.9	13.9	11.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	9.88	0.01
WA	9.22	4.29	1.79	0.01	3.43	2.12	9.12	6.21	0.01	3.13	0.01	2.50	2.32	1.06	1.08	0.01
TAS	0.01	0.01	0.01	0.01	88.8	58.9	0.01	0.01	0.01	0.01	0.01	56.5	0.01	0.01	0.01	0.01

WA and Queensland appear to have lower annual FIFR in metalliferous mining than NSW. As indicated above, representative arrangements were levelled down in the NSW metalliferous industry, particularly after 2014.

A major limitation of Safe Work Australia's data set is the lack of breakdown by operation type, underground or surface. State mining regulator data indicates underground mines have a higher FIFR than surface mines, and the WA SIFR may partially reflect that more mining hours are worked at surface operations in metalliferous mines in WA than in NSW, Queensland, and Tasmania. Also, it appears the NDS used by Safe Work Australia does not include fatal injuries suffered by workers employed by contractors and, as discussed, there have been a substantial number of contractor fatalities in WA and Queensland. Data collected by state-based mining regulators does not include contract workers.

Serious injury claims

The NDS of workers' compensation claims defines a serious injury as one requiring one or more weeks off work. Different state jurisdictions have applied different definitions of SI at different times, based on legislation. Queensland measures serious accidents as those that result in death or an injury requiring hospital admission (see Table 5-1).

Table 5-1: Definitions of serious injury for health and safety performance reporting

NSW CMHSA 2002 and MHSA 2004 (applied until 2013/14)	NSW WHS (MPS) Act 2013 and WHS (MPS) Regulation 2014/2022	Qld Safety and Health Act 1999 Mining and Quarrying Safety and Health Act 1999	WA Mine Safety and Inspection Act 1994 (applied until 2022)	Work Health and Safety (WA) 2020. WA WHS (Mines) Regulation 2022
NSW Mine Safety Performance Report 2009-10 defines: **Serious Bodily Injury** (SBI)/Serious Injury (SI) An injury whose nature of injury is notifiable under the relevant legislation is classified as a Serious SBI in this report and covers the following: – Coal Refers to the nature of injury types specified in Coal Mines (General) Regulation 1999 Clause 85 and the Coal Mine Health & Safety Regulation 2006 Clauses 55 and 57. SI – Non-Coal Refers to the nature of injury types specified in the Mines Inspection Act 1901 Section 47 and the Mine Health & Safety Regulation 2007 Clause 145 (px). The classification of SBI/SI remains consistent under the new coal and non-coal legislation, although it omits dislocations and is slightly more inclusive for certain fractures and amputations (p52) This outcome was	**Prior to 2014, the NSW Mine Safety Performance Reports defined Serious bodily injuries** as injuries notified to NSW [Regulator] under the relevant coal and non-coal legislation because of the nature of injury. After 2015, the definition of an SBI/SI was expanded to include any injury that resulted in immediate treatment as an inpatient at a hospital irrespective of the nature of the injury. Injuries with non-serious outcomes that resulted in in-hospital inpatient admission or loss of consciousness were included as SBIs/SIs. The report further states that 'while injuries classified under the previous legislation were recorded with hospital admission clauses, some of these may have only resulted in hospital treatment rather than inpatient admission.'	Coal Mining Safety and Health Act 1999 and Mining and Quarrying Safety and Health Act 1999 define a ***serious accident*** at a coal mine is an accident an accident that causes— (a) the death of a person; or (b) a person to be admitted to a hospital as an in-patient for treatment for the injury. Note - The legislation does specify the serious injuries in terms of nature. Over time, Queensland mines and quarries safety and health reports have included different breakdowns of serious injury data – • **Permanent incapacity** injuries (as well as impairment included permanent transfer to other job or termination). • **Significant accidents** (worker suffered or could have suffered a serious bodily injury. The excel data sheets for the Queensland Mines and quarries safety and health reports separate fatal and serious accidents. Annual	**WA mining specific legislation defined a serious injury** is an injury that results in the injured person being disabled for a period of two weeks or more. The reports detailing safety performance in the WA minerals industry also reported: • **Disabling injury** includes where the injured person: (i) is placed in a different occupation or job, whether on full or restricted work hours; (ii) remains in his or her normal occupation or job, but is not able to perform the full range of work duties; (iii) remains in his or her normal occupation or job, but on restricted hours. • **Restricted work injury** (RWI) is a work injury (not LTI) that results in the injured person being unable to fully perform his or her ordinary occupation (regular job) any time after the day or shift on which the injury occurred e.g. Where a person	Does not define a serious injury but requires quarterly reports to include information on the number of lost-time, restricted duties injuries, and deaths. A **serious injury** is defined under the WHS Act 2020**,** Part 3 Incident notification Section 36.

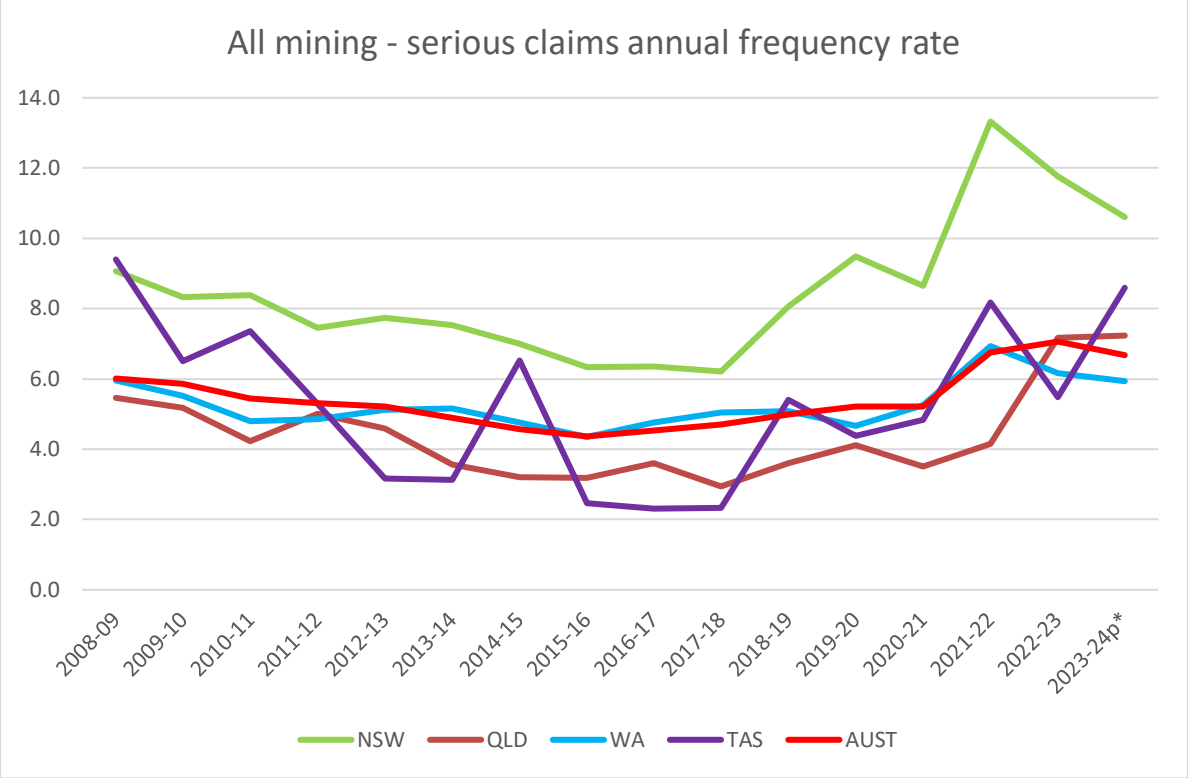
required **by Coal Mines (General) Regulation 1999 cl 85 Notification of accidents causing serious bodily injuries]** (p52). Under the Coal Mine Health and Safety Regulation 2006 Clauses 55, 56 and 57 from mid 2006-07, and the Mine Health and Safety Regulation 2007 Clause 145 and 146 from the second quarter of 2008-09 **outcomes** requiring **a**t least seven days of lost time and/or alternative duties became newly reportable.		reports and excel data sheets also include other categories of injury and include data sheets for fatalities, serious accidents and permanent incapacity.	is on alternative or light duties or hours are restricted.	
Notification of certain incidents at or in relation to operations: CMHSR 2006 cl 55/MHSR 2007 cl 145 The following incidents are prescribed for the purposes of section 110 (1) (b) of the CMHS Act/or section 88 (1) (b) of the MHS Act or as incidents notice of which must be given to the Chief Inspector by the operator of a mine: (a) an injury to a person that results (at any time after the injury) in any of the following: (i) the amputation of one or more fingers or toes or any other part of a hand or foot,	**WHS (MPS) Act 2013, Section 14** In this Act, *notifiable incident* means— (a) the death of a person, or (b) a serious injury or illness of a person that is prescribed by the regulations, or (c)a dangerous incident prescribed by the regulations. WHS(MPS)Reg 2014 & 2022 cl128 Duty to notify regulator of certain incidents (cl 675V model WHS Regs) (1) The operator of a mine or petroleum site must take all reasonable steps to ensure that the regulator is notified in accordance with this clause after becoming aware of	**CMSHA 1999 s 198 and MQSHA 1999 s 195 Notice of accidents, deaths or incidents** (1) If the site senior executive for a coal mine becomes aware of a serious accident or death at the coal mine, the site senior executive must as soon as possible after becoming aware report to an inspector and industry safety and health representative.	**MSIA Section 76 (4) Notice of accident to be given** An injury is a serious injury for the purposes of this section if the injury — (a) results in the injured person being disabled from following his or her ordinary occupation for a period of 2 weeks or more; or (b) involves unconsciousness arising from inhalation of fumes or poisonous gases or asphyxiation due to lack of oxygen or displacement of oxygen by an inert gas; or (c) results from an accident, including fuming, arising out of the use of explosives or blasting agents.	**WHS Act WA Section 36 Serious injury or illness,** of a person, means an injury or illness — (a) that requires the person to have immediate treatment as an in-patient in a hospital; or (b) that requires the person to have immediate treatment for– (i) the amputation of any part of the body, (ii) a serious head injury, (iii) a serious eye injury, (iv) a serious burn, (v) the separation of skin from an underlying tissue, (vi) a spinal injury, (vii) an underlying

(ii) any fracture other than a fracture of a finger, toe, hand or foot, (iii) loss of sight of an eye, (iv) an internal haemorrhage receiving hospital treatment, (v) the injection of fluid (including hydraulic fluid, oil, air or water) under pressure, (vi) asphyxia, (vii) the loss of consciousness of the person caused by impact of physical force, exposure to hazardous substances, electric shock or lack of oxygen, (b) an event that results (at any time after the event) in the admission of a person to hospital as an in-patient.	an incident (other than a notifiable incident) arising out of the carrying out of mining operations or petroleum operations at the mine or petroleum site, but only if the incident— (a) results in illness or injury that requires medical treatment within the meaning of clause 13 of Schedule 9, cl 178 Serious injury or illness For the purposes of section 14(b) of the WHS (Mines and Petroleum Sites) Act, each of the following is prescribed as a serious injury or illness of a person— (a) an injury or illness requiring the person to have immediate treatment as an in-patient in a hospital, (b) an injury or illness requiring the person to have immediate treatment for any of the following— (i) the amputation of any part of his or her body, (ii) a serious head injury, (iii) a serious eye injury, (iv) a serious burn, (v) the separation of his or her skin from an underlying tissue (such as degloving or scalping), (vi) a spinal injury,			tissue (such as degloving or scalping); the loss of bodily functioning, (viii) a serious lacerations; (ix) an injury that requires the treatment by a medical practitioner within 48 hours (x) exposure to a substance that requires the person to have treatment by a medical practitioner within 48 hours of exposure.

	(vii) the loss of a bodily function, (viii) serious lacerations, (c)an injury or illness requiring the person to have medical treatment within 48 hours of exposure to a substance, (d) a fracture to a person's bone other than a bone in the person's hand (including a finger) or foot (including a toe), (e) a condition prescribed as a serious illness for the purposes of section 36 of the WHS Act.			

NDS workers' compensation claims define 'serious claims' as all accepted workers' compensation claims that involve one or more weeks' absence from work. The 'claims frequency rate' is defined as the number of claims per million hours worked using estimates of the working population covered under workers' compensation schemes. Figure 5-6 shows that NSW and, to a lesser extent, Tasmania have more serious claims than the other states. In the NDS, serious claims are assessed based on absence from work. This is not the same as serious injuries as defined under state-based mining legislation, which, in addition to injuries requiring more than a week's absence from work, are determined by the nature of the injury and include injuries requiring immediate treatment by a medical practitioner within 48 hours after the injury. As mentioned above, serious claims can also be reduced by keeping workers at work on selected duties.

Figure 5-6: Australian mining serious claims annual frequency rate by state – 2008-09 to 2023-24

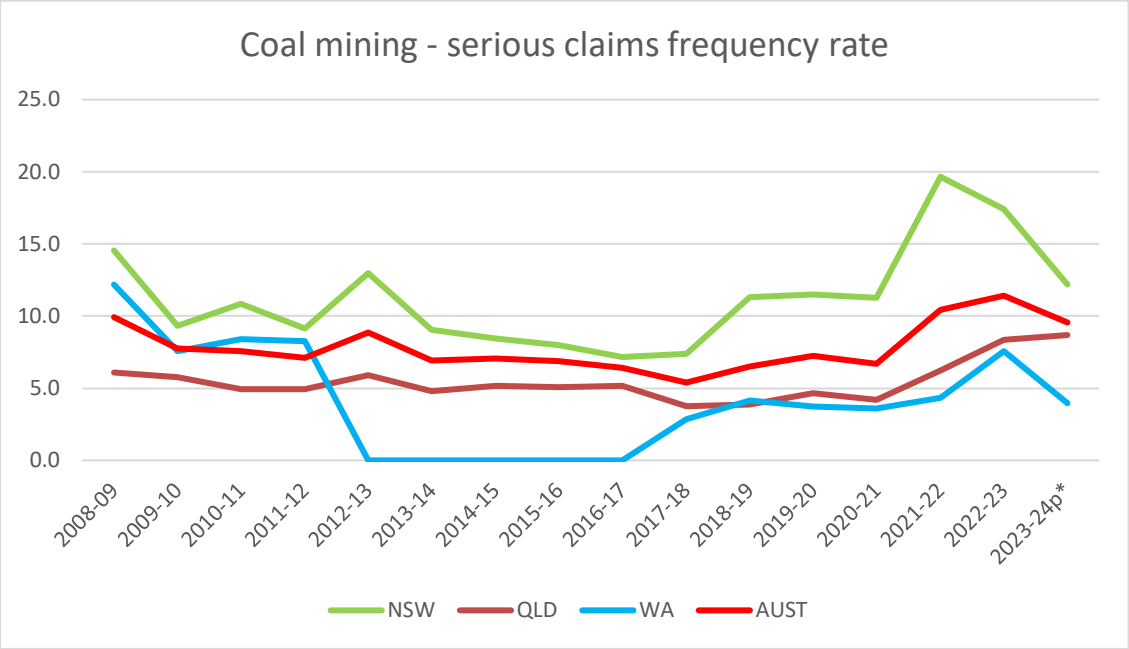


* 2023-24p denotes preliminary data

Figures 5-7 and 5-8 show that NSW has more serious claims in the coal mining sector than in the metalliferous sector. The difference between coal and metalliferous mining serious injury claims is not as marked in WA and Queensland. As noted above, the coal mining industries in WA and Tasmania are relatively small compared to those in NSW and Queensland.

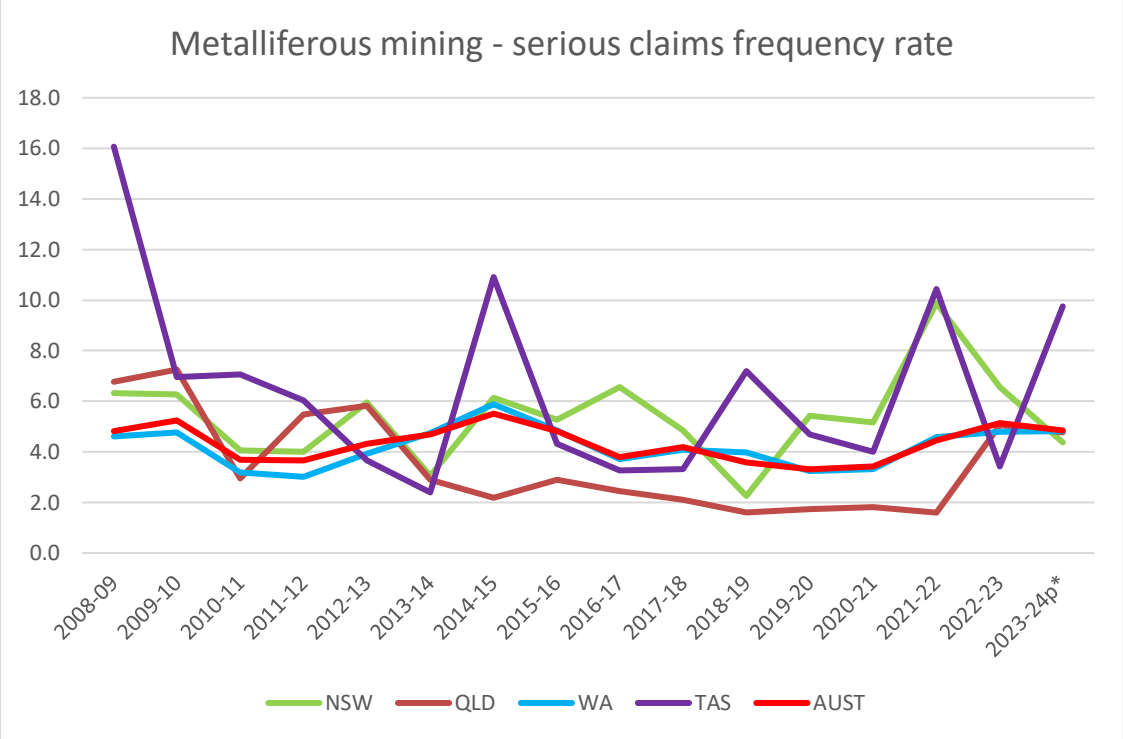
Tasmanian coal mining serious injury claims are not included in the calculation of the serious claims annual frequency rate as the values were below the reporting threshold (the rate therefore only reflects metalliferous mining serious injury claims).

Figure 5-7: Australian coal mining serious claims annual frequency rate by state – 2008-09 to 2023-24



*2023-24p denotes preliminary data

Figure 5-8: Australian metalliferous mining serious claims annual frequency rate by state – 2008-09 to 2023-24



*2023-24p denotes preliminary data

Review of mine safety performance based on state-based data reports

The next sections review the comparative health and safety performance of coal and metalliferous mining in the state jurisdictions between 2003-04 and 2023-24. This review uses fatal and serious injury (serious accident in Queensland) data to examine the effect (if any) of legislative changes to worker representative arrangements on health and safety performance.

Mining regulators in each state jurisdiction publish incident and injury data in annual Mine Safety Performance Reports. In WA and Tasmania, WorkSafe WA and WorkSafe Tasmania collect and publish this data, respectively. As noted above, NDS claims data used by WorkSafe Australia does not examine the differential performance of underground and surface mining and does not include fatal and serious injuries of contract workers. The NDS claims data measures 'serious claims', rather than 'serious injuries/accidents'. In contrast, mining regulators break down data by operation type and include contract worker fatal and serious injuries.

NSW

A report comparing NSW coal and metalliferous health and safety performance and the role of worker representatives was completed in December 2025. This report discussed in detail the health and safety performance of the coal and metalliferous sectors before and after the *Work Health and Safety (Mines and Petroleum Sites) Act* 2013 (WHS (MPS) Act) was implemented. In 2013-14, representative provisions in the two sectors changed significantly, with coal mines' representative arrangements covered by the WHS (MPS) Act and metalliferous mines' representative arrangements by the general WHS Act. A summary of NSW health and safety performance is included in this report as a point of reference.

Background - health and safety performance in NSW

In 2002 and 2004, the *Coal Mines Health and Safety Act* (CMSHA) and the *Mines Health and Safety Act* (MHSA) were enacted, and associated regulations were enacted later in 2006 and 2007, respectively. This legislation implemented risk management processes that obliged companies to implement principal hazard management and contractor management plans, and extended reporting requirements. The CMHSA 2002 strengthened the two-tier worker representative arrangements with 'site' and 'district' check inspectors, while the MHSA only provided for site check inspectors.

In May 2013, the NSW Minister for Resources and Energy, Mr Chris Hartcher, introduced the Work Health and Safety (Mines) Bill to the NSW Parliament. In the second reading, he stated, 'In recognition of the significant risks involved with mining undertaken in the three [sectors][111] particularly in relation to coal mining, it was also agreed that a tri-state process involving New South Wales, Queensland and Western Australia would develop additional mining-specific provisions.' In 2013-14, NSW consolidated coal and metalliferous mining legislation into a single Act and Regulation titled the NSW *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.* This legislation strengthened the requirement to report notifiable incidents (Part 3 ss 14-17), including dangerous incidents (cl 190 of the regulation) and other high-potential incidents (cl 124 of the regulation).

[111] The three sectors are coal, metalliferous and quarrying.

The Act also ensured coal mine-specific worker representation under Part 5 (but not applied to metalliferous mining) to supplement work health and safety representatives (HSRs under the WHS Act 2011).

> The high-risk nature of coal mining has warranted special attention by governments and mining operators. Underground coal mines are inherently hazardous workplaces because of the potential explosive atmospheres associated with methane. The bill ensures that the existing coalmine-specific worker representative arrangements are maintained. These arrangements are consistent with Queensland—the other key coal jurisdiction—and the recommendations from the Pike River royal commission report.[112]

In coal mining, the WHS (MPS) Act framework allowed the concurrent operation of worker representation, consultation, and participation schemes under mining-specific and general legislation. It provided for the appointment of Industry Safety and Health Representatives (re-aligned industry 'check inspectors') with powers to enter and inspect a coal mine and 'review the content and implementation of a coalmine safety management system, participate in an investigation of an event, occurrence or notifiable incident, and assist in the training of other representatives.' These oversight and participation functions contribute significantly to mine safety. Metalliferous mines draw their representative rights and functions from the general WHS Act and therefore rely on workgroup HSRs for worker representation, with access to authorised WHS entry permit holders for support. However, Union entry permit holders do not have the same powers as an ISHR in coal mining.

NSW commissioned two reviews of mine safety after the Gretley Colliery disaster in 1996 and the Northparkes windblast incident in 1999. The second review, the Wran Mine Safety Review (2005), identified a 'disconnect' between company OHS management systems and management practices in the field and a lack of trust between workers and management. To examine the 'disconnect', and other issues identified by the Wran review, the Mine Safety Advisory Council commissioned the *Digging Deeper* project, which concluded that the informal aspects of an OHS management system were more important than formal systems.[113]

In 2019, the NSW government commissioned a statutory review of the WHS (MPS) Act. Conducted by Kym Bills, the review's recommendations were published in 2020. Bills recommended that the Resources Regulator consider re-establishing the role of ISHR in metalliferous mines. In addition, Bills recommended establishing a role for mechanical safety and health representatives. [114] In December 2023, the Portfolio Committee No.2 of the NSW Legislative Council released a report on *Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales*, and recommended that the government consider expanding the role of ISHR under the *Work Health and Safety (Mines and Petroleum Sites) Act* to metalliferous mine sites.[115]

[112] NSW Parliament Work Health and Safety (Mines) Bill 2013, 48.
[113] Shaw, A., Blewett, V., Stiller, L., Cox, S., Ferguson, S., Frick, K., & Aickin, C. (2007) *Digging Deeper*, Wran Consultancy Project, Vol 1 Chapter 5 OHS management systems and consultation, 190.
[114] Bills, K. (2020) *Statutory Review of the Work Health and Safety (Mines and Petroleum Sites) Act 2013*, NSW Resources Regulator, Sydney, 65.
[115] Portfolio Committee No.2 – *Health, Report No.63 Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales,* Legislative Council of NSW, Sydney, December 2023, x.

Methods

In NSW provision for worker health and safety representation is covered under the WHS(MPS) Act. The objects of the Act require fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety; and that unions and employer organisations be encouraged to take a constructive role in promoting improvements in work health and safety practices. Quantitative and qualitative data was reviewed to examine the effectiveness of legislative provisions and regulatory compliance and enforcement activities in promoting representative participation for the purpose of achieving a healthy and safe working environment.

In addition to examining the effectiveness of representative arrangements, we considered whether evidence on the health and safety performance of coal and metalliferous mining supports the assertion that metalliferous mining is less hazardous and therefore does not need additional mining-specific representative provisions.

To do this, we examined the performance data in the NSW Mine Safety Performance Report series between 2009-10 and 2024-25, quarterly safety reports, business activity reports, and targeted assessment and priority compliance program reports. Information on the circumstances of fatal and high-potential incidents was obtained from regulatory investigation reports, investigation information releases and prosecution summaries.

Results

Fatal injuries – underground and surface coal and metalliferous mines

Figure 5-9 shows fatalities between 2008-09 and 2023-24 in NSW coal and metalliferous mining for both surface and underground operations. In 2013-14 there were four incidents resulting in five fatalities. Figure 5-9 also shows that, from 2018-19 onwards, there were more fatalities at surface mines than underground mines.

Figure 5-9 NSW coal and metalliferous mining fatalities – 2003-04 to 2024-25

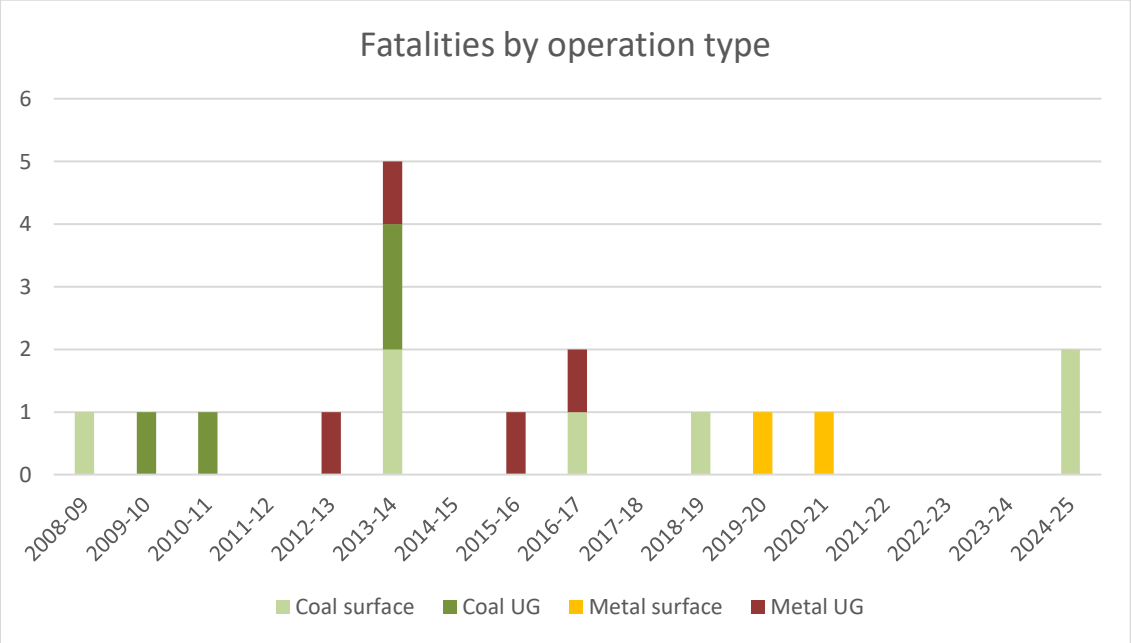


Figure 5-10 shows active mines in each sector and the date of establishment. In the 2000s, surface coal mining grew substantially.[116] This growth occurred in the Hunter Valley and Gunnedah. Company annual reports, MiningLink,[117] Wikipedia's article 'Coal companies of Australia', and NSW Resources Regulator Quarterly were used to identify the number of active mines and mining companies in NSW over the century.

Figure 5-10: NSW mining industry growth from 1860 to 2020

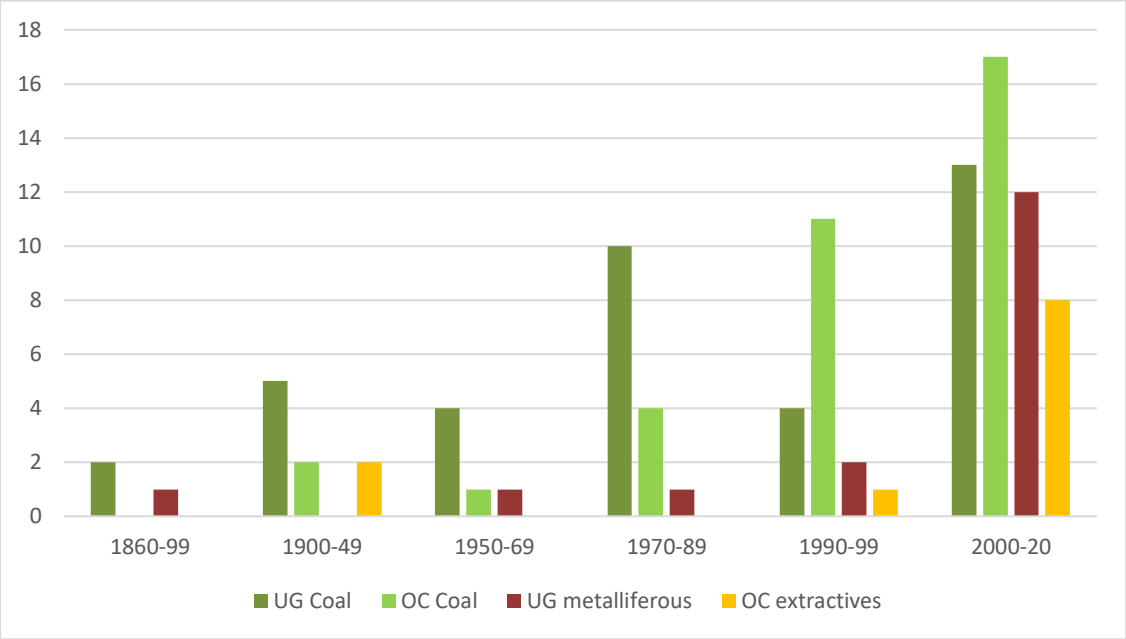
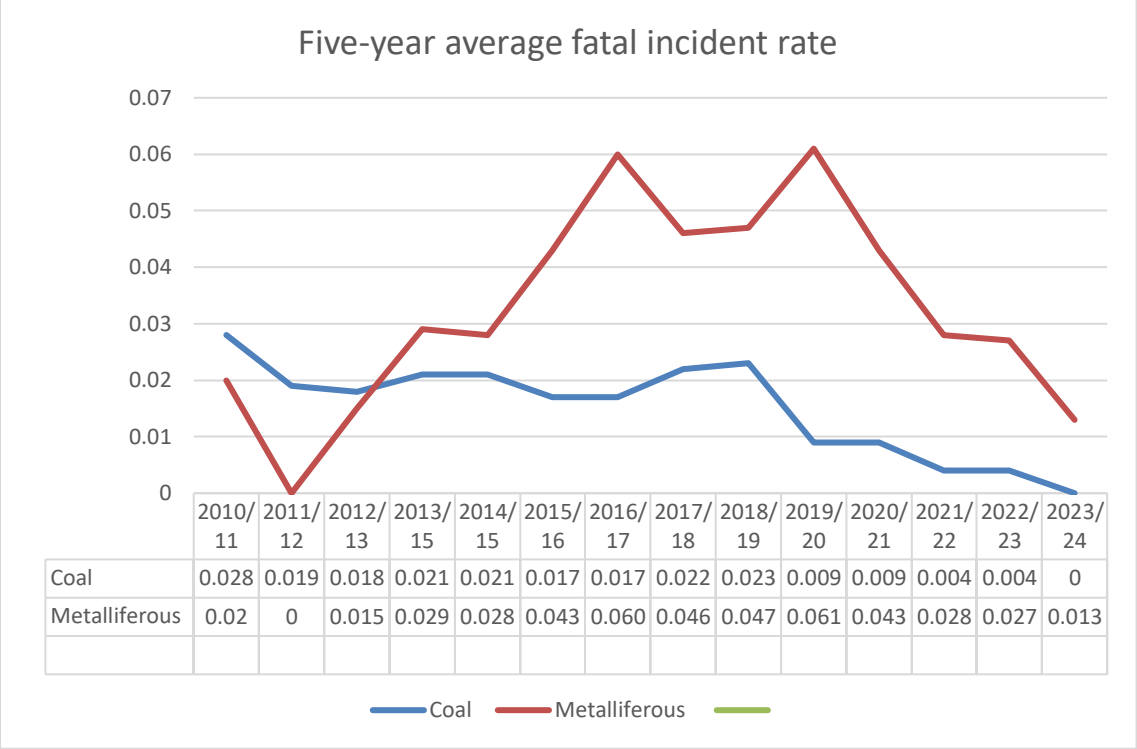


Figure 5-11 shows the five-year rolling average FIFRs for coal and metalliferous mining. The coal mining FIFR trended down over the 20-year reporting period, whereas the metalliferous FIFR trended up between 2013-14 and 2019-20. The rise in the metalliferous FIFR reflects two fatalities that occurred in 2013-14 and four fatalities between 2015-16 and 2018-19. The recent double fatality in a metalliferous mine in 2025 will further increase the FIFR in that sector. The coal mining fatalities in 2013-14 had a lesser impact on the FIFR because more hours were worked in the coal sector. Overall, the five-year average FIFR to June 2012 fell by 65.1% compared to June 2007.[118] The CSA/Macmahon shaft sinking fatality in 2013 and the CSA underground dewatering project fatality in 2014 account for the increase in metalliferous FIFR after 2012-13.

[116] Jackson, H. (2021). *Recurrent causes of occupational incidents in the NSW, Australia coal and metalliferous mining industry.* (Doctor of Philosophy). University of Newcastle, NOVA.
[117] MiningLink was established in 2011 by an ex-mine worker as an online site to keep the industry up to date with mining news. It claims to be the largest media outlet giving the resources and energy sector a voice.
[118] NSW Trade & Investment Mine Safety. (2012). *NSW Mine Safety Performance Report 2011–12*. NSW Department of Trade and Investment. 1. https://www.resources.nsw.gov.au/sites/default/files/documents/nsw-mine-safety-performance-report-2011-12.pdf

Figure 5-11: NSW five-year rolling average FIFR 2010-11 to 2023-24

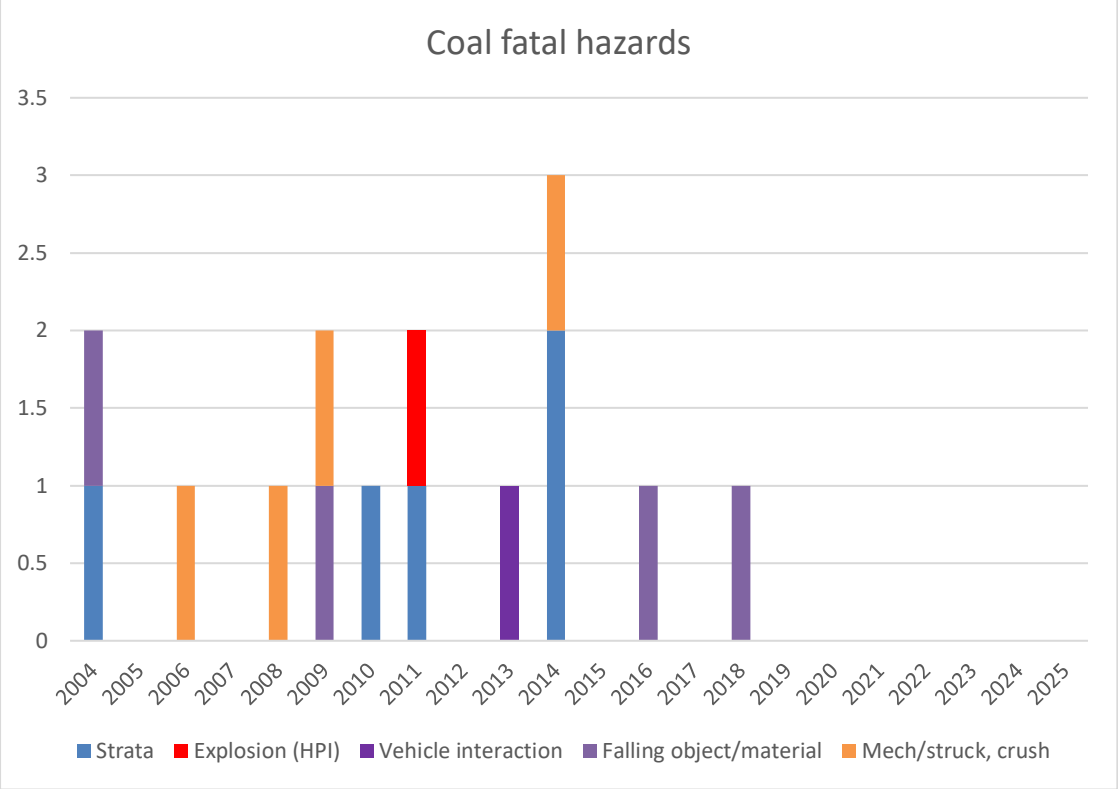


	2010/11	2011/12	2012/13	2013/15	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Coal	0.028	0.019	0.018	0.021	0.021	0.017	0.017	0.022	0.023	0.009	0.009	0.004	0.004	0
Metalliferous	0.02	0	0.015	0.029	0.028	0.043	0.060	0.046	0.047	0.061	0.043	0.028	0.027	0.013

Figures 5-12 and 5-13 depict the hazards associated with fatalities. The NSW Resources Regulator commissioned a review to examine whether systemic factors, such as the industry's current economic circumstances, may have been a causal factor (Wilkinson, 2014).[119] The incidents subject of the Wilkinson Fatality Review, as shown in Figure 5-12, included (1) a light-heavy vehicle interaction at an open cut coal mine (purple); (2) a coal burst in an underground coal mine resulting in a double fatality (dark blue); (3) a crush between a mobile elevated work platform and a structural beam on a coal processing plant construction project (green); and Figure 5-13 (4) a worker sucked into a sump drain hole in an underground metalliferous mine while clearing a blockage (dark blue). The most common hazards associated with fatalities in coal mining were falling material or objects and mechanical hazards – being struck or crushed. An underground coal mine explosion occurred in 2011, but no workers were underground at the time. A range of hazards were associated with metalliferous mining fatalities. There were three high potential/dangerous incidents in underground metalliferous mines: two underground fire events requiring withdrawal of workers and an inrush of material into an underground area where seven people were working. The two fatal incidents classified as inundation/ground involved a worker being sucked into a drain sump and a ground fall from a draw which pushed a vehicle into the mine wall, crushing the worker.

[119] Wilkinson, P. (2014). *MSAC Fatality Review 2013-14*. Deakin West ACT: Noetic Solutions Pty Limited, Retrieved from https://resourcesandgeoscience.nsw.gov.au/miners-and-explorers/safety-and-health/about-us/mine-safety-initiatives

Figure 5-12: NSW coal mining fatalities (and HPI) and fatal hazards



The *Wilkinson Fatality Review* concluded that although the activities described above were different, a common feature among the four incidents was that control measures typically relied on human action rather than higher-order controls such as an engineered barrier. The report recommended that the regulator and industry focus on higher-order controls and draw on the discipline of Human Factors to understand why risk controls are not reliably implemented.

A later thesis on recurrent causes of fatal and serious coal and metalliferous mining incidents in NSW between 2004 and 2020 examined the relationship between coal prices and coal mining fatalities.[120]

[120] Jackson, H. (2021). *Recurrent causes of occupational incidents in the NSW, Australia coal and metalliferous mining industry.* (Doctor of Philosophy). University of Newcastle, NOVA.

Figure 5-13: NSW metalliferous mining fatalities (and HPIs) and fatal hazards

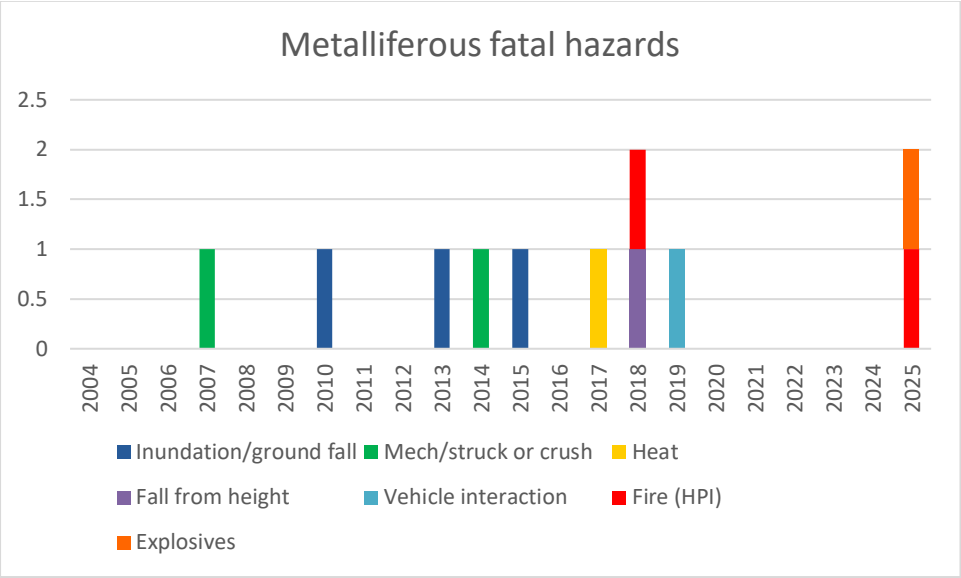
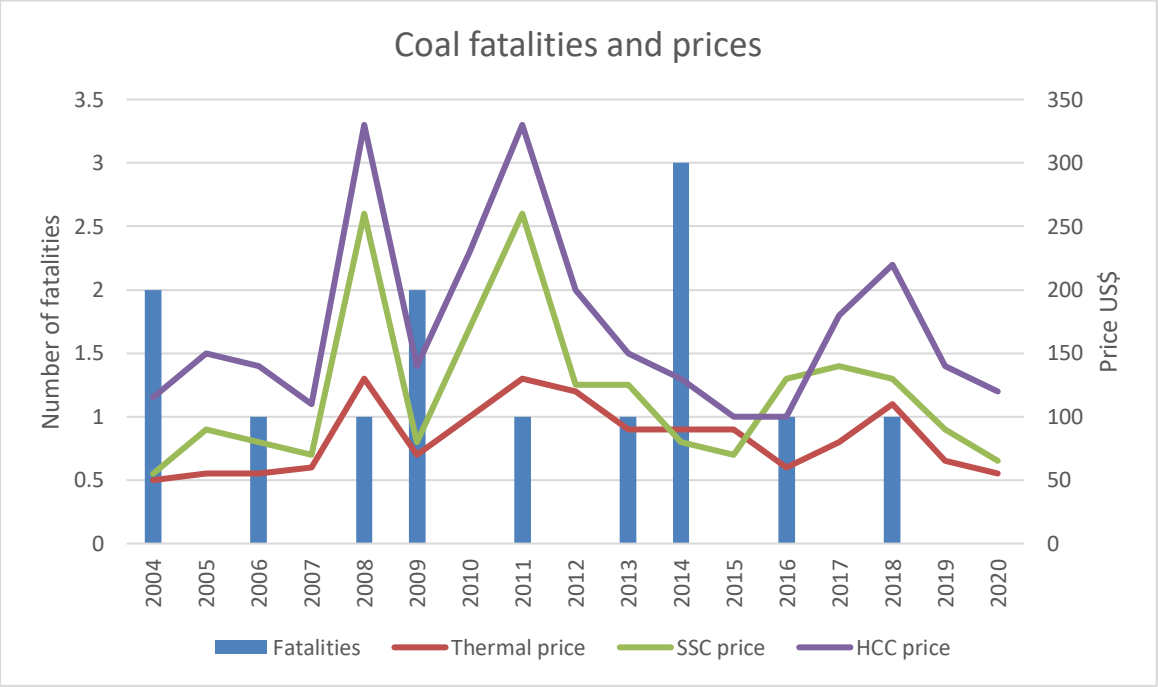


Figure 5-14 maps coal prices over time and illustrates the relationship between coal prices and fatalities. The four coal mining fatalities in 2013-14 occurred when thermal and semi-soft coking coal prices fell below US$100. In 2009 there were two fatalities when coal prices dropped following the GFC.

The decision to invest capital in major projects or acquire new assets is based on forecasts of future demand. Failure to realise return on investment within a planned timeframe may adversely affect a company's ability to meet short-term commitments and service debt, i.e. low liquidity.

Figure 5-14: NSW coal mining fatalities and coal prices 2004 to 2020



The mining industry, particularly coal mining in the early 2000s, was characterised by substantial growth and investment driven by Asian urbanisation and industrialisation. In 2005-06, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) publication 'Australian

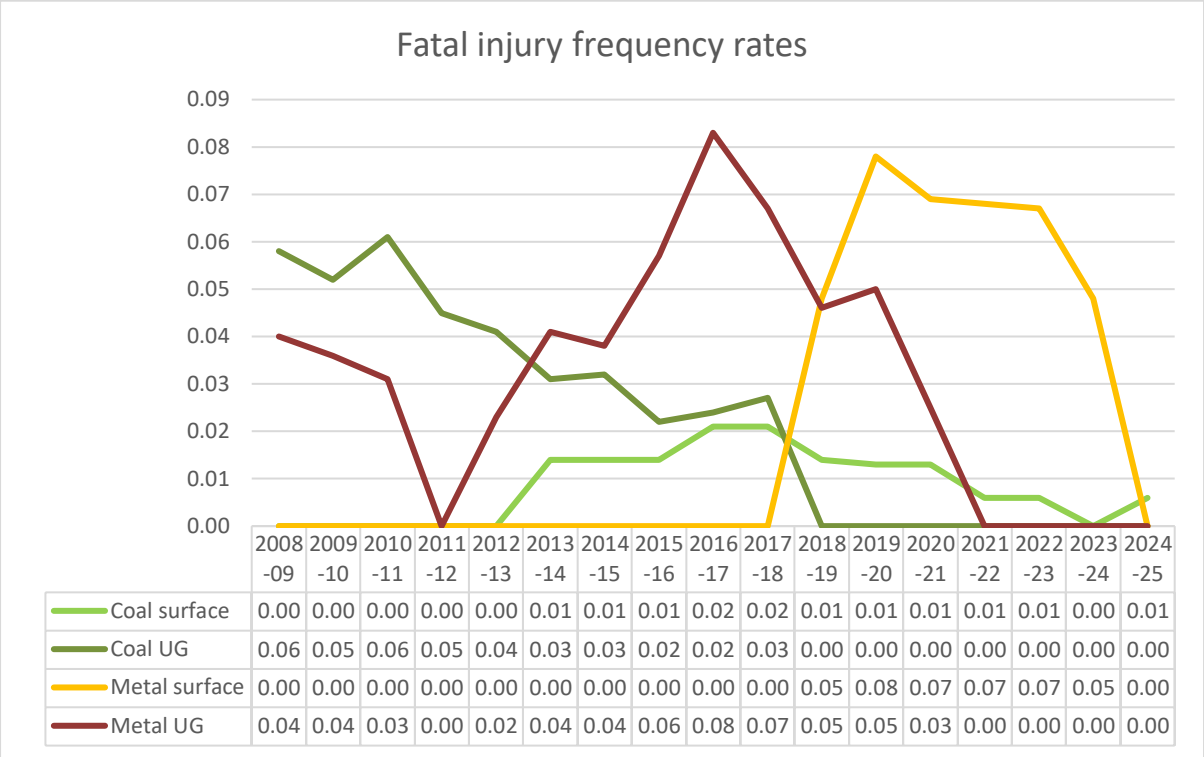
Commodities' reported capital expenditure of A$18b in the Australian mining industry and a projected A$18b in 2006/07.[121] In 2010, ABARES reported a record expenditure of A$132.9b on advanced-stage projects in the Australian mining industry.[122] The lead time between investment and return on mining developments is reported to be three years. The expectation of return on investment therefore coincided with the 2013-14 market downturn. The *Resources and Energy Quarterly*, December 2013, stated:

> Rather than reducing output in response to declining prices, many high cost producers have increased production to reduce their unit cost. Some of these producers, largely in Australia, are locked into fixed take-or-pay contracts for infrastructure services and it has been more cost effective to increase production than to close. This extra production has placed further downward pressure on thermal coal prices.[123]

Figure 5-15 displays the breakdown of FIFRs for sectors and operation type. The figure shows that after 2018-19, metalliferous FIFRs were higher than coal. Metalliferous mines have fewer incidents and fewer hours worked than coal mines; therefore, each incident has a greater impact on the rate. There is a clear downward trend in underground coal mining since 2010-11, while surface coal mining displayed an upward trend between 2012-13 and 2017-18 (reflecting four fatalities during this period); a steady decline is noted until the uptick in 2024-25, which reflects two fatalities in this financial year. The upward trend in surface coal mine fatalities in the earlier part of the reporting periods may be associated with expansion in that sector and market volatility motivating companies to manage the unit cost of production by cutting input costs and increasing production rates (see, for example Ravensworth open cut mine fatality in 2013 described in Table 5-2).

[121] Australian Bureau of Agricultural and Resources Economics. (2006). *Australian commodities December quarter 2006* (Vol. 13 No. 4) ABARE.
[122] Lampard, M. & Copeland, A. et al. 2010, *Minerals and energy, major development projects – October 2010 listing*, ABARE–BRS, Canberra, November.
[123] Bureau of Resources and Energy Economics. (2013). *Resources and energy quarterly, December quarter 2013*. Australian Government Department of Industry. p16.

Figure 5-15: NSW underground and surface coal and metalliferous mine five-year rolling average FIFR – 2008-09 to 2024-25



	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Coal surface	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Coal UG	0.06	0.05	0.06	0.05	0.04	0.03	0.03	0.02	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.07	0.07	0.07	0.05	0.00
Metal UG	0.04	0.04	0.03	0.00	0.02	0.04	0.04	0.06	0.08	0.07	0.05	0.05	0.03	0.00	0.00	0.00	0.00

Tables 5-2 and 5-3 provide details of fatal and high potential incidents in coal and metalliferous mines and the Ten Pathways analysis of failures. The tables also show the total failures for each incident and the proportion of incidents exhibiting a failure of that pathway. Incident investigation reports were analysed using the Ten Pathways model[124] In coal mining, 10 fatal incidents occurred at underground mines and eight at surface mines. There was an average of 5.5 failures per underground incident compared to 7.1 failures for surface mine incidents, which could indicate that underground mines are better at managing their hazards and risks than surface mines. One of 11 metalliferous mining incidents occurred at a surface processing plant construction site, and a second occurred in a mine shaft under construction. All the other incidents occurred in underground areas. There was an average of 7.4 failures per incident.

Few investigations directly report worker perspectives, including concerns raised before the event by workers or their representatives about incident hazards and risks, including inadequate risk assessments and control measures. Some investigations reported, with minimal detail, that workers' concerns had been raised. However, investigation reports generally do not make the role and functions of industry or site safety and health representatives visible to industry, nor do they include their observations. While investigators may look at WHS committee reports, or worker representatives' reports and interview workers, these perspectives are rarely reported. Worker evidence may not be published for confidentiality reasons. As noted previously, this is an important feedback loop on the effectiveness of the WHSMS.

Economic and reward pressures were assessed by considering the interaction between strategic risks – acquisitions, divestments, and major expansion/development projects in the medium term before

[124] Quinlan, M. (2014), *Ten Pathways to Death and Disaster: Learning from fatal incidents in mines and other high hazard workplaces*, Federation Press, Sydney.

or after the incident and operational risks – geotechnical risks slowing production and/or requiring additional controls; labour disputes, such as failure to negotiate satisfactory collective agreements that adversely affect productivity, supply to customers or reputation; new technologies where safety risks are not adequately assessed and controlled during design, manufacture procurement and commissioning; supply chain failures or increased costs within the supply chain, e.g. unused rail or port commitments attract financial penalties associated with take-or-pay contracts.

The analysis of the reports using the Ten Pathways model (Tables 5-2 and 5-3) shows the most frequent failures were Pathway 1 'engineering, design and maintenance'; Pathway 3 'risk assessment failures'; and Pathway 4 'safety management system flaws'. Pathways 8 and 9, 'worker concerns raised before the incident not addressed' and 'poor communication and trust between workers and managers', were identified in 39% of coal mining incidents and 61% of metalliferous mining incidents. Pathway 6 'economic/production pressures' was identified in 72% of coal and 72% of metalliferous mining incidents. One coal and one metalliferous mining incident are described below, showing how failures interacted.

In 2011, a continuous miner operator who was also the site check inspector was fatally injured when a slab of coal fell from a rib. The direct cause of the incident was a failure of engineering rigour applied to review the implementation of the strata support design. The regulator approved mining by pillar extraction based on the installation of secondary roof and rib supports, and the mine engaged geotechnical consultants to assess and design secondary support in preparation for pillar extraction. However, the regulator had not inspected the mine before production commenced to ensure the mine had complied with the approval to mine (Pathway 7).

Failures that undermined the critical control concerned the panel not being developed or extracted as per the design – there was some confusion about whether secondary rib support was required, but secondary roof support was installed in the panel (Pathway 9); the specialist contractor who was engaged to install the support failed to bolt the ribs in the incident area (Pathway 1); the check inspector, who was fatally injured, had documented a workplace safety hazard concern regarding an rib fall incident in April 2010 and there were four other rib falls and one roof fall between May 2010 and when the fatal incident occurred (Pathway 2); inexperienced deputies who had not been trained conducting strata audits at the mine and who were labour-hire workers from the mine operator's labour hire company failed to note the unbolted sections of rib in strata audits and the undermanager had not participated in all audits as required by the mines strata failure management plan (Pathways 4 and 5); safe standing zone plans were developed for a different extraction method; and supervisors and management who had visited the area had not identified or taken any action regarding the unbolted ribs (Pathway 4). The investigation report provided insufficient information explaining why the check inspector had not stopped the job. TARPs completed before the incident did not note any rib deformations, and strata monitoring results indicated no movement (Pathway 3). After the incident, a geotechnical consultant identified 156 areas of rib spall, some of which were of a greater volume than five metres^3.

The mine was recently acquired by the operator, which had financial issues, and geological faults and poor strata conditions were affecting production at the time of the incident (Pathway 6). In 2011, coal prices had recovered after a low in 2009, and it is possible the company was under pressure to produce coal while prices were high.

Table 5-2: NSW Coal mine fatal and high potential incidents: Presence of Ten Pathways in analysis of investigation summary reports (N=18)

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
Ground or strata	Dartbrook Kayuga mine 2004 – A fatality due to roof fall during a pillar split using manual bolting and a road header that was not fitted with drill rigs and roof support (instead of a CM), chosen not to block access to the adjoining Wynn mine workings. The deputy failed to communicate concerns about the positioning of the road header under unsupported ground and the noncompliant bolting sequence. Change management/communication during change from contract to owner-operator.	1	0	1	1	1	1	0	0	1	0	6
Mechanical CP	Angus Park colliery 2006 – A testing contract technician was fatally injured when struck by hydraulic fluid under pressure while taking test samples. The technician was not trained in the new system's safety features, including isolation requirements. Supervision arrangements were inadequate, and longwall production continued while sampling was undertaken.	1	0	1	1	1	1	1	0	0	1	7
Mechanical CP	Myuna 2008 – A worker's foot was hit by a drill steel, which flicked out when placed under tension between the retracting drill head and the mobile bolter platform. He later died from complications. The mine had not implemented remedial measures, such as guarding of the moving and rotating components and falling materials, identified by the equipment designer/manufacturer.	1	1	1	0	0	0	1	0	0	0	4
Ground or strata	Chain Valley 2011 – A fatality due to rib spall while operating a CM by remote control. The deceased, also the check inspector, had raised concerns about rib support after a previous incident. The slab did not contain any rib bolts. The investigation found that deputies lacked training (particularly contract deputies) in an understanding of the new secondary strata support regime, and Undermanagers did not always participate in strata support audits as required by mine inspection rules.	1	1	1	1	1	1	1	1	1	1	10
Ground	Ashton underground/Silver City Drilling 2012 – Contract driller seriously injured due to a pressure event while drilling a borehole. The driller reported excessive water, requiring a change in drilling method. A lack of defined supervisory roles and responsibilities between the mine's contract supervisor and the contractor's site supervisor contributed to poor decisions and a failure to respond to the driller's concerns.	1	1	1	1	1	1	0	1	1	0	8
Fire or explosion	Blakefield South underground mine 2011 – A methane explosion and subsequent fire occurred on the longwall due to an undetermined ignition source - lightning strike or spontaneous combustion. Forty-seven workers were evacuated safely from the mine. In addition to ventilation and earthing design flaws, inspection and supervision failed due to inadequate hazard understanding or training of statutory supervisors on CO monitoring and spontaneous combustion.	1	0	1	1	1	1	1	0	0	1	7
Ground or strata	Austar 2014 – Double fatality due to coal rib burst. Information about bumps was passed between crews in an ad hoc manner. Senior technical staff did not access the available information regularly. Workers were advised that bumps indicated strata pressure relief, and despite frequent large bumps, the mine had no planned response.	1	1	1	1	1	1	1	1	1	0	9

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
Fire or explosion	Metropolitan colliery 2019 - Seventy workers were withdrawn from underground workings after carbon dioxide and methane levels increased unexpectedly to hazardous levels. Regular inspection identified elevated CO and methane. The decision to withdraw workers was made promptly.	1	0	1	1	0	0	0	0	0	1	4
Inrush or inundation	North Wambo underground mine 2020 - This caused a rapid loss of drilling mud from a blind bore drilling shaft. An engineered underground bulkhead seal was installed directly beneath the blind bore drilling project, where the shaft was to intersect the roadway underground. A risk assessment, which included the ISHR, had identified the hazard, and an exclusion zone was established at the base of the shaft.	1	0	1	0	0	1	0	0	0	0	3
Shafts and winders MECP	Appin Winder Project 2020 - At the time of the incident, the mine operator had engaged a principal contractor, Winder Controls Australia Pty Limited (WCA), to undertake a drift winder upgrade project. During the removal of the winder rope from the Appin East drift winder, the head sheave pulley heel, weighing several tonnes, dislodged from its support frame and fell approximately 13 metres to the ground below.	1	0	1	1	0	0	0	0	0	0	3
	Surface operations											
Mechanical CP	Mt Thorley open cut mine 2004 – A maintenance contractor worker was fatally injured when a tyre fell while fitting it to the hub. The main control was safe positioning; however, workers adopted a position between the wheel hub and the tyre mounted on the tyre handler due to the line of sight required to fit the tyre to the hub without any damage. The contractor supervisor was aware of the practice but allowed it to occur.	1	0	1	1	1	0	0	0	0	0	4
Mechanical CP	Glennies Creek 2009 – A worker was fatally injured when struck in the head by a shear shaft, which was ejected from the shearer when workers were attempting to replace a broken shaft. Shafts had broken on 34 previous occasions, and despite concerns raised by fitters, no SWP had been developed. The supervisor approved re-energising the shearer to tram and “flick” the component to remove it (in breach of isolation).	1	1	1	1	1	1	0	1	1	0	8
Mechanical CP	Ravensworth CHPP 2009 - A contract driver was fatally injured when the reject bin chute door inadvertently opened, releasing material that fell, crushing the truck cabin. To avoid a tarry slurry dripping onto truck windscreens in wet weather, some drivers drove forward through the race and then reversed back into position, prematurely initiating the “TIP” command from the PLC. The contractor had not reported previous incidents to the CHPP operator.	1	1	1	1	0	0	1	0	0	0	5
Ground Inrush or inundation	Mt Thorley open cut 2011 – A dangerous incident occurred when a dozer became submerged in a water body on the open cut mine. Statutory inspection failed to record information on the location of the sump. Failure to transfer information between shifts placed the worker in a hazardous situation.	1	1	1	1	1	1	1	1	1	1	10
Vehicle interaction	Ravensworth 2013 – A labour hire trainee was fatally injured in a collision between a haul truck and a light vehicle. Roads and windrow heights were the most common hazard reports made by workers. The mine management responded to concerns about roadway	1	1	1	1	1	1	1	1	1	0	9

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
	conditions by reinforcing operator compliance with traffic management rules rather than addressing intersection design, roadway conditions, and windrows.											
Mechanical CP	Boggabri Coal/Theiss 2014 – Construction contract worker's inadvertent action resulted in a fatal crush between the MEWP rails and the structure the MEWP was working under. Safety relied on lower-level controls such as training and competency rather than secondary guarding.	1	1	1	1	0	1	1	0	0	1	7
Mechanical CP	Rix's Creek 2016 - A contract worker was fatally injured when the tail gate on his trailer fell while accessing the trailer for cleaning. The contractor had purchased a new vehicle for transporting processed coal from the CHPP. The trailer had no safe means of access for cleaning. The worker understood that the mine had prohibited contractors from using the heavy vehicle wash facilities. Workers had limited access to health and safety committee meetings, and there was no regular communication between the mine and the contractor. The deceased had raised concerns about the procedure for cleaning the trailer. This was not resolved, and the worker developed an ad hoc procedure that involved propping the tailgate open with a bar.	1	0	1	1	1	1	0	1	1	0	7
Mechanical CP	Bengalla open cut 2018 - A contract worker was fatally injured when a tyre fell while cleaning with a high-pressure hose. Marathon Tyres was responsible for supplying, repairing, installing, and maintaining all tyres and rims for mine vehicles. The Mine Safety Management System specified 'Golden Rules', and workers were expected to undertake a personal risk assessment before each task. At the shift start meeting, the deceased raised a safety focus issue relating to suspended loads. The investigation report does not provide any details about this issue. There was no engineering control to prevent tyres from falling from the grab of the tyre handler. The mine relied on a Marathon Tyres SWP, which required workers to place a tyre flat on the ground before alighting from the tyre handler. Marathon Tyres denied having any knowledge that their tyre fitters were using the heavy vehicle wash bay to clean tyres. Bengalla did not prohibit Marathon Tyre workers from using the wash bay. The mine's supervisors were aware that tyre fitters were using the facility to clean tyres/rims.	1	1	1	1	0	1	1	0	1	0	7
Underground coal operations total for each pathway (n=10)		10	4	10	8	6	7	5	3	4	4	5.5
Surface coal operations total for each pathway (n=8)		8	6	8	8	5	6	3	4	5	2	7.1
Coal total for each pathway (n=18)		18	10	18	16	11	13	8	7	9	6	

In 2015, a contract miner was fatally injured when he was crushed while operating a Jacon Maxijet water cannon. A pinch point formed when fragmented rock flowed out of a blocked draw point, contacted the front of the water cannon, and pushed it backwards, causing it to impact the wall of the extraction drive. Bunds were identified as the critical control protecting workers from rock flowing out of a draw; however, engineering rigour was lacking in the bund design and in monitoring material flowing from the draw. Engineers failed to adjust the dimensions of the bund based on monitoring the nature of the material flowing from the draw and following prior incidents

Although bunds were identified as the critical control, alternative equipment that enabled the task to be carried out from the safety of a vehicle cab would have removed the worker from the vicinity of the draw (Pathways 1 and 2). Previous incidents involving equipment had occurred at the site which, as a matter of course, would have required reporting to the regulator, being notifiable incidents. However, the investigation report provided no information regarding action taken by the regulator concerning post-incident control measures (Pathway 7). Risk assessments conducted following the prior incidents failed to control the risk of a worker being hit by flowing material or being crushed between the vehicle and the mine wall (Pathway 3). Management failed to identify non-conformances in bund dimensions and placement, the changing nature of the material flowing from the draw, and changes in rill angle (Pathways 4 and 5). Compliance with the procedure specifying where workers were to stand and their direction of movement away from the draw when a hang up released was monitored, and it was known that the procedure was not always followed, as it required workers to move downwind with the dust (Pathway 4). A meeting held between workers and supervisory/management personnel to review the procedure indicates there was a degree of concern about the procedure after several incidents, some of which caused equipment damage; however, the procedure was not changed (Pathways 8 and 9).

The average gold price in 2015 was 5% lower than the prior period, and the average copper price was 24% lower. The company's annual report noted that it implemented cost reductions and efficiency gains to reduce the adverse impacts of lower commodity prices, but profit was US$44m lower than in the previous reporting period (Pathway 6). The annual report also indicated that an amended remuneration framework was implemented in the 2015 financial year. Seventy-five percent of the business indicators were financial incentives, including reducing production costs, which focused executives on cost savings, sustainability, earnings, and free cash flow. The remaining 25% of the business indicators were based on safety performance, representing 15% of the overall incentive (Pathway 6). The mine was approaching the end of its productive life. Resource depletion, declining ore grade, and lower commodity prices had reduced profit margins. Mature block cave mines carry a greater risk of material inflow. The annual report indicated a focus on cutting production costs and paying down debt. The mine ceased production the following year.

The investigation report did not acknowledge the role of HSRs or how the mine utilised them to facilitate workers reporting safety concerns or conducting inspections of work areas. Risk assessments undertaken after similar incidents appeared to involve workers doing the job with no record of a worker health and safety representative being present. The mine management discouraged union presence at the mine, and there is evidence that the mine prevented the union WHS entry permit holder from entering the mine. The fatally injured worker was an employee of a major contract miner engaged to provide equipment maintenance and labour. The investigation report contains no information on whether the mining contractor inspected the work location, assessed the process and machinery involved, or was notified of prior incidents.

Table 5-3: NSW metalliferous fatal and high potential incidents: Presence of Ten Pathways in analysis of investigation summary reports (N=11)

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
Mechanical CP	Perilya underground 2007 – A new worker was fatally injured when crushed between a remote-control loader and the mine wall. Inexperienced worker, working alone under remote supervision, with a lack of engineered controls such as proximity detection or a bund.	1	1	0	1	1	1	0	1	1	1	8
Inrush or inundation	Cadia East gold mine 2010 – Seven workers were exposed to the risk of inundation when an inrush of material occurred into an occupiable area during a ventilation shaft construction that intersected an aquifer. Management failed to comprehend the significance of slurry trickling at the base of the shaft as a warning sign, and reconciliation of reamed to bogged material had failed to consider wet material. Worker and supervisor concerns went unheeded as workers were instructed to continue bogging.	1	1	1	1	1	1	1	1	1	1	10
Inrush or inundation	CSA underground 2014 – A worker drowned when sucked into a sump drain hole while unblocking a drain between levels. The drain had been blocked to accommodate a dewatering project. No engineering project risk assessment or fit-for-purpose equipment for blocking drains. Inadequate supervision, overreliance on hazard awareness and JSA controls, and reported fear of disciplinary action for losing a bar in the sump contributed to the worker's decision to enter the sump.	1	1	1	1	1	1	1	1	1	0	9
Shafts and winders	CSA/Macmahon 2014 – An engineering contract worker was fatally injured when he hit his head on a stage platform while travelling up a shaft in an unguarded materials kibble. The project was behind schedule, workers were fatigued from long hours, and reliance on low-level controls contributed to the incident.	1	0	1	1	1	1	1	0	0	0	6
Fall of ground	Ridgeway 2015 - An employee of a mining labour/maintenance contractor was between a mining plant and the mine wall while water jetting to bring down a hung-up ore draw point. The mining plant was pushed by an inrush of material. Several similar incidents had occurred, some causing equipment damage. A meeting held between workers and supervisory/management personnel to review the procedure indicates a degree of concern. The outcome was that the existing procedure was confirmed. The procedure required workers to stand and move downwind when a hang up let go, to avoid moving behind the plant. Management was aware that some workers moved in the opposite direction to avoid the dust.	1	1	1	1	1	1	1	1	5	0	8
Health CP Ventilation CP	Peak gold mine 2017 - A contract worker, 36, was operating a Jumbo alone in a development road when he became unwell. The mine had decided to maintain production while a ventilation upgrade was undertaken. Insufficient ventilation led to increased heat and diesel particulate. The supervisor visited him regularly during the shift but did not undertake the required tests for heat stress. The worker became unconscious and was pronounced dead on arrival at hospital.	1	1	1	1	0	1	0	1	1	0	7

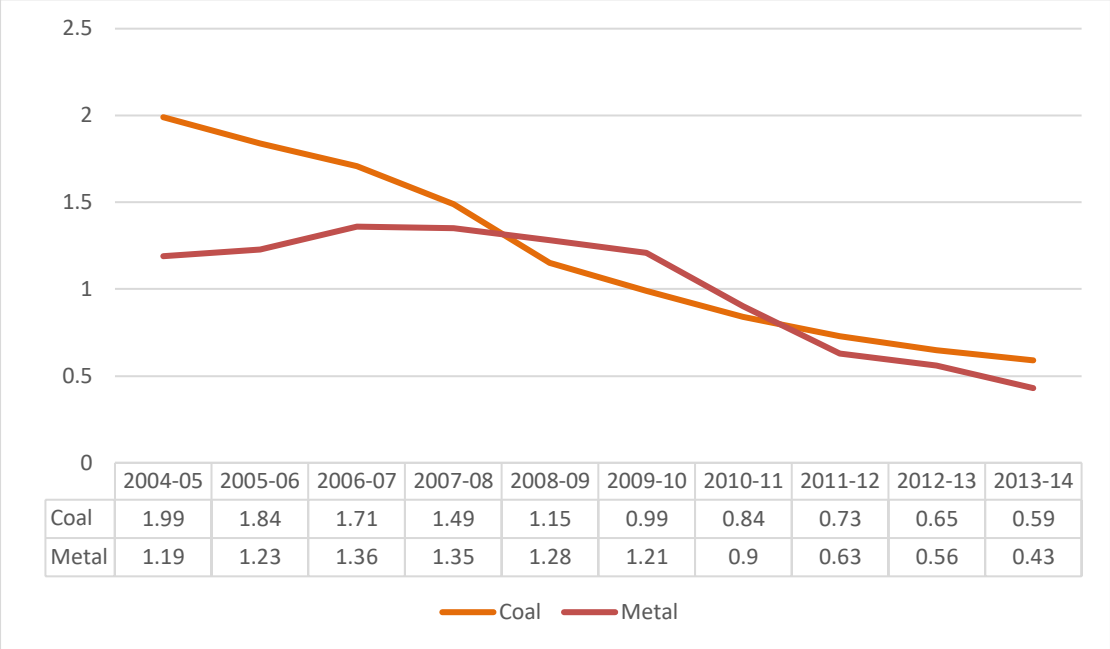
Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
Mechanical CP	Cowal gold mine 2018 - A contract worker undertaking a construction project was seriously injured and later died from complications when he lost his balance and fell off a MEWP platform from a height of about one metre. Design and overreliance on low-level control.	1	1	1	1	0	0	1	0	0	0	5
Fire or explosion	Tritton underground mine 2018 - Nineteen workers were moved to refuge chambers in the lower sections of the mine after a haul truck caught fire about 900 metres underground in the main decline. The mine's ventilation system design caused the smoke and gases from the fire to travel further into the mine toward the workers, adversely affecting air quality. The fire caused the loss of communications and the external air supply to the refuge chambers. The occupants relied on the self-contained air supply within the refuge chambers. A worker reported a leak in the exhaust flex to a maintenance supervisor, but he did not recommend taking the truck out of service. A Sandvik representative said he advised a different maintenance supervisor that the truck had a hole in its exhaust flex and questioned whether it should be in service.	1	1	1	1	1	0	0	1	1	1	8
ROVOA	Snapper 2019 - A contractor was fatally injured when a dozer collided with his light vehicle. At least seven mobile plant collisions/near-miss incidents had occurred between 2014 and 2019. Investigations found workers had either failed to follow mobile plant separation distance or communication procedural requirements. At the daily contractor meeting, non-compliance with, or a need to improve, mobile plant positive communication work practices were consistently raised. Pit inspection paperwork completed for the Snapper mine during the two weeks prior to the incident commented that there was "…poor radio comms around the site." The deceased, who was driving the light vehicle, had breached BSL's separation distance, parking and communication procedural requirements immediately prior to the incident.	1	1	1	1	1	0	0	1	0	0	6
Explosives CP	Peak gold mine 2022 - An unplanned initiation of some electronic detonators in the stope occurred. During the re-entry, post-firing, it was identified that a production stope had not been disconnected from the mains firing line and the shot had fired. The blast plan was delayed over several shifts due to some problems encountered, and the plan was changed. There were two blasting contractors, one for development using an electric detonator and a production contractor using an electronic detonator. The development blast proceeded and was fired via the 240v AC mains firing system. The I-Kon III electronic starter detonator and firing line connection were removed from the production stope; however, on re-entry it was found to have fired. Communication failure between shift supervisors and the two contractors using different detonating systems. Application of a 240v AC pulse to the I-Kon III detonators resulted in the detonation of the explosive product in the production stope. The manufacturer had issued a bulletin warning that electronic detonators must not be connected to 240v AC power and/or other non-approved initiation equipment.	1	0	1	1	0	1	0	0	1	0	5

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Total
Fire or explosion	Perilya underground 2025 - All underground workers retreated to fresh air bases when workers undertaking remediation identified fumes and vapour in an area where a polyurethane product was being used to fill a void and stabilise the ground. The workers successfully retreated and remained there until it was assessed as safe to leave the mine. The control room was initially reluctant to evacuate the mine in case it was not warranted, and did not call for evacuation for some two hours after the fire was detected. No structured consultation occurred with operational teams; no procedures were developed for high-risk chemical application. The causal investigation stated, 'Evacuation was, in part, delayed due to perceived concerns relating to the ramifications of sounding an alarm when not required, which highlights a cultural issue that has manifested as minimal hazard reporting on-site' and a belief that the PUR was fire retardant.	1	1	1	1	0	1	1	1	1	1	9
Total pathways		100%	81%	91%	100 %	64%	73%	55%	64%	64%	36%	7.4

Serious injuries – underground and surface coal and metalliferous mines

Serious injuries are presented in two separate charts as the definition of a serious injury changed with the legislation change in 2013 (see Table 5-1 for definitions). Figure 5-16 shows that both coal and metalliferous SIFRs trended down between 2004-5 and 2013-14.

Figure 5-16: Coal and metalliferous five-year rolling average SIFR – 2004-05 to 2013-14



	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Coal	1.99	1.84	1.71	1.49	1.15	0.99	0.84	0.73	0.65	0.59
Metal	1.19	1.23	1.36	1.35	1.28	1.21	0.9	0.63	0.56	0.43

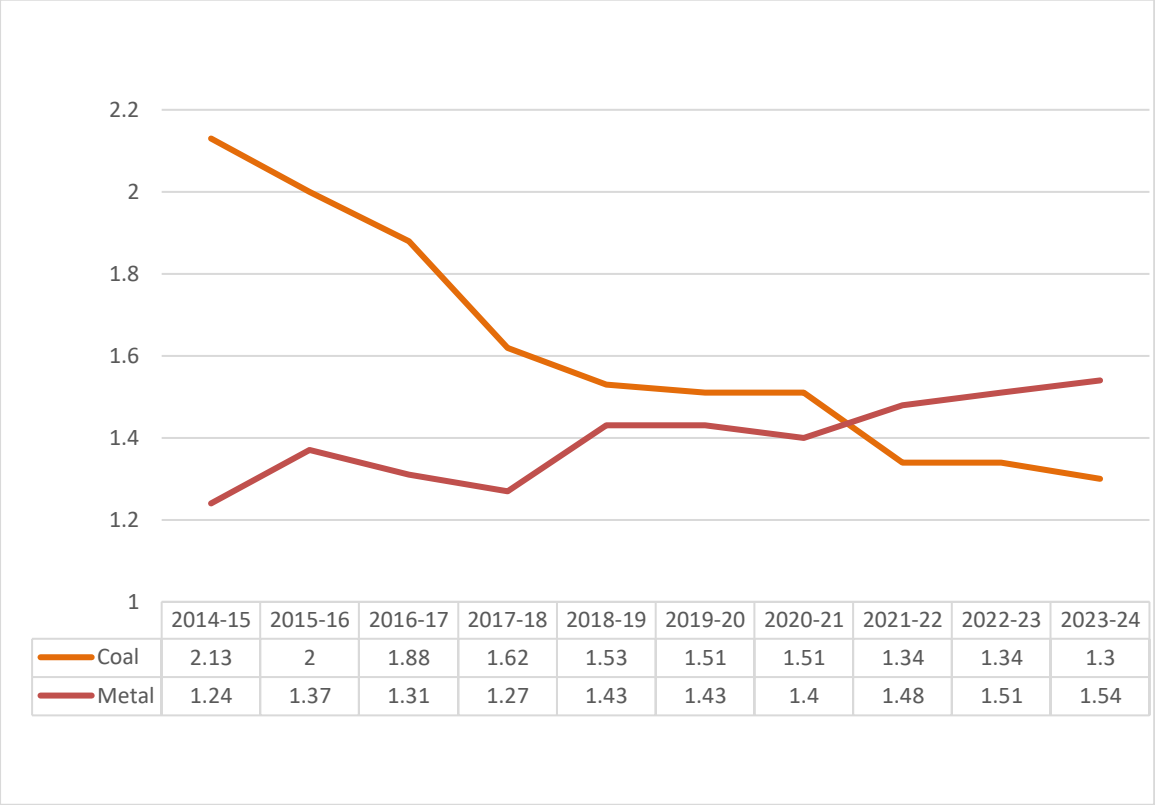
The NSW report reviewed 16 coal mining and five metalliferous mining serious incidents that occurred between 2004-05 and 2013-14. Of the 16 incidents investigated, nine were associated with mechanical failures. Five incidents involved service contractors or labour hire, and four involved specialist contractors or teams with specialist labour hire (Ashton/Silver City Drilling, Appin Douglas Park Project, Metropolitan longwall extension and changeout project, and Beltana longwall changeout). In the Silver City Drilling and Appin scaffold incidents, contractors raised serious safety concerns, which were not addressed. These workers likely did not have access to a health and safety representative or check inspector, and if they did, timely access or fear of adverse action may have prevented effective issue resolution.

Of the five metalliferous mining incidents, four were associated with mechanical failures. Worker safety representation at both Cadia and CSA mines entailed non-union worker participation models. In the CSA incident, the two workers involved in the incident were employed by a contractor that provided labour and underground maintenance services. The workers were obligated to comply with the mine's health and safety management system, which required workers to undertake a personal hazard awareness/risk assessment or a Job Safety Analysis before each task. Cadia also engaged a contractor to provide labour and underground maintenance services and discouraged union health and safety representation. It is not known how many of the workers engaged in bogging the material at the base of the ventilation shaft under construction were contractor employees. Workers had reported several instances where machines were clogged with mud and out of service, as well as concerns about the slurry running from the base of the shaft. Supervisors had reported this to management, but remote bogging was not implemented as specified by the work procedure. An appropriately empowered check inspector may have been able to stop this work activity.

In contrast to the SIFR between 2004-05 and 2013-14, Figure 5-17 shows that after representative arrangements for metalliferous mines were transferred to the WHS Act (post 2013), the SIFR trended upwards.

The Mine Safety Performance Report 2023-24 noted a steady downward trend in the rolling five-year average SIFR for the combined coal, metalliferous and extractive sectors since 2014–15. The coal mining SIFR decreased from a high of 2.13 in 2014-15 (reflecting the four coal mining fatalities in 2013-14) to 1.30 in 2023-24. Conversely, over the same period, the metalliferous mining SIFR increased from a low of 1.24 to 1.54.

Figure 5-17: Coal and metalliferous five-year rolling average SIFR – 2014-15 to 2023-24

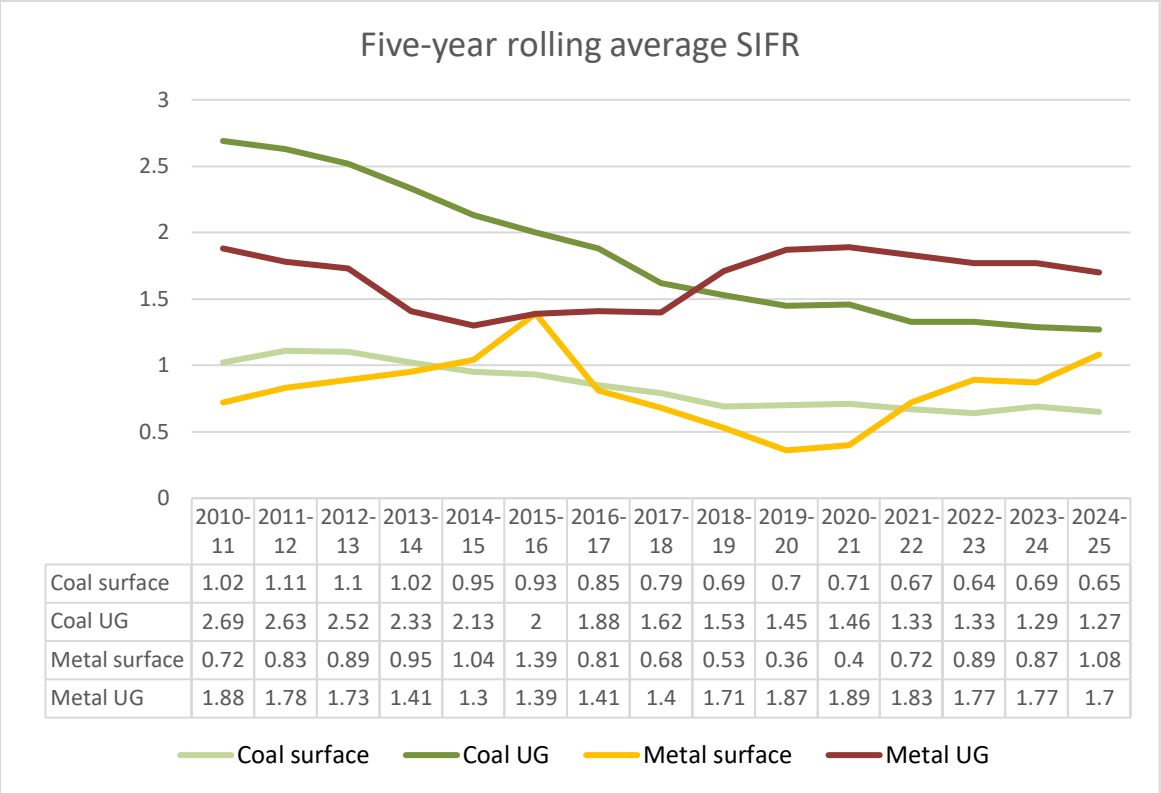


	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Coal	2.13	2	1.88	1.62	1.53	1.51	1.51	1.34	1.34	1.3
Metal	1.24	1.37	1.31	1.27	1.43	1.43	1.4	1.48	1.51	1.54

The Mine Safety Performance Report 2023-24 does not address the differing performance trends in the coal and metalliferous sectors since 2014-15. Possible explanations for the divergence in performance include sector-specific market forces affecting production and health and safety; differences in work arrangements, such as the proportion of contract versus direct employees; differences in the application of compliance and enforcement strategies; or the different worker representative regimes described in this report.

Figure 5-18 compares surface and underground operation SIFRs. Both underground and surface coal SIFRs trended up. Underground metalliferous SIFR peaked at 1.89 in 2020-21, while surface mining SIFRs attained a low of 0.36 in 2019-20 but rose again to 1.08 in 2024-25.

Figure 5-18: Surface and underground mines five-year rolling average SIFR - 2010-11 to 2024-25



	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Coal surface	1.02	1.11	1.1	1.02	0.95	0.93	0.85	0.79	0.69	0.7	0.71	0.67	0.64	0.69	0.65
Coal UG	2.69	2.63	2.52	2.33	2.13	2	1.88	1.62	1.53	1.45	1.46	1.33	1.33	1.29	1.27
Metal surface	0.72	0.83	0.89	0.95	1.04	1.39	0.81	0.68	0.53	0.36	0.4	0.72	0.89	0.87	1.08
Metal UG	1.88	1.78	1.73	1.41	1.3	1.39	1.41	1.4	1.71	1.87	1.89	1.83	1.77	1.77	1.7

In the NSW report, 23 coal mining and nine metalliferous mining serious injury incidents were analysed. Nine of the 23 coal incidents were associated with mechanical control plans, and six with roads or vehicle operating area principal mining hazard management plans, which is consistent with the most frequently notified events. A further three incidents, two of which are classified as 'Fire or explosion' and the other as 'Shafts and winding systems', could also be related to mechanical control plans. Five of the nine incidents involved contract workers.

Five of nine metalliferous mining incidents analysed involved mechanical failure. Two of the three 'Fire or explosion' incidents were fires on mobile plant, which, because of the prevalence of these types of incidents, had been identified by the inspectorate for targeted or priority compliance assessment programs. Not all investigation reports clearly identify the employment type of injured workers. In the Tritton underground fire, Tritton maintenance services were undertaken by a maintenance service contractor; Peak gold mine shotfirers were employed by two different blasting contractors; CSA and Cadia retain a mining contractor to provide labour and maintenance in production areas. The Northparkes incident involved contract workers undertaking a mill reline maintenance and cleaning service.

NSW Resources Regulator compliance and targeted assessment programs in response to industry performance

For the NSW report, we reviewed a substantial selection of consolidated targeted assessment and compliance priority reports to evaluate the worker representative safety role with regard to worker contribution to the implementation of control measures for principal mining hazards and principal control plans, and engagement with SSHRs/HSRs during assessment or intervention programs. Three general risk management topics, supervision and communication, hazard reporting, and contractor management, were addressed in compliance priority programs.

Between July and December 2022, the NSW Resources Regulator conducted a campaign targeting *hazard reporting of safety-related issues* in large extractive and metalliferous mines, visiting 37 metalliferous and large extractive mines.[125] This program may have been initiated in response to a survey undertaken on behalf of the Mine Safety Advisory Council (MSAC) on safety reporting. Worker responses to this survey indicated that while knowledge of incident and hazard reporting systems was high across both permanent and non-permanent worker groups, there was some feedback from workers indicating that it was not always easy to report a safety issue, and that safety issues at their workplace were not always appropriately addressed or there was no feedback regarding the issue of concern.

The assessment of reporting safety-related issues found that specific training for supervisors on how to encourage workers to report incidents or hazards was generally not provided, and that many mines utilised on-the-job training for new supervisors. Several mines with mature safety systems had formal supervisor development programs. A second finding was that feedback to workers on concerns raised was not always systematic and relied upon verbal communication between supervisors and workers. Several mines produced a weekly report from the incident database and displayed the information on the notice boards. Best practice also included a weekly or shift-change review of open incident and hazard reports, with updates on actions taken to close the incident or hazard. A third finding was that hazard reports may not be recorded if the hazard is immediately rectified. On maintaining records of reported hazards, some focus group participants reported that supervisors sometimes discarded hazard reports.

Based on the campaign findings, the regulator recommended that mine operators must have a system in place to provide feedback and monitor actions recorded to correct the hazard or incident reported by workers, and that this system should consider providing feedback directly to the person who raised the incident or hazard report. Additionally, the regulator recommended that mine operators review training and information designed to promote the development of supervisor skills and knowledge, with a focus on organisational behaviours and culture. Thirdly, the regulator recommended that mine operators should ensure that workers and supervisors understand the importance of recording hazards, regardless of whether they are immediately rectified, to allow for proper analysis of the prevalence and nature of hazards and expedite the systematic elimination of hazards, rather than continuously taking remedial action to address the same hazard. Worker representation is an important pillar within the regulatory framework yet appears to be entirely overlooked in the regulator's assessment programs. The object of the WHS Act, which requires provision of 'fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety', is essentially invisible in regulatory compliance activities.

The regulator identified that, in the 12 months between May 2023 and May 2024, 31 incidents resulted in 80 improvement notices referencing *supervision and risk management* in coal and metalliferous surface and underground mines. Between January and June 2025, the Regulator conducted compliance visits at 22 metalliferous and large extractives and 46 underground and surface coal mines, targeting risk management and supervision in metalliferous and large extractives mines.[126]

[125] NSW Resources Regulator. (2022, December). *Compliance priority report: Hazard reporting of safety-related issues – Tier 1 quarries and metalliferous mines*. Department of Regional NSW. https://www.resources.nsw.gov.au/sites/default/files/2022-12/compliance-priority-report-hazard-reporting-of-safety-related-issues-metex.pdf [1]

[126] NSW Resources Regulator. (2025). *Compliance priority report: Risk management and supervision – metals and extractives January 2025 to June 2025* (Department Reference No. D25/61013). NSW Department of

The visits in metalliferous/large extractive mines resulted in 31 compliance notices issued to 12 of 15 underground mines (2.07 notices per assessment) and 10 notices across the six surface metex mines (1.67 notices per assessment). In the coal sector, 35 compliance notices were issued to 12 of 27 surface coal mines (1.41 notices per assessment) and 11 of 19 underground mines (1.31 notices per assessment), representing a lower rate of notices per assessment in coal mines compared to metalliferous mines. Overall, the assessment rating for coal mines was 96% criteria met compared to 86% for metalliferous mines. Topics examined included workers' understanding of hazard risk management, their ability to identify hazards and controls, and supervisors' understanding of inspection responsibilities and requirements. In metalliferous mines, two prohibition notices were issued concerning risk management and supervision controls under the site MECP and ROVOA PHMP. Improvement notices and notices of concern were issued regarding risk management and supervision. In coal mines, one prohibition notice was issued regarding risk management and supervision controls on the site MECP. Improvement notices and notices of concern were issued related to risk management and supervision.

Between December 2020 and June 2021, the regulator assessed contractor management at 38 metex mines.[127] The assessments identified serious failings in contractor management, including contractors not being involved in site risk assessments and shift start meetings; contractors not being able to demonstrate competencies; non-compliance with procedures during major shutdowns; and non-compliance with permit-to-work procedures. In seven of 13 fatal and serious injury incidents investigated between 2014 and 2025, the injured worker was a contractor. Supervision and communication failures were common contributing factors. In contrast, the contractor management compliance priority program in the coal sector, conducted between June and October 2021, found that contractor representatives were frequently part of the Health, Safety, Environment and Community committees, and some mines included contractors in the overall training analysis.[128]

Previous research and incidents such as the 2020 Grosvenor coal mine explosion have shown that significant use of contracting and labour hire has been found to weaken OHS management, including workers' willingness to report safety and health issues. In broad terms, interviews/focus groups reinforced this picture, although use of contractors was reported as largely stagnant in metalliferous mining but declining in coal mining, which is attributed in part to the implementation of the same-job-same-pay principle removing the cost savings associated with contractors or labour hire.

Overall, these programs resulted in a substantial number of proactive interactions with mine workers at all levels. We acknowledge the value of the information generated on critical controls/control supports and recommendations to industry regarding incident prevention. In 2025, the Queensland Johnston Review noted the quality of information the NSW Resources Regulator provided to industry.[129] However, there is little evidence of engagement with SSHRs/HSRs when undertaking site-

Primary Industries and Regional Development. https://www.resources.nsw.gov.au/regulator-library?sort_by=name&page=178 [1, 2, 3]

[127] NSW Resources Regulator. (2021). *Compliance priorities outcomes: Contractor management in metalliferous mines and large quarries*. Department of Regional NSW. https://www.resources.nsw.gov.au/sites/default/files/2021-11/Compliance-Priorities-Report-Contractor-Management-Metalliferous-mines-and-Large-Quarries.pdf

[128] NSW Resources Regulator. (2022). *Compliance priorities report: Contractor management in coal mines*. NSW Government. 2. https://www.resources.nsw.gov.au/sites/default/files/2022-01/Compliance%20priorities%20report%20-%20contractor%20management%20-%20coal.pdf [1, 2, 3] *2.*

[129] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 42. Retrieved from https://www.rshq.qld.gov.au/

based assessments or using WHS/HSR committee records as a source of information. We recognise that this may have occurred but not been reported. However, noting that these interactions did occur promotes the important function of worker representatives in the legislation. Risk management programs could have provided an opportunity to assess the implementation of *Work Health and Safety Act* HSR arrangements at metalliferous mines. There was no compliance program to assess compliance with WHS Act legislative requirements, such as identification of work groups, nomination, election, and training of HSRs; support and time afforded for them to carry out their functions; and WHS/HSR committee constitution.

A summary of findings relevant to worker participation, consultation, and representation is outlined below.

General risk management:

- Supervision and communication arrangements between shifts - 1.65 notices issued per assessment at metalliferous and large extractives mines (metex) compared to 1.09 per assessment at coal mines.
- Contractor management – in metex mines, assessments found contractors were not involved in site risk assessments; there was non-compliance with procedures during major shutdowns; contractors were not being involved in shift start meetings; not able to demonstrate competencies; and they were not always compliant with permit to work procedures. In coal mines, assessments found that contractor representatives were frequently part of the Health, Safety, Environment and Community committees and that some mines included contractors in the overall training analysis.
- A hazard reporting of safety-related issues campaign, conducted in metalliferous mines, found that feedback to workers on concerns raised was not always systematic and relied on verbal communication between supervisors and workers.
- Supervision and risk management - topics examined included worker understanding of hazard risk management, ability to identify hazards and controls, and supervisor understanding of inspection responsibilities and requirements. The overall assessment rating for metalliferous mines was 86% compared to 96% for coal mines.

Principal hazard management plans consolidated reports found:

- Airborne contaminants - in metalliferous mines, the regulator recommended that mine operators consult with site management and workers about arrangements for implementation of the airborne contaminants monitoring program.
- Crystalline silica – in coal mines, the report noted that some mines included dust reports as a standing item on WHS committee meeting agendas.
- Spontaneous combustion – the report noted worker involvement in risk assessments and development of the PHMP.
- Inrush or inundation – in metalliferous mines, the report noted that risk assessments did not consider the hierarchy of controls when bogging raise bore cuttings, and recommended that inrush zones be discussed in worker inductions and crew safety meetings.
- Ground or strata - in metalliferous mines, the assessment found that workers may not be competent in ground awareness, ground support or seismicity (lack of training records);

PHMPs did not reference related risk assessments, and these may not have involved systematic analysis and application of the hierarchy of controls.

- Ground or strata - in coal mines, the report noted that risk assessments were completed in consultation with workers and internal and external geological and geotechnical experts, and that strata failure incidents were investigated by a range of stakeholders. The report also noted that most mines conducted communication sessions with the workforce at key points in the life cycle management of ground or strata hazards.
- ROVOA – a targeted intervention in 2022, which followed up on an awareness campaign conducted in 2021, canvassed workers' views on vehicle interaction controls. Contractors expressed fears about being reprimanded if they raised concerns.

Health control plan

- Lead and heat exposure - the consolidated compliance reports indicated a lack of worker consultation on and participation in exposure monitoring and the selection and implementation of controls.

Mechanical and electrical engineering control plans

- MECP – the 'entanglement' and 'falling objects' consolidated reports found that MECP risk assessments lacked representation of a cross-section of the workforce and lacked detail in identifying entanglement and falling object hazards and control measures.
- MECP – the 'drill rigs and immobilisation versus isolation' compliance priority assessments found risk assessments were undertaken without the participation of relevant workers or management.

The regulator made recommendations about worker training, particularly on principal mining hazard awareness. HSR's constitute the third feedback loop in triple loop learning and provide an additional source of review of mine risk management standards and practices. The apparent limited engagement with HSRs represents a lost opportunity to raise awareness about principal hazard management and critical controls. Our focus groups/interviews indicated assessment programs were not visible to workers in metalliferous mines. We recommended that the consolidated program outcome reports be disseminated to SSHRs/HSRs so these findings can be communicated to relevant workgroups. We also recommended that assessment programs promote the safety role for workers/worker representatives in principal mining hazards and control plans.

NSW focus groups - worker representation

The main themes that emerged from the NSW focus groups around health and safety representation were fear of retribution for raising health and safety concerns, lack of participation in hazard management and risk assessment, non-reporting of high-potential incidents, and lack of interaction with the inspectorate. Metalliferous mine workers and HSRs referred to workers feeling vulnerable and afraid to report safety and health issues for fear of retribution.

Challenges faced by HSRs in performing their functions included their inability to cover site-wide issues or readily conduct regular inspections. They also felt isolated from support, notwithstanding the efforts of union officials, given the latter's right of entry powers, need to deal primarily with industrial issues at workplaces (in the case of the AWU) and inability to speak readily to anyone on site, demand access to relevant documents or issue anything beyond a warning in relation to a safety issue. One fatal metalliferous incident described above occurred at a mine where the entry permit holder was

denied access.[130] While job insecurity and fear of victimisation were present in coal mining, the representative structures were seen to be operating effectively, including their intersection with mine WHS committees. The coal sector worker representative regime was seen to lead to more constructive on-site relations, where matters could be resolved. ISHRs were able to provide support and advice, as well as deal with intractable issues. In essence, a three-tiered system of representation.

Worker representative arrangements in the NSW coal sector have evolved since the 2013 legislation, and this was universally viewed as an improvement. The 2013 legislation was seen as beneficial by formalising representation procedures and adding the position of HSRs who could represent particular workgroups in a mine, a new layer of representation that had been introduced in some mines through careful negotiation, unlike in metalliferous mining. Far from overcomplicating representation, coal sector respondents described a more effective system in which representative roles (HSRS, SHSRS, and ISHRS) were carefully delineated.

Coal mine worker representatives (SSHRs and ISHRs) indicated they had good, constructive relations with inspectors, including notification of visits (as required legislatively), accompanying inspectors during workplace inspections, and support and advice in resolving safety issues. This contrasted sharply with metalliferous mining, where almost all HSRs interviewed said they were never advised of inspections by metalliferous mine inspectors, receiving this information, if at all, only through the company. Contact with inspectors was reported as minimal by both metalliferous mine workers and their HSRs, and trust in the Inspectorate, including reluctance to contact them, was low.

Coal mining respondents were generally satisfied with representative arrangements for addressing workplace safety concerns, whereas metalliferous mine workers pointed to a litany of failures regarding safety hazards associated with ground control, dust management, fires, and inrush prevention. The disparity was similar regarding the involvement of workers and representatives in risk assessment and incident investigation. Metalliferous mine workers and HSRs made critical comments about the lack of consultation on these critical activities. Whereas coal mining SSHRs indicated they were either directly involved or kept apprised of developments when they chose not to (or could not) attend immediately,

Regarding incident notification, coal worker responses were mixed. Several coal mine respondents identified incidents they believed were notifiable but had been 'downgraded' so as not to invoke statutory reporting provisions. However, concern was uniform among metalliferous mine workers and HSRs, who gave detailed descriptions of serious incidents that met the criteria for a dangerous incident being downgraded, or serious incidents not reported altogether to avoid notifying the regulator.

Finally, the emergence and value of mechanical safety and health representatives was discussed. Focus group participants in Cessnock and Wollongong explained that mechanical safety and health representatives are not legislated; they have emerged organically through site consultation, often via WHS committees and work groups seeking mechanical expertise to resolve incidents. Examples were cited at Mount Thorley in the Hunter Valley, and Appen and Dendrobium in Wollongong. Prior roles existed at some sites, and both companies and regulators saw value in involving mechanical expertise to minimise incidents and escalation. The role typically fills an expertise gap when incidents involve

[130] Portfolio Committee No.2 – *Health, Report No.63 Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales,* Legislative Council of NSW, Sydney, December 2023, x.

mechanical systems (e.g., hydraulics). A fitter/mechanical tradesperson can clarify causes and implications, like how regulators have mechanical and electrical inspectors for specialised knowledge. One participant noted Mount Thorley/Walkworth as an example where mechanical expertise added value without company objection; both parties supported it to reduce incidents.

Discussion

Clear evidence emerged from the focus groups in NSW about problems with the HSR model of representation and the strengths of the three-tier representative system that has emerged at some mines, comprising workgroup-based HSRs, SSHRs representing the whole mine site, and ISHRs providing support, mentoring, and training for SSHRs. In our review of regulatory compliance activities, evidence emerged from metalliferous focus groups regarding lack of engagement between inspectors and HSRs. One outcome of this was the lack of visibility of targeted and compliance priority assessment programs. Few metalliferous HSRs were aware of the regulator's focus on principal mining hazards, and mechanical, electrical and health hazards. The regulator's assessment programs identified several issues related to a lack of worker involvement in risk assessments and a lack of knowledge of principal hazards, such as inrush, inundation, and ground control at metalliferous mines. Focus group participants reported HSRs were largely unaware of mine dust monitoring programs. The regulator recommended that metalliferous mine operators consult with site management and workers about arrangements for implementation of the airborne contaminants monitoring program. Tripartite engagement at the mine level appears to be an important part of the success of inspector-led interventions and of building worker knowledge and understanding of hazard management.

Worker ability to raise concerns and report incidents was elevated to the MSAC. In response, the inspectorate implemented a compliance priority program around hazard reporting. The program sought to verify survey feedback on workers' knowledge of incident and hazard reporting systems, and whether these systems effectively facilitated feedback to people who raised safety concerns. It was found that feedback to workers regarding their safety concerns was not always systematic and relied upon verbal communication between supervisors and workers. The campaign did not explore the role of HSRs in raising concerns or HSR committees in facilitating their resolution. A common theme from the focus groups was the lack of feedback workers received about safety issues raised on their behalf. The Queensland State of the Art reporting commissioned research project identified a lack of feedback to workers.[131] A third finding was that hazard reports may not be recorded if the hazard is immediately rectified. On maintaining records of reported hazards, some focus group participants reported that supervisors sometimes discarded hazard reports.

It is important to recall what was learnt in the past about worker representation. The 2009 *Digging Deeper* Wran Consultancy project concluded that informal aspects of WHSMS, of which worker participation was an important part, are more important than the formal mechanisms. Both the Wran and *Digging Deeper* reviews emphasised the importance of trust between workers and management at high-hazard workplaces. Trust is important for hazard and incident reporting systems to function effectively. Crucially, this means 'no reprisals' against worker representatives and workers who raise concerns and report hazards or incidents.[132] Furthermore, *Digging Deeper* found that:

[131] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health) 26, 41 and 46.
[132] Shaw, A., Blewett, V., Stiller, L., Cox, S., Ferguson, S., Frick, K., & Aickin, C. (2007). *Digging Deeper, Wran Consultancy Project, Vol 1.* Commissioned by Mine Safety Advisory Council, NSW Department of Primary

> Unions can be crucial to the goal of making the workplace healthy and safe. Because they have access to considerable information about OHS and have the capacity to inform their members, they can be valuable in helping to skill their members with content knowledge as well as the 'how to' of consultation.[133]

A union organiser, a WHS entry permit holder, raised the issue of regulatory impediment with regards to representation of non-union contractors concerning safety issues at mine sites. This issue was discussed by the Portfolio Committee No.2 of the NSW Legislative Council in December 2023. As part of its terms of reference, the committee considered the role of worker representatives in dust management. The committee recommended the government consider expanding the role of ISHR under the *Work Health and Safety (Mines and Petroleum Sites) Act* to metalliferous mine sites.[134] The Committee interviewed Jack Ayoub, an AWU NSW branch organiser, who described challenges in organising members at the mine. In response to questions, Mr Ayoub said the AWU had about 100 members working at the Cadia mine, roughly 10% of the workforce. Mr Ayoub went further to state in relation to Cadia mine: 'We have put a lot of resources into trying to unionise that workplace—and particularly around safety. But the company has been very sophisticated at keeping us out, and some of our powers aren't sufficient to get in the door.[135] This statement indicates that hostility to union presence, at least at some mines, remains an issue in the industry and one relevant to considerations of the need for industry-level safety representatives.

Contracting and labour hire have been found to weaken safety management systems, both in terms of hazard reporting and representative mechanisms.[136] Company annual reports identified labour issues as a business risk. They noted that failure to negotiate satisfactory collective agreements adversely affects productivity, supply to customers, or reputation. For example, in evidence given to the Queensland Coal Mining Board of Inquiry (BOI), Quinlan noted that mining companies track union presence in their operations as indicated by Peabody Energy's 2019 Annual Report under 'Labour Relations'. Approximately 42% of those hourly employees were represented by organised labour unions and worked in mines that generated 19% of the company's 2019 coal production from continuing operations. Peabody has both contractor and owner-operated mining activities. While making no direct reference to contractor operations, discussing potential risks the Peabody report

Industries, Sydney. 202 Retrieved from http://www.nswminesafety.com.au/sites/default/files/products/digging-deeper-final-report-volume-1.pdf

[133] Shaw, A., Blewett, V., Stiller, L., Cox, S., Ferguson, S., Frick, K., & Aickin, C. (2007). *Digging Deeper, Wran Consultancy Project, Vol 1.* Commissioned by Mine Safety Advisory Council, NSW Department of Primary Industries, Sydney. 202 Retrieved from http://www.nswminesafety.com.au/sites/default/files/products/digging-deeper-final-report-volume-1.pdf

[134] Portfolio Committee No.2 – *Health, Report No.63 Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales,* Legislative Council of NSW, Sydney, December 2023, x.

[135] Portfolio Committee No.2 – *Health, Report No.63 Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales,* Legislative Council of NSW, Sydney, December 2023, 50.

[136] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 23, 27.; Queensland Coal Mining Board of Inquiry. (2020). Queensland Coal Mining Board of Inquiry Report, Part II, 415.

pointed to the importance of good industrial relations, but also the higher costs if some mines were unionised:[137]

> Approximately 42% of our hourly employees were represented by organized labor unions and generated approximately 19% of our coal production for the year ended December 31, 2019 … If some or all of our current non-union operations were to become unionized, we could incur an increased risk of work stoppages, reduced productivity and higher labor costs. Also, if we fail to maintain good relations or successfully negotiate contracts with our employees who are represented by unions, we could potentially experience labor disputes, strikes, work stoppages, slowdowns or other disruptions in production that could negatively impact our profitability.

Industrial issues primarily emerged towards the end of the 'tweenies', when the industry was responding to market volatility, particularly the coal market, and mostly observed at surface coal mines. Union concerns included shift lengths, casualisation, and production targets. Evidence for this was found in MEU press releases. Industrial action targeting the supply chain in 2017 suggests a high level of worker concern about work conditions.

While strong empirical evidence for production pressures undermining safety management and influencing incident rates is lacking, we found some evidence of a relationship between commodity prices (in this case, coal prices) and fatalities. Our analysis of incident investigation reports, in conjunction with company annual reports, illustrates how economic and reward pressures can undermine health and safety management through cost-cutting and increased production rates. The impact of increased production rates on methane gas management was highlighted by the BOI[138] report into the Grosvenor mine explosion. However, the Transport and Resources Parliamentary Committee inquiry noted the lack of empirical evidence on production priority over safety:

> The committee notes the disjunct between coal mine operators' stated commitments to safety, and worker submissions about their daily experiences of inadequate site safety risk management. We also note the impossible task of evaluating conflicting anecdotal evidence about how coal mine operators reconcile the competing priorities of production and safety, in the absence of empirical evidence. We note with concern the survey results provided by the MEU regarding worker perceptions of how their employers manage the competing priorities of production and safety.[139]

The committee recommended the Coal Mine Safety and Health Advisory Council commission independent research into the impact of coal production rates on safety risk management in Queensland coal mines.

[137] Reported in Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 25-26.
[138] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II*. 5-6.
[139] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane. 27

In NSW, production pressures have been raised in the context of open-cut coal mining where ramp-ups in production were noted in the Ravensworth mine fatality and a string of serious vehicle interaction incidents at Whitehaven's Maules Creek Mine.

Based on several indicators, the tripartite relationship in the NSW coal mining sector appears to be operating effectively, contributing to a substantial reduction in serious injuries. In contrast, the metalliferous sector's performance based on serious injuries and targeted and compliance priority assessment findings has deteriorated. Despite improved safety outcomes in the coal sector, potential threats to health and safety management exist in both sectors; for instance, contracting and labour hire may continue to undermine worker safety representation throughout the industry.

Concluding observations on NSW mine health and safety performance

Using serious injury rates as an indicator, it is evident that the health and safety performance of metalliferous mines has deteriorated since the representative arrangements were transferred to the WHS Act in 2013. Coal mine representative arrangements under the WHS (MPS) Act provide for the concurrent operation of worker representation, consultation, and participation schemes under mining-specific and general WHS legislation. The Act provides for the appointment of Industry Safety and Health Representatives with powers to enter and inspect a coal mine and additionally, 'review the content and implementation of a coal mine safety management system, participate in an investigation of a notifiable incident, and assist in the training of other representatives.' These functions contribute significantly to mine safety. In contrast, metalliferous mines draw their representative rights and functions from the general WHS Act and consequently rely on workgroup HSRs for worker representation and union WHS entry permit holders, whose right of entry is often challenged (as we have noted).

Evidence gathered from focus group respondents working at metalliferous mines indicates the representative regime provided under the WHS Act is not operating effectively. Topics of concern included difficulty recruiting workers to take on the role due to fear of management reprisal and constant turnover contributing to incomplete coverage of the mine. Issues with reporting unsafe conditions and raising concerns, poor relationship with the inspectorate, isolation and lack of training compounded to create an unsatisfactory safety environment. In contrast, focus group participants working at coal mines reported the representative regime was functioning effectively to address their safety concerns. Several participants commented that the WHS (MPS) Act had formalised the role of the SSHRs and that the workgroup-based HSRs had integrated well, providing, in essence, a three-tier representative system. They reported the relationship with the inspectorate was constructive and, for the most part, reported that WHS committees were also operating effectively.

The other question considered in the NSW report was the hazardous nature of mining and if metalliferous mining was less hazardous than coal mining and therefore justified the 'levelling down' of representative arrangements.[140] Based on the review of several fatal incidents between 2010 and 2024, the serious incident rate and inspectorate interactions with the metalliferous sector resulting in significantly more notices issued to metalliferous mines during targeted assessments, this argument cannot be sustained. Evidence from the focus groups exposed the hazardous nature of the underground working environment, including ground falls, working around stopes, explosives and dust. Participants provided examples of management representatives downgrading or not reporting high-potential incidents to avoid notification to the regulator and potential regulatory intervention. In

[140] NSW Parliament Work Health and Safety (Mines) Bill 2013, 48

coal mining, SSHRs reported robust discussions with management about classifying and reporting high-potential incidents. Union mentoring by the ISHR and union-sponsored training days and conferences for SSHRs are vital components of the representative regime. A lack of, or poorly targeted, HSR training in metalliferous mines leaves HSRs ill-equipped to deal with major mining hazards.

The objects of the WHS Act acknowledge the importance of unions in contributing to achieving safe and healthy workplaces. Historically, union worker representatives have played an important role in safeguarding workers against exposure to hazardous working conditions. Although the WHS Act allows authorised officers to enter a mining workplace to investigate complaints, their health and safety role is limited, and they generally have limited health and safety qualifications. Some authorised officers interviewed had experienced managerial challenge to their right of entry to workplaces. In some instances, focus group participants reported managerial hostility to representative processes. Worker voice was linked to hostility to union presence in the workplace, and focus group respondents expressed concern, among union and non-union members alike, that they would be targeted for reprisal for raising safety issues. As discussed in Chapter 4, unions provide an important support structure for worker representatives. Research evidence on major disasters indicates that limiting union participation weakens the safety management system and, in particular, undermines the representative mechanisms preserved in health and safety legislation.

The *Wilkinson Fatality Review* did not find evidence that production pressures due to falling coal prices contributed to the incidents, although later research examining the relationship between coal prices and fatalities indicates there may be an association.[141] While production pressure was not raised as a major concern in NSW investigation reports, we consider it to be a contributing factor to the four fatal incidents in 2013-14.

[141] Jackson, H. (2021). *Recurrent causes of occupational incidents in the NSW, Australia coal and metalliferous mining industry.* (Doctor of Philosophy). University of Newcastle, NOVA.

Queensland

In Queensland, the mining legislation was reviewed following the Moura No.2 mine explosion and two earlier disasters. Among changes to better manage the risk of mining disasters, the introduction of the *Coal Mining Safety and Health Act 1999* and *Mining and Quarrying Act 1999* gave industry safety and health representatives the power to visit any mine within their region to conduct safety inspections, review documents, and order a cessation of work if they judged workers to be in imminent danger. Worker representatives were identified as a key element of achieving the objectives of the Act (s7). The appointment of 'district workers', now Industry Safety and Health Representatives under Part 8 of the Act, was a key element in fostering cooperation between operators, Site Senior Executives (SSEs) and workers to achieve the objects of the Act. Furthermore, involving workers in risk management is identified as an important contribution to achieving the objective of securing safe and healthy workplaces. Specifically, the Act states that its objects are achieved by establishing workplace safety and health advisory committees to participate in developing and facilitating strategies to improve safety and health throughout the mining industry, and by providing for safety and health representatives to represent the safety and health interests of coal mine workers. Significantly, in 2024 the *Resources Safety and Health Legislation Amendment Act* granted ISHRs expanded powers to enter any part of a mine without notice and to issue a directive to suspend mining operations for unacceptable risk. This applies to coal mines, mineral mines, and quarries.

In metalliferous mining and quarrying, unlike coal mining, the *Mining and Quarrying Act 1999* provides that the government funds district workers' representatives who are entitled to the remuneration and allowances decided by the Minister. A focus group participant from the minerals mining and quarrying sector explained this model worked well – inspectors focus on regulation and compliance, while District Worker Representatives (DWRs) 'explicitly amplify worker voice and prioritise proactive, risk-based visits initiated by workers', expressing that over time, inspectors had come to recognise the value of DWRs in identifying worker concerns.

Following the Brady Review of fatal and serious accidents in coal and mineral mines and quarries[142] and the Grosvenor mine explosion, two recent inquiries into Queensland mining, namely the Queensland Coal Mining Board of Inquiry (BOI) into the 2020 Grosvenor mine explosion and the Transport and Resources Parliamentary Committee, affirmed the important role of site and industry safety and health representatives (ISHRs) and site safety and health representatives (SSHRs). The inquires also recognised the challenges posed by labour hire arrangements.

Methods

The objects of the Queensland Mining Acts require the provision of safety and health representatives to represent the safety and health interests of coal mine workers. Quantitative and qualitative data was reviewed to examine the effectiveness of legislative provisions and regulatory compliance and enforcement activities in promoting representative participation for the purpose of achieving a healthy and safe working environment. To examine the effectiveness of worker representative participation in contributing to the development and function of health and safety standards in Queensland, data and information were gathered from the Queensland Mines and Quarries Safety

[142] Brady, S. (2019). *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019.* Prepared for Department of Natural Resources, Mines and Energy, 2019.

Performance and Health Report series 2010-11 to 2019-20.[143] The department advises data is collected in accordance with ss 198 and 297 of the *Coal Mines Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999.*

The 2019-20 report was the last report published on the Queensland Government publications portal. Unlike NSW and Western Australia, RSHQ does not publish information describing the circumstances and causal factors contributing to serious incidents in the Queensland mining and quarrying industry. This was an issue highlighted in the Queensland review of RSHQ.[144] Consequently, we gathered context on mine health and safety performance from commentary in the safety performance and health reports and from other inquiries and reviews. We gathered details of fatal incidents from inquiry and investigation reports.

We paid particular attention to dust and gas management, as these issues were a primary focus of the Queensland Mines Inspectorate safety performance and health reports and major concerns for worker representatives. There have been few high-profile incidents/events in the minerals and quarrying sector. We did not identify any area of major concern for district and site worker representatives in published reviews or reports, notwithstanding serious risks of ground fall and falls, including equipment (and operators) falling into stopes, and explosives.

Dust disease

Coal dust and crystalline silica are major hazards in coal and metalliferous mining. In the NSW research on worker representatives, workers and worker representatives interviewed expressed considerable concern regarding management of exposure to dust and the accuracy of health monitoring. The significance of these worker concerns is highlighted by the discovery of silicosis and pneumoconiosis (black lung) in active and retired Queensland and NSW miners. There was a widespread belief that black lung had been eliminated; however, from December 2015, a growing number of cases, firstly in Queensland and then NSW, indicate that the existing health-monitoring regime had failed. Black lung is an insidious health hazard to all coal miners, not just those working underground.

Black lung was the subject of Queensland and federal government (Senate) inquiries that confirmed that health monitoring (notably the misinterpretation of X-rays) had failed to identify it, and that urgent action was required.[145] The MEU played a leading role by advocating at state and national levels for government inquiries and action on the issue.[146] In this respect, it is relevant to note the union's demonstrated commitment to the health, safety and wellbeing of coal miners, and the expertise and advocacy skills it drew on through its ISHRs, exemplified by Queensland ISHR Steve Smyth's involvement in the media and public debate.[147] The Union identified deficiencies in the abilities of domestic radiologists and health practitioners to accurately identify the presence of black lung on X-

[143] Department of Natural Resources and Mines. *Queensland mines and quarries safety performance and health report.* The State of Queensland (Department of Natural Resources and Mines) **https**://www.**publications**.**qld**.**gov**.**au**/**dataset**/52b27e34-3603-456a-bfb0....

[144] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel].41. Retrieved from https://www.rshq.qld.gov.au/

[145] Coal Workers' Pneumoconiosis Select Committee (2017) *Black lung White Lies: Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland, Report No. 2*, 55th Parliament, Queensland Government, Brisbane.

[146] See for example CFMEU (2016) *The Return of Black Lung Disease in Queensland: CFMEU submission to the Senate Select Committee on Health*. February 2016 and Newcastle Morning Herald 3 February 2017.

[147] See for or example *A fifth case of black lung disease in the coal industry leads union to suggest this is the "tip of the iceberg"* ABC News Queensland Country Hour, 8 January 2016.

rays and scans and sought out expertise in respiratory disease, notably Malcolm Sim, an eminent Australian epidemiologist and Robert Cohen and Lionel Gao (and others) from the USA, who had proficiency in diagnosing black lung and related respiratory diseases. As a result of union advocacy and government intervention, health monitoring regimes improved in NSW and Queensland, with the latter establishing a national and international benchmark for detecting and addressing exposures. As a result, an enhanced health monitoring regime was introduced, requiring rigorous accreditation procedures. Other developments included technologies to better assess respiratory health and a mobile X-ray unit which visited towns where miners and retired miners lived, providing them with a detailed assessment of respiratory function or the presence of disease. This was especially important given the dispersal of mines and mining communities across the state.

Queensland also adopted an overarching approach to respirable hazards that includes mandatory involvement, prevention, compliance, robust health surveillance, training of doctors and radiologists, standards for X-rays and spirometry and workers' compensation. The Queensland branch of the MEU played a prominent role in these developments and continues to take initiatives in the area by maintaining its collaboration with the leading respirable disease experts and holding a succession of global conferences on dust diseases.

Queensland is the only state that requires reporting of a spectrum of dust diseases, thus providing more comprehensive evidence on exposure to guide prevention programs in a more proactive and comprehensive fashion than the fragmentary information derived from workers' compensation claims. This contrasts with the more confined approach nationally and in other states, which appears to rely too heavily on workers' compensation data to guide intervention programmes. In short, Queensland developments provide a model for an area where the extent of the hazard and the toll in terms of fatalities and severe disablement almost exceeds that resulting from traumatic injuries by an order of magnitude. The approach should also be extended in other high-risk work settings where similar problems occur, notably tunnelling.

Regulatory context of mine safety performance

In response to five fatalities in 2018-19, the Queensland Minister for Natural Resources, Mines and Energy, announced a review of mine safety. The review report focused on worker training and supervision, higher-order controls, and improved reporting and data analysis systems. Recommendations included shifting the focus from LTI's to High Potential Incidents and creating a 'Serious Accident Frequency Rate'. This recommendation aligned with the report's overall recommendation that the industry should adopt the tenets of 'High Reliability' theory. While acknowledging the role of Site and Industry Safety and Health Representatives (SSHRs/ISHRs), it made no other observations or recommendations concerning worker representation.

In 2020, an underground methane explosion occurred at the Grosvenor mine, which could have resulted in multiple fatalities. The subsequent Queensland Coal Board of Inquiry (BOI) identified challenges mine-site worker representatives faced, including production priority over safety. A recurring theme raised by worker representatives who gave evidence to the inquiry was that coal mines sometimes depart from established safety procedures to maximise production. In 2019, the MEU surveyed 1,010 Queensland coal mine workers, comprising union and non-union members. Eighty percent of workers surveyed indicated that their biggest safety concern was companies valuing

production over safety.[148] Other issues identified by worker representatives included under-reporting of incidents to minimise incident statistics, and increased use of contractors/labour hire. Evidence from worker representatives (and supported by expert witnesses) showed that contractors and labour hire workers were reluctant to report incidents for fear of reprisal for raising problems.[149]

The *Brady Review*[150] and the BOI provided the impetus for a review of the mining and resources industry safety and health legislation. The *Resources Safety and Health Legislation Amendment Act 2024* strengthened the worker representative framework, giving SSHRs clearer powers to suspend mining operations if they believed a risk was at an unacceptable level; improved protections against reprisals for raising safety concerns or taking action (such as stopping production); and clarified the powers of ISHRs to enter sites to investigate serious accidents or high-potential incidents.

In 2020, the Queensland Government established Resources Safety and Health as an independent health and safety regulator under the *Resources Safety and Health Queensland Act 2020* (RSHQ Act). The Queensland Government recognised the potential conflict between dual responsibilities for overseeing resource development and regulating health and safety. The Resources Safety and Health framework established under the RSHQ Act was criticised and described as being intrinsically flawed by Professor Susan Johnston, who was engaged to lead an independent review of the regulatory framework. [151]

The core purpose of the Johnston Review was to 'examine the existing regulatory model for resources safety and health in Queensland to ensure it is operating in a manner best suited to drive effective safety and health outcomes for the resources industry in Queensland'.[152] One term of reference, relevant to our purpose, was the tripartite consultation arrangements through the safety and health advisory committee (CMSHAC and MHSAC). The advisory committees enabled mining and quarrying industry representatives, unions, and the regulator to participate in developing strategies to improve safety and health. One criticism of the changes brought about by the RSHQ Act 2020 was that advisory committee members (unions and industry) no longer had the function of reviewing and providing advice on changes to legislation, regulations, recognised standards, and guidelines.[153] The other two issues of concern were a perceived lack of information on risks, trends, and strategic priorities and inadequate sharing of information from investigations.[154]

The findings and recommendations of the *Brady Review*, the BOI, the Coal Workers' Pneumoconiosis Select Committee and four fatalities in 2024 served as a trigger for the Johnston Review, which culminated in the introduction of the Resources Safety and Health Queensland and Other Legislation

[148] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety. Report No. 29*, 57th Parliament, Queensland, Brisbane, 25-26.
[149] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety. (Report No. 29*, 57th Parliament). Queensland Parliament, Brisbane, 30-31, 36-42, 45-52.
[150] Brady, S. (2019). *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019.* Prepared for Department of Natural Resources, Mines and Energy, 2019.
[151] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel].5. Retrieved from https://www.rshq.qld.gov.au/,.
[152] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 5 Retrieved from https://www.rshq.qld.gov.au/
[153] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 24 Retrieved from https://www.rshq.qld.gov.au/
[154] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 42 Retrieved from https://www.rshq.qld.gov.au/

Amendment Bill 2026. The proposed reforms included establishing an independent Governing Board to oversee RSHQ and strengthening the roles of advisory committees.

Following the explosions at the Grosvenor and Moranbah North mines and ongoing concerns about gas management and the fatalities in 2024, the regulated community lost confidence in the regulatory framework and stakeholder engagement, particularly its approach to information sharing, including incident data and investigation findings. The NSW and Western Australian regulators publish investigation information advising industry (including unions and workers) about the incident circumstances and causal factors. Queensland does not publish such a report, and this was a criticism of stakeholders interviewed as part of the Johnston Review.[155] ISHRs access this information to keep abreast of mining hazards and risks, and to learn from and prevent similar future incidents in mines where they are responsible for the health and safety of the workers they represent.

> NSW sends out a weekly report. It's really useful. We get no information on investigations at all from the inspectorates, and we want to see much more' (union representatives).[156]

Industry representatives expressed similar views, with one respondent saying that he downloaded the NSW information to share with his under-managers.

The next section presents incident data and commentary from the Queensland mines and quarries safety performance and health reports 2010-11 to 2019-20, along with quarterly excel data for the reports. These reports provided substantial comment about the industry context behind incidents and emerging issues.

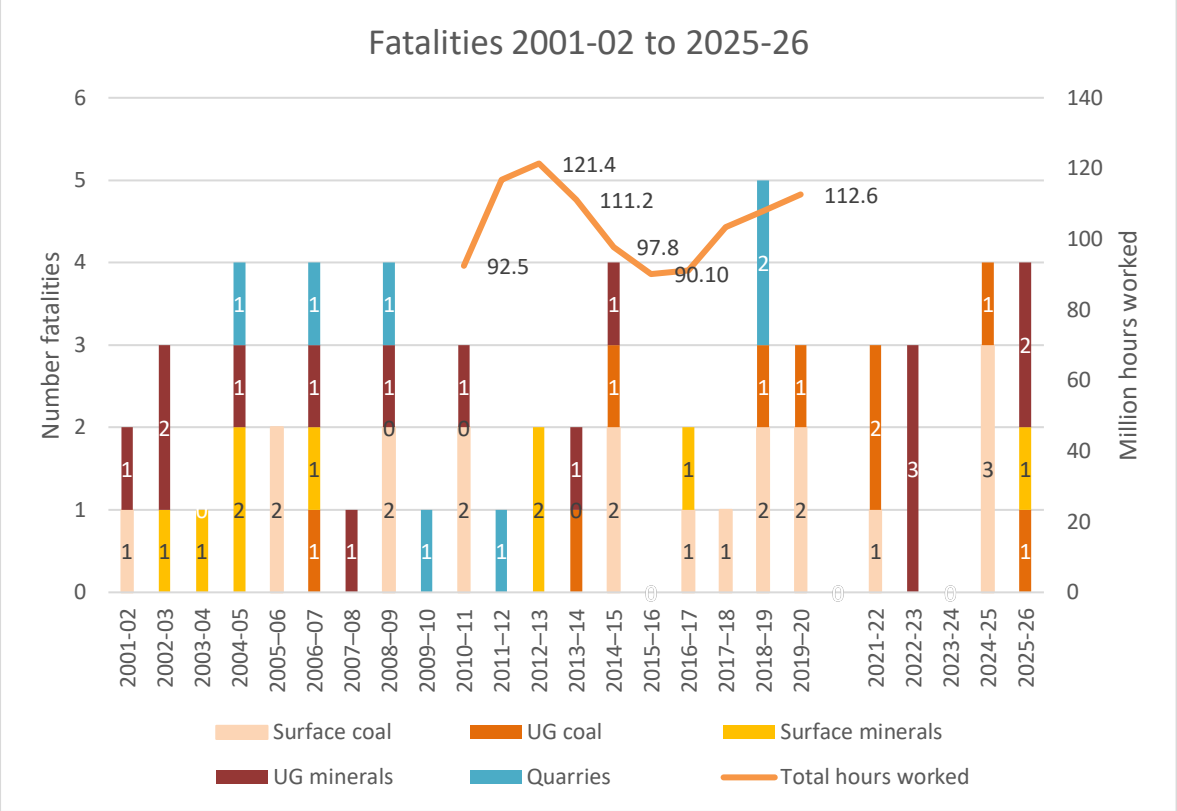
Results

Fatal injuries – underground and surface coal and metalliferous mines

Figure 5-19 shows the 59 mining fatalities between 2001-02 and 2025-26, of which 28 occurred in coal mines and 31 in minerals mines and quarries. In coal mining, there were more fatalities in surface operations (19) than in underground mines (9). In the minerals and quarry sectors, there were more fatalities in underground mineral mines (15) than in surface mineral mines (9) and quarries (or other mines) (7). However, combining surface minerals and quarries, fatalities in surface operations and underground mines are roughly equal. Figure 5-19 also shows the million hours worked from 2010-11 to 2019-20.[157] This data indicates that hours worked were at a low in 2010-11 and then again in 2015 to 2017. The dips in hours worked correspond to 'downsizing' during periods when coal prices were low.

[155] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 45 Retrieved from https://www.rshq.qld.gov.au/
[156] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 46 Retrieved from https://www.rshq.qld.gov.au/
[157] Queensland quarterly mines frequency rates from July 2012 to 30 September 2025 URL:https://www.data.qld.gov.au/dataset/7b84e618-102c-4b1f-a829-d12428781f4e/resource/60fc8acd-7e7
.

Figure 5-19: Queensland fatalities and million hours worked (2010-11 to 2019-20)



Between 2010-11 and 2019-20, the Queensland mines and quarries safety performance and health report series identified a range of contributing factors, including organisational/team and external factors. In 2011-12, the Chief Inspector's summary highlighted poor training and mentoring, people being promoted to supervisor level and above without understanding hazard or risk management processes (uncovered during audits), and high turnover of senior personnel. In 2012-13, the Chief Inspector highlighted outdated management systems and fewer senior people holding statutory competencies as issues. In 2014-15, the Chief Inspector noted a reduction in total hours worked in all sectors and in 2015-16, and he suggested that the downturn in demand and prices 'has resulted in an ongoing focus on reducing costs and improving productivity', creating a challenge for industry 'to ensure the safety and health of workers is not compromised by the actions taken to maintain economic viability of individual mines and quarries'.[158] During this time, the Australian Office of the Chief Economist's Resources and Energy Quarterlies (REQ) noted that 'rather than reducing output in response to declining prices, many high cost producers have increased production to reduce their unit cost'[159] and that 'mine closures are more than offset by increased output from other operations'.[160] In 2016-17, the Chief Inspector noted that fatalities continued to occur due to the failure of critical controls and that fatalities have occurred during periods of industry growth as well as contraction.[161]

[158] The Department of Natural Resources and Mines (2017), *Queensland Mines and Quarries Safety Performance and Health Report 2015-16, 2*

[159] Department of Industry, Science and Resources. (2013). *Resources and energy quarterly: December 2013*. Australian Government. 16.

[160] Department of Industry Science and Resources. (2014). *Resources and Energy Quarterly, December 2014*, 40.

[161] The Department of Natural Resources and Mines 2017, *Queensland Mines and Quarries Safety Performance and Health Report 2016-17,* 13.

Figure 5-20 plots coal prices against the number of coal mining fatalities. Despite the fatality-free period from 2011-12 to 2012-13, this chart supports the Chief Inspector's observation that fatalities occur during periods of both growth and contraction.

Figure 5-20: Queensland coal mining fatalities and coal prices – 2002-5 to 2020-21

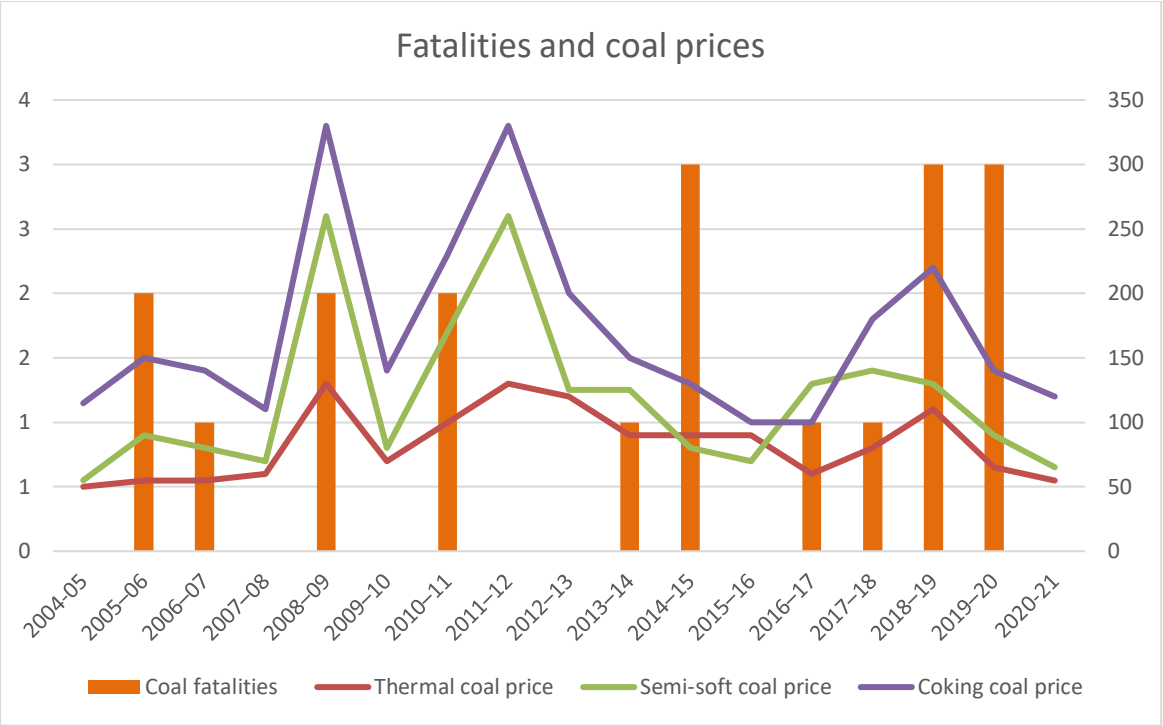


Figure 5-21 shows the annual FIFR for each sector. Frequency rates are calculated using the Queensland quarterly frequency rates data from 1 July 2012 to 30 September 2025. [162] Higher rates in quarrying reflect fewer hours worked in this sector. The five-year rolling average rate is charted at the last year of the five-year period.

[162] Queensland quarterly mines frequency rates from July 2012 to 30 September 2025
URL:https://www.data.qld.gov.au/dataset/7b84e618-102c-4b1f-a829-d12428781f4e/resource/60fc8acd-7e7

Figure 5-21: Queensland mining annual fatal injury frequency rates (FIFR) by sector.

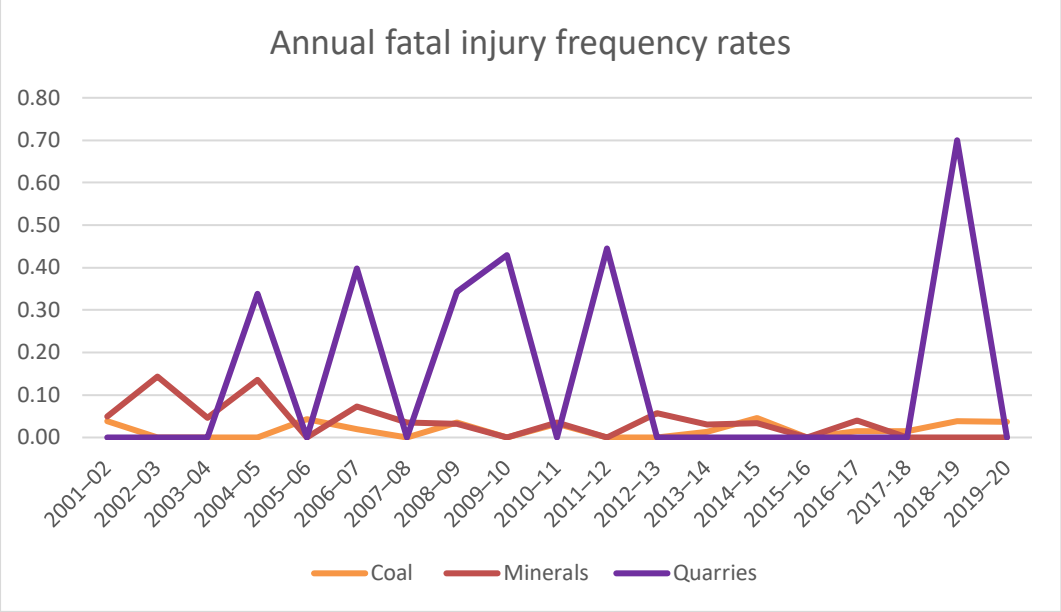
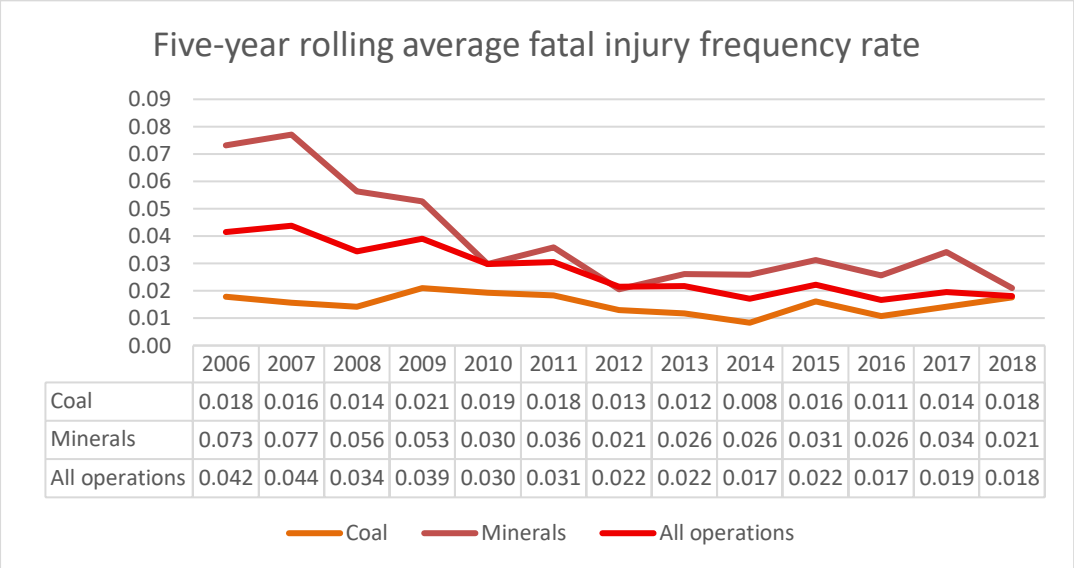


Figure 5-22 shows the five-year rolling average FIFR (2006-2018) trended down in the period 2007-12. However, from 2014, the FIFR appears to have plateaued or trended slightly up. The recent fatalities in 2024-25 and 2025-26 in the coal and minerals sectors, surface and underground operations, would see the upward trend continue.

Figure 5-22: Queensland five-year rolling average FIFRs between 2006 and 2018.



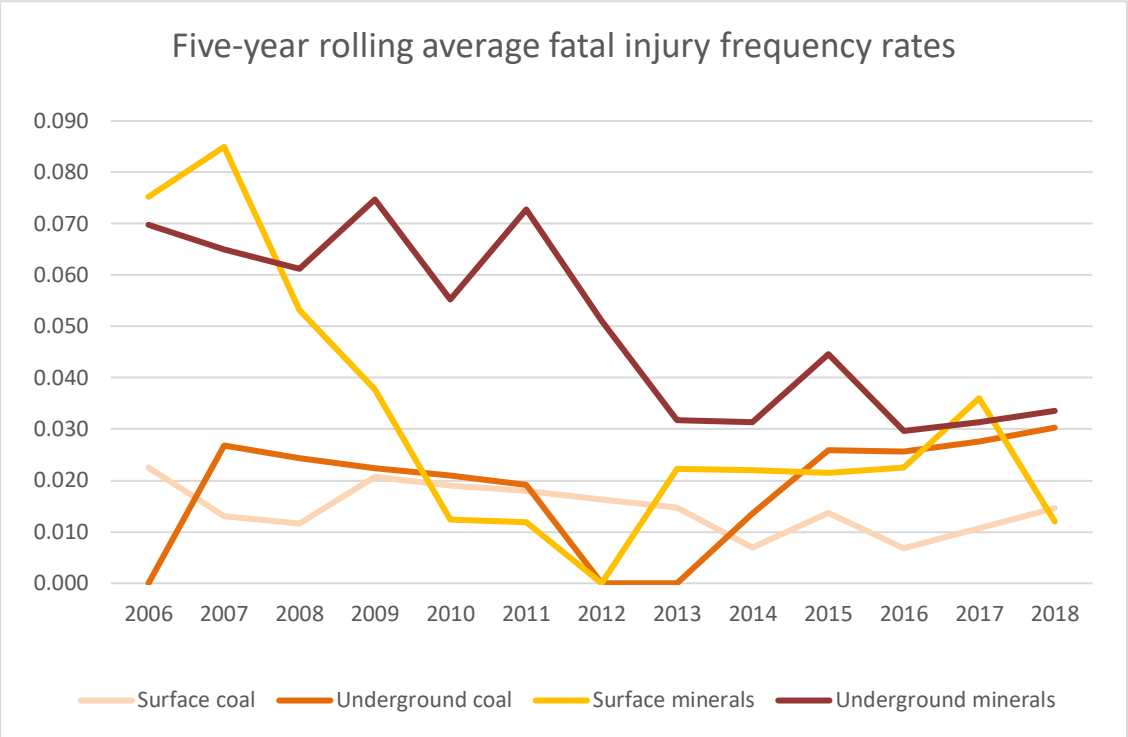
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coal	0.018	0.016	0.014	0.021	0.019	0.018	0.013	0.012	0.008	0.016	0.011	0.014	0.018
Minerals	0.073	0.077	0.056	0.053	0.030	0.036	0.021	0.026	0.026	0.031	0.026	0.034	0.021
All operations	0.042	0.044	0.034	0.039	0.030	0.031	0.022	0.022	0.017	0.022	0.017	0.019	0.018

Figure 5-23 depicts the comparative rates by sector and operation type. This reveals that the decline in FIFR was primarily driven by underground metalliferous mines. The underground coal mine FIFR has trended upward since 2013-14. The surface minerals and, to a lesser extent, surface coal FIFRs have also trended upward since 2013-14.[163]

[163] *The five-year rolling average FIFR is influenced by performance over the previous five years*.

Figure 5-23: Queensland FIFR 2001-2006 to 2013-2018 – sector and operation type

FiThe Queensland Mines and Quarries Safety Performance and Health Report 2016-17, reported



vehicle interactions were the most common fatal hazard in the coal sector (46% of fatalities), followed by tyre management (over 20%). Around 75% of fatally injured workers were contractors. In the minerals, quarry and opal sectors, the most common fatal hazard was falls, including gravity-related falls including equipment, falling rocks, vehicles, and people. Half of the workers fatally injured due to collisions, entanglement, uncontrolled release of pressure, and fire were also contractors.[164]

Figures 5-24 and 5-25 show the top fatal hazards in coal and minerals mining between 2001 and 2025.[165] In coal mining, 18 of 28 fatalities between 2001 and 2025 involved contractors. In minerals mining, of the 31 fatalities over this period, 16 involved contractors and 15 involved directly employed workers.[166]

As discussed in Chapter 4, the comparison of fatal hazards inspection reports prepared by mines inspectors, ISHRs and SSHRs (pre-1988 to 2013) showed that ISHR reports were more likely to focus on inrush/inundation, fire or explosion, and rockfall and entrapment, while inspectorate reports were more likely to focus on electrocution. Mines inspectors, SSHRs, and ISHRs addressed machinery and falls hazards equally. Referring to Figure 5-20, the top fatal hazards in coal mining between 2001 and 2025-26 were vehicle interactions and tyre management (most likely surface coal hazards), strata control, mechanical and falls.

[164] Department of Natural Resources and Mines (2020) *Queensland mines and quarries safety performance and health report 2016-2017, 14.*

[165] *2019-20 Data for the Queensland mines and quarries safety performance and health report.xls.*

[166] Queensland quarterly mines frequency rates from July 2012 to 30 September 2025. URL:https://www.data.qld.gov.au/dataset/7b84e618-102c-4b1f-a829-d12428781f4e/resource/60fc8acd-7e7

Figure 5-24: Queensland comparison of contractor and employee fatalities – coal top fatal hazards

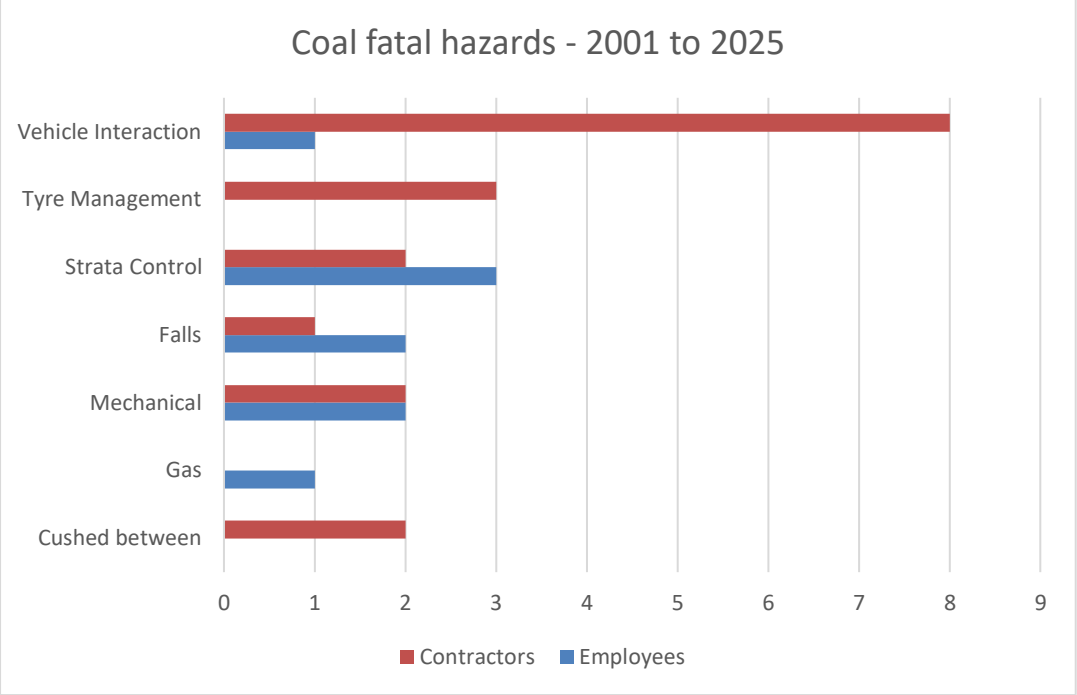
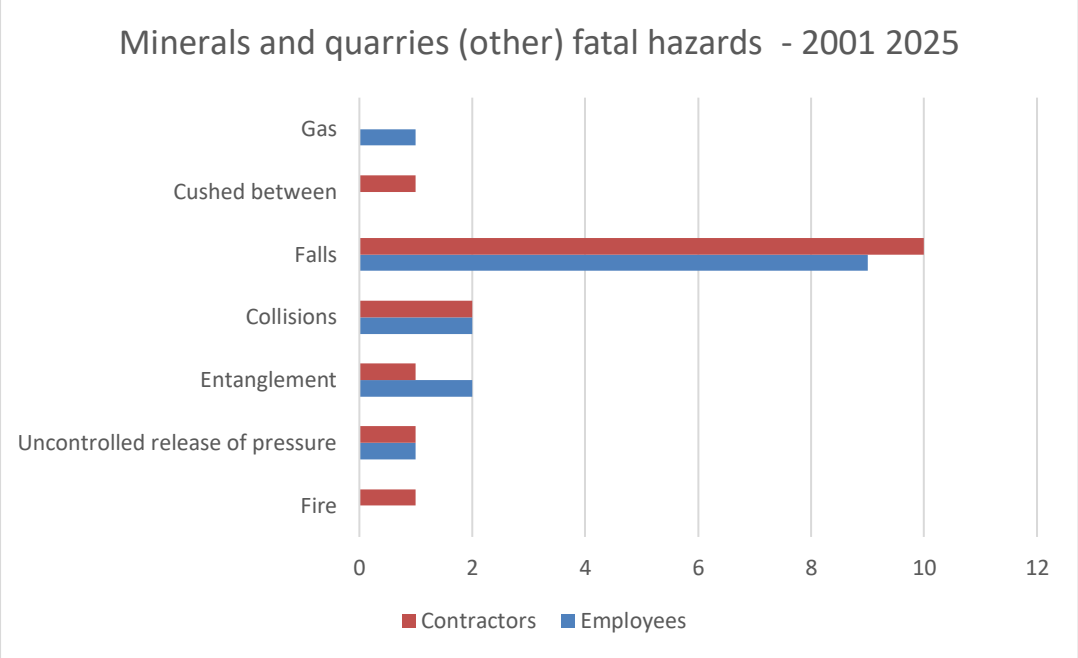


Figure 5-25: Queensland comparison of contractor and employee fatalities - minerals mining and quarrying top fatal hazards



Serious accidents and high potential incidents - underground and surface coal and metalliferous mines

Queensland mining legislation does not define a serious injury; instead, it defines a serious accident and a high-potential incident. A ***serious accident*** is an accident that causes the death of a person or a hospital admission as an inpatient for treatment. Unlike serious injuries in other Australian mining jurisdictions, serious accidents do not include a time lost from work criterion but are solely based on severity or potential for a serious injury or fatality. NSW mining legislation includes both criteria for reporting a serious injury, and states adopting WHS legislation also include both criteria. This limits the comparison of serious incidence or frequency across jurisdictions.

Also, in other Australian mining jurisdictions, the criteria for classifying a serious accident do not include absence from work for two weeks or more than 10 days (refer to Table 5-1); therefore, Queensland serious injury rates are not directly comparable to serious injury rates in other states.

Serious accident frequency rates

The five-year rolling average serious accident frequency rates were calculated using the Queensland quarterly frequency rates data from 1 July 2012 to 30 September 2025.[167] Figure 5-26 shows that the serious accident frequency rate (SAFR) is trending up. The 2019-20 safety performance and health report noted that the SAFR had risen steadily across all sectors between 2014-15 and 2018-19, but there was a notable reduction in 2019-20, except for surface minerals, which saw a decrease in the SAFR. The 2016-17 safety performance and health report noted that serious accident causation data had not been included because the coding reports provided by mines to the inspectorate were inadequate.[168] However, the quarterly frequency rate data up to 2025 shows that the reduction in the SAFR was not sustained. As Queensland has not published a mines and quarries safety performance and health report since 2019-20, there is no commentary on the context of this deterioration in safety performance, which appears to be driven by the quarrying and underground coal sectors.

The inspectorate stated that investigations of incidents in coal mines before 2020 revealed that poor-quality frontline supervision contributed to all categories of incidents. Inspectors found that, in general, supervisors do not understand their role, their influence or their responsibility, and that industry needs to improve the quality of supervision.[169] The inspectorate noted contractor management was a long-term concern associated with the industry's move toward greater use of labour hire and contractors. Contractors were involved in 64% of serious accidents in coal mines and 35% of serious incidents in mineral mines and quarries.[170]

In addition, the inspectorate formed an opinion that the span of control of supervisors was too large, limiting their ability to effectively manage tasks under their control.[171] Increasing supervisors' span of control (thereby reducing the number of supervisors) may also be a cost-reduction strategy. Also, as discussed in the section examining fatalities, concurrent safety performance and health reports identified the negative effect of market pressures and downsizing on safety outcomes. Anecdotal evidence from the MEU suggests that one consequence of downsizing is the loss of experienced people, including experienced supervisors. These are all indicators of economic pressures, Pathway 6 of the Ten Pathways model.

[167] Queensland quarterly mines frequency rates from July 2012 to 30 September 2025 URL:https://www.data.qld.gov.au/dataset/7b84e618-102c-4b1f-a829-d12428781f4e/resource/60fc8acd-7e7

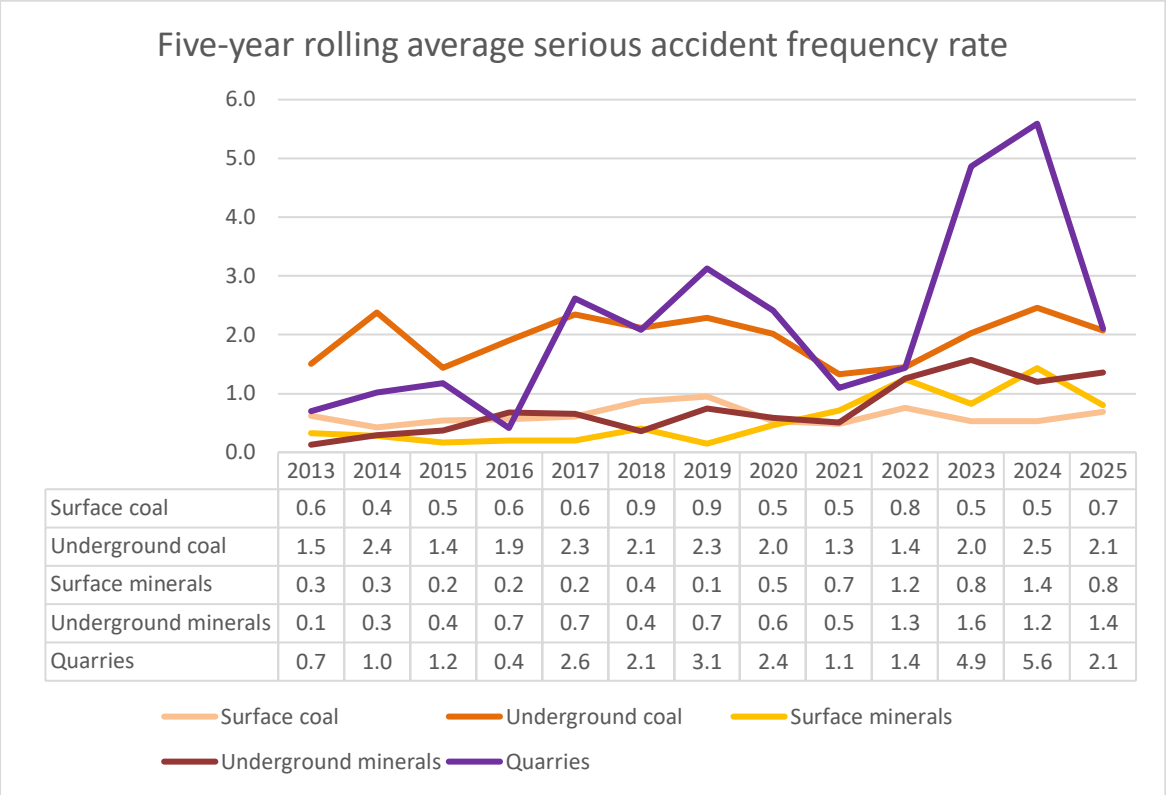
[168] The Department of Natural Resources and Mines (2017), *Queensland Mines and Quarries Safety Performance and Health Report 2016-17*, 19.

[169] The Department of Natural Resources and Mines (2018), *Queensland Mines and Quarries Safety Performance and Health Report 2017-18*, 52.

[170] The Department of Natural Resources and Mines (2019), *Queensland Mines and Quarries Safety Performance and Health Report 2018-19,* 8.

[171] The Department of Natural Resources and Mines (2019), *Queensland Mines and Quarries Safety Performance and Health Report 2018-19*, 20.

Figure 5-26: Queensland five-year rolling serious accident frequency rate 2013-2025 – sector and operation type



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Surface coal	0.6	0.4	0.5	0.6	0.6	0.9	0.9	0.5	0.5	0.8	0.5	0.5	0.7
Underground coal	1.5	2.4	1.4	1.9	2.3	2.1	2.3	2.0	1.3	1.4	2.0	2.5	2.1
Surface minerals	0.3	0.3	0.2	0.2	0.2	0.4	0.1	0.5	0.7	1.2	0.8	1.4	0.8
Underground minerals	0.1	0.3	0.4	0.7	0.7	0.4	0.7	0.6	0.5	1.3	1.6	1.2	1.4
Quarries	0.7	1.0	1.2	0.4	2.6	2.1	3.1	2.4	1.1	1.4	4.9	5.6	2.1

High potential incident frequency rates

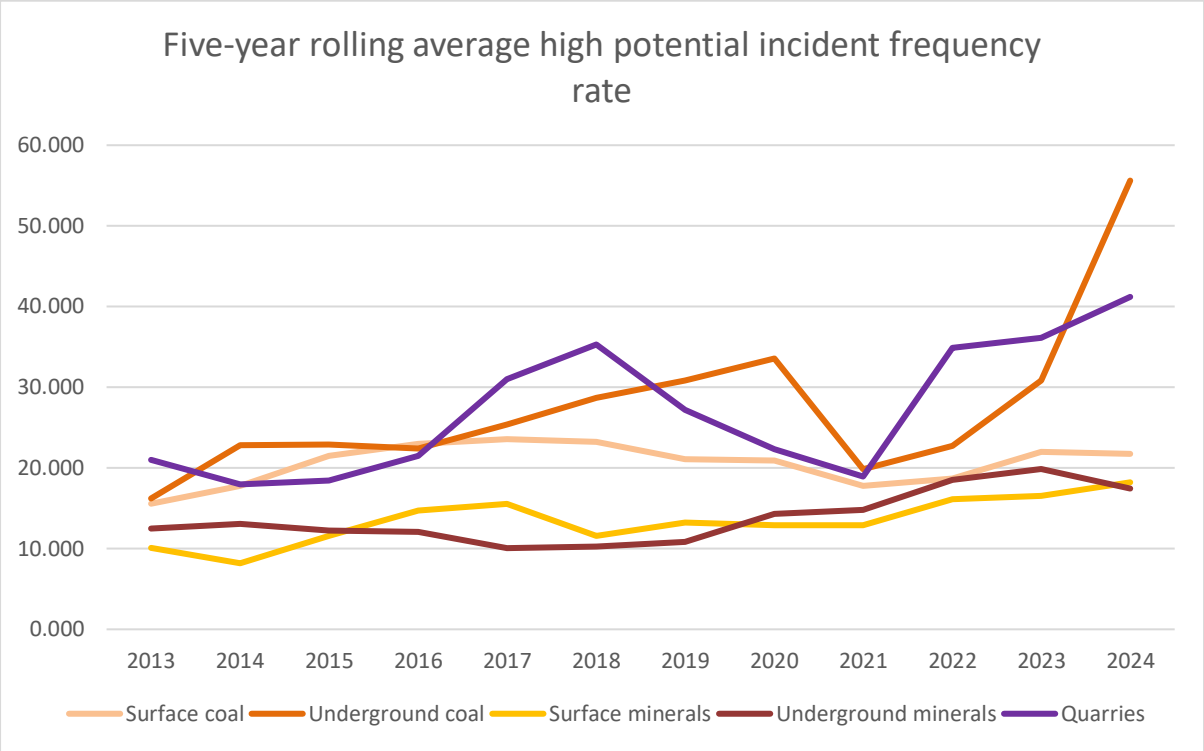
A high potential incident at a mine is defined as an event, or a series of events, that causes or has the potential to cause a significant adverse effect on a person's safety or health. The mines inspectorate advised that HPIs are not a predictor of accidents, but rather a measure of the effectiveness of the safety management system. The inspectorate concluded that the number of HPIs correlates with workforce size.[172] Figure 5-27 shows the high potential incident frequency rates across sectors between 2013 and 2025. In 2017-18, the mines inspectorate stated that they considered HPIs a 'lead' indicator of the effectiveness of safety and health management systems and that analysing their root causes provided an opportunity to improve performance.

The *Brady Review* recommended 'rather than viewing the high potential incident frequency rate as a measure of the level of safety in the industry, it should be viewed as a measure of the reporting culture', i.e., a leading performance indicator. The mines inspectorate stated that high potential incident reporting should be encouraged to better ensure early warning signals of impending incidents and fatalities are captured and disseminated to the wider industry. This provides the best opportunity to identify hazards before they cause harm and ensure they are effectively controlled.[173] This aligns with High Reliability Organisation theory, which holds that mature organisations are open and willing to hear about failures.

[172] The Department of Natural Resources and Mines (2017), *Queensland Mines and Quarries Safety Performance and Health Report 2016-17,* 17.

[173] Brady, S. (2019). *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019.* Queensland Legislative Assembly. http://nla.gov.au/nla.obj-2496221169 [1]

Figure 5-27: Queensland five-year rolling average HPI frequency rates 2013-2024 – sectors and operation type



In the coal mining sector in 2017-18, the inspectorate identified a significant increase in HPIs related to gas management. The upward trend of the underground coal mining HPI frequency rate may be due to the 2.5% gas exceedance reporting requirement established by the *Coal Mining Safety and Health Regulation 2017*. There were 63 exceedances reported in 2016-17, and this more than doubled in 2017-18, with 155 exceedances reported. The inspectorate attributed the higher methane concentrations to deeper coal mines and increased longwall production rates. The inspectorate also found that methane concentrations above 2.5% in the general body indicated higher concentrations in the longwall face, where frictional ignitions were likely to occur. Other HPI focus areas included fires, explosives (misfire), electric shocks and vehicle collisions. In minerals mines and quarries, falls and vehicle incidents were continuing concerns.[174]

As part of the focus groups for this project, participants were asked to complete a Ten Pathways analysis of a high-potential incident they were familiar with. Table 5-4 describes the incidents selected by focus group participants to conduct a Ten Pathways analysis. The most common hazard type was mechanical hazards (eight), including sudden release of pressure, falling equipment or object, vehicle operation and entanglement. Ground-related incidents (five) were the second most common hazard type and included underground strata, open cut highwall, and water bodies. This is consistent with the top fatal hazards identified in the safety performance and health reports. The number of pattern failures identified ranged from one to eight, with an average of 4.6. Engineering failure was the most frequent, followed by management system failure and then economic or production pressures. A previous incident, communication issues, and risk assessment failures were also frequently identified.

[174] The Department of Natural Resources and Mines (2018), *Queensland Mines and Quarries Safety Performance and Health Report 2017-18, 30.*

Table 5-4: Queensland focus group participants' high potential incident: Ten Pathways assessment summary (N=22)

Incident details	P1 Engineering	P2 Prior warnings	P3 Risk assessment	P4 OHSM/SWP & audit	P5 Contractor mgt	P6 Production pressure	P7 Reg failure	P8 Worker concern	P9 Communications	P10 Emergency mgt	No. Pathways
Explosives - 2025 explosive incident in underground, two killed (could refer to Cobar incident in NSW)	1		1	1	1	1		1	1		7
Fall (of equipment) - 2025 a dozer reducing bund heights for drill prep went over the edge and slid down 24m and rolled onto roof. Operator had major lacerations and broken wrist.	1								1		2
Fall (of equipment) - 2025, heavy haul truck nearly went over the tailings dam embankment at Mongolia Bur underground.		1		1			1	1			4
Fire or explosion - 2025 gas ignition in longwall goaf.	1	1	1	1		1	1				6
Fire or explosion - 2018 spontaneous combustion necessitating emergency sealing of mine.	1	1		1	1	1	1	1	1		8
Ground/strata - Roof fell in belt heading. No injuries.	1	1		1	1	1		1	1		7
Ground/strata - Dozer into body of water (sump). PDM several years ago. Operator nearly drowned, inhaled particulates and has not worked since.	1	1	1	1		1	1		1	1	8
Ground/strata– 2026 high wall failure. (Dragline spoil) on a base layer of mud. Regulator (RSHQ) and ISHR notified.	1		1			1		1	1	1	6
Ground/strata - 2025 truck breaches bund after dump failed, no injuries.		1	1	1	1	1	1		1		7
Ground/strata -CMW operating loader with bucket riding up on the rib bolt when the	1										1

Incident details	P1 Engineering	P2 Prior warnings	P3 Risk assessment	P4 OHSM/SWP & audit	P5 Contractor mgt	P6 Production pressure	P7 Reg failure	P8 Worker concern	P9 Communications	P10 Emergency mgt	No. Pathways
roof fell and hit his head on the loader canopy, causing a broken neck.											
Health/dust - unfavourable weather caused coal dust (ROM) exposure to coal mine workers.	1	1	1	1		1	1	1	1		8
Health/fatigue - 2026 fatigue-related microsleep incident, no injury recorded.		1	1		1	1	1				5
Health/confined space - shutdown maintenance of Dragline, spray painters and offsider overcome by fumes. Number of failures in planning & scope of work was not carried out. Two people had to be removed in an unconscious state. Seven people went into zone without controls. Potential to expose 9 people.	1	1	1	1	1	1			1		7
Mechanical/crush between - 2024 CMW crushed between recovering LV and dry-bogged fuel tankers' bull bar.	1	1	1	1	1	1		1	1		8
Mechanical/struck by or crushed - an employee was fatally injured by a mobile loader in an underground mine.	1		1			1		1	1		5
Mechanical/falling object - 2026, CMW tyre bay crushed in tyre handler mast.		1	1	1		1			1	1	6
Mechanical/release of pressure - 4 stage breaker feeder stabilizer ram exploded, no injuries.	1	1				1		1	1		5
Mechanical/release of pressure - 2025 major incident while installing roof support with 1.8 m roof bolts. Rib bolter has caught by bolt, creating stored pressure.	1	1		1		1		1			5

Incident details	P1 Engineering	P2 Prior warnings	P3 Risk assessment	P4 OHSM/SWP & audit	P5 Contractor mgt	P6 Production pressure	P7 Reg failure	P8 Worker concern	P9 Communications	P10 Emergency mgt	No. Pathways
Mechanical/release of pressure- CHPP, tailings dam pump line bled valve opened while under high pressure.	1			1							2
Mechanical/entanglement - Quarry, worker entangled in the tail drum of conveyor.	1	1	1	1		1	1	1	1		8
Mechanical - Lighting lamp detached from LV down ramp, no locking pin.	1			1	1		1				4
Unknown - 2024, Grosvenor mine - No injuries (no detail of incident provided).	1	1	1	1	1	1		1	1		8
Percentage of HPIs assessed (n=22)	82%	68%	64%	77%	36%	72%	45%	50%	68%	14%	4.6

Worker involvement in risk assessment and audits

The safety performance and health report also monitors lead indicators, defined as pre-emptive actions or initiatives that help prevent workplace injury and disease. Lead indicators identified by the inspectorate include the key hazard register, formal risk assessments and number of workers/contractors involved, audits and number of workers involved in internal audits, outstanding actions from audits, sites with formal reporting systems capturing HPIs, and improvement actions resulting from mine HPI investigations. Figure 5-28 shows that a high proportion of mines involved more than 15 employees or contractors in formal risk assessments. The safety and health advisory committee developed a risk assessment education resource to help mining and quarrying operations improve the quality of operational risk assessments, with a focus on critical control management.

Figure 5-28: Percentage of Queensland mines involving workers in risk assessments

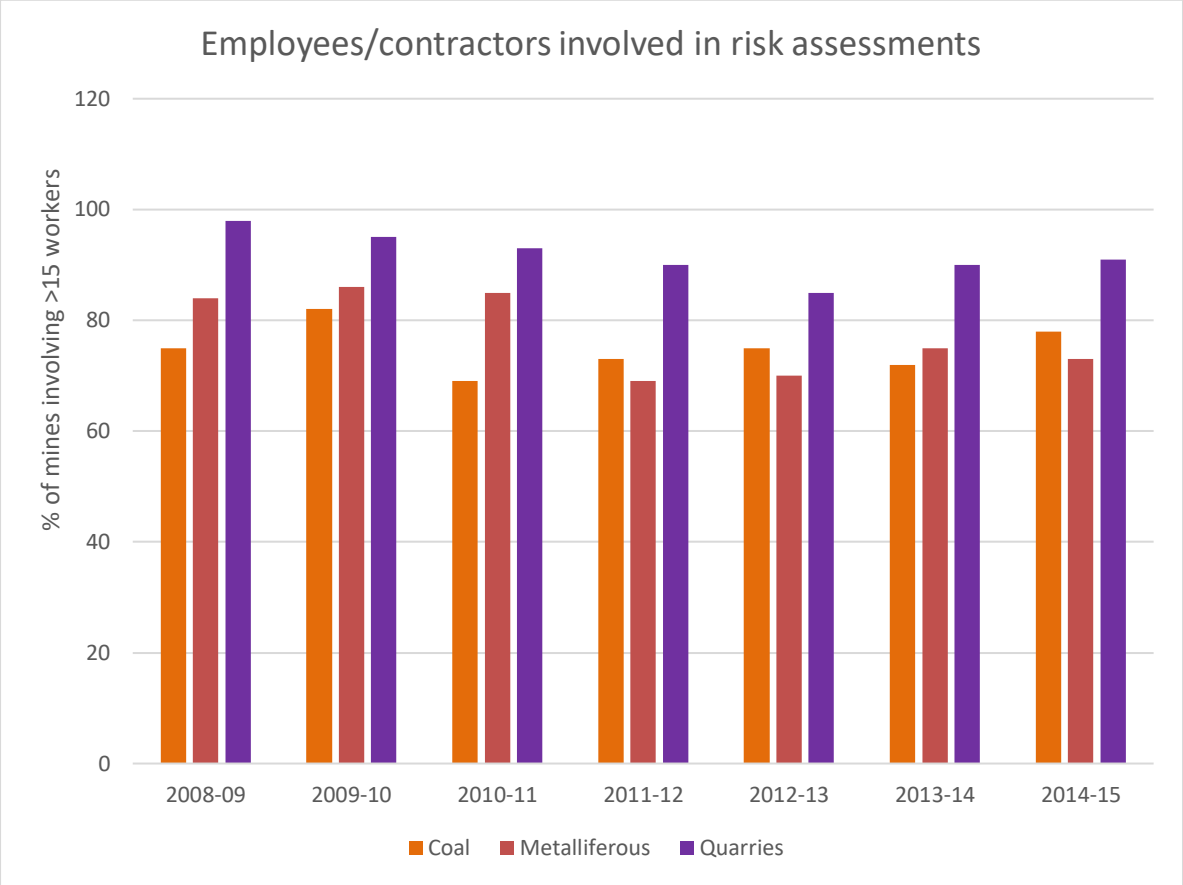
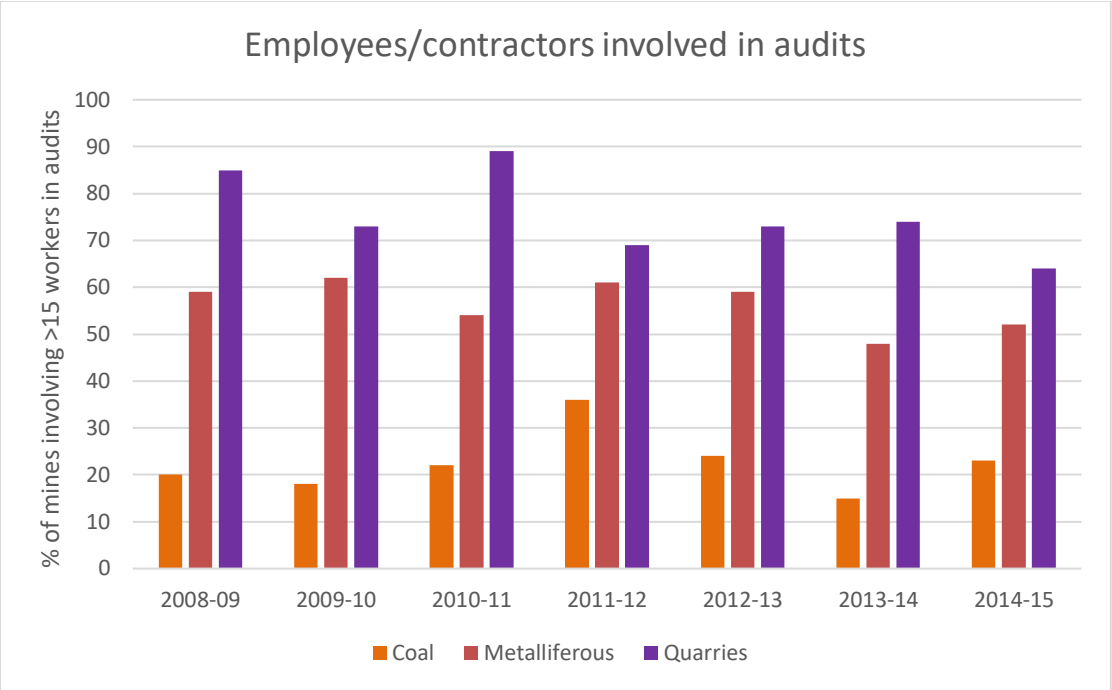


Figure 5-29 shows that the proportion of mines and quarries involving more than 15 workers in internal audits varies between sectors, with a high proportion of quarries having involved workers in an audit in the past 12 months, while approximately 20% of coal mines involved more than 15 workers in an audit. The safety performance and health report does not reveal how the information was gathered.

Figure 5-29: Percentage of Queensland mines involving workers in internal audits



Worker safety and health complaints and inspector directives issued (incidents, inspections and complaints)

The RSHQ also monitors compliance and enforcement actions regarding safety and health at mines, and directives issued by an authorised officer requiring action if risk is believed to be at an unacceptable level. Under Part 9, Division 5 of the CMSHA and MQHSA 1999, inspectors, inspection officers and industry safety and health representatives can issue directives. The Queensland safety performance and health report series monitors the number of directives issued and the section under which they were issued. An ISHR is an authorised officer under the Act, but the safety performance and health reports do not report directives issued by ISHRs. It would be useful to know the nature of the risks identified by workers and managed through ISHR directives. Earlier safety performance and health reports identified the number of inspector directives issued in response to worker complaints, but this was only reported for a short period, and the nature of the risks was not identified.

Section 275 of the CMSHA and MQSHA 1999 allows mine workers or their representatives to make confidential complaints about safety and health matters. The safety performance and health report series monitors complaints made by workers (and members of the public). Figure 5-30 shows the number of complaints received from 2010-11 to 2019-20.

For example, in 2013-14 the inspectorate received 121 complaints about safety and health matters, of which 85 were from mine workers or their representatives. Complaints were taken regarding 'dust exposure, inadequate equipment maintenance, quality of training, fatigue and working hours, drug use, lack of supervision, not reporting or investigating incidents, and workplace bullying and heat exposure'. Sixty five percent of complaints concerned mine worker safety and 21% mine worker health.[175] These proportions appear to have remained steady in the coal sector over subsequent reporting periods. In the minerals sector, more than 50% of the complaints received were about safety, with mine worker health complaints having increased from 8% to 22%, possibly due to higher

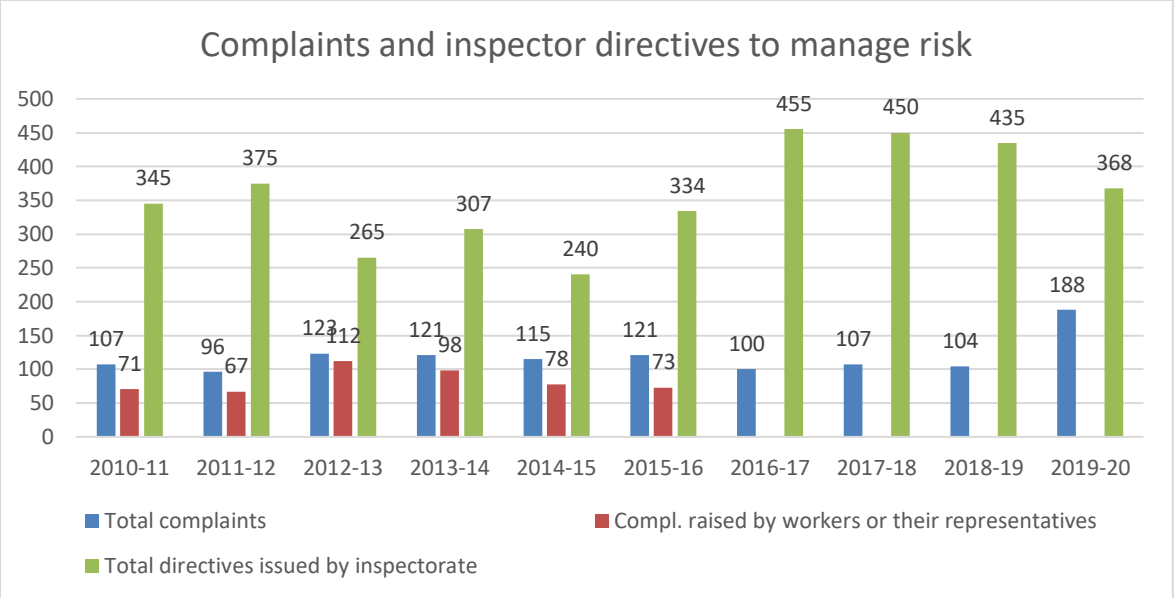
[175] The Department of Natural Resources and Mines, 2014, *Queensland Mines and Quarries Safety Performance and Health Report 2013-14, 25.*

awareness of mine workers' dust disease. In quarries, almost 80% of complaints were made by the public.

In 2019-20 (the last published report), 188 complaints were made across all mining sectors, up from 104 in the previous reporting year. In 2019-20, complaints related to coal mines almost doubled compared to 2018-19.[176] As in previous reporting periods, many complaints (53%) related to worker safety, with 22 % relating to worker health. In the minerals sector, 38 complaints were received, of which 77% related to safety and 11% to health. The report stated that the potential for reprisal was a concern, with records in 2018-19 showing that 63 workers complained, citing the relevant legislation on protection from reprisal. In 2019-20, this increased to 119 workers.[177]

Issuing a directive is one outcome of a complaint investigation. In 2010-11, 18 directives were issued as a result of a complaint, and in 2011-12, nine were issued as a result of a complaint. From 2016-17 onwards, the proportion of complaints being made by workers was not reported. A breakdown of complaints received by sector showed that, in coal mining, 90% were made by workers, and in the minerals sector, 72% were made by workers.[178] In 2019-20, the proportion of complaints received from workers had reduced slightly, with 82% of complaints in the coal sector and 63% in the minerals sector being made by workers.[179] However, Figure 5-30 shows the overall number of complaints increased.

Figure 5-30: Queensland safety and health complaints and directives issued for risk, safety management system review or unacceptable risk



[176] This was attributed to the Safety Reset forums in response to the Brady report recommendations relating to reporting.
[177] Resources Safety and Health Queensland 2020, *Mines and Quarries Safety Performance and Health Report 2019-20, 58.*
[178] The Department of Natural Resources and Mines 2017, *Queensland Mines and Quarries Safety Performance and Health Report 2016-17, 67-68.*
[179] Resources Safety and Health Queensland 2020, *Mines and Quarries Safety Performance and Health Report 2019-20, 59.*

Directives are an effective mechanism to ensure issues are addressed effectively and as a priority.[180] The common issues dealt with in directives were identified as ineffective management and control of methane in longwall operations, respirable dust and silica exposure, and strata.[181]

The inspectorate holds all available respirable dust data from 2000 to 2018. A single exceedance clearly signals that action is required to review the circumstances. Directives issued for dust were at a high in 2015-16, and average respirable dust exposure levels in 2016-17 showed a ten-fold reduction compared to the first half of 2016. Average longwall and development exposure levels also reduced to less than 1mg/m^3 and just over 0.5mg/m^3. Actions contributing to the improvement included the requirement for coal mines to provide personal dust monitoring data to the Chief Inspector.

In 2011-12, exposure to crystalline silica was assessed in a selection of small quarries and recommendations were made to improve dust management. In 2016-17, following gazettal of the Guideline for management of crystalline silica, monitoring of respirable crystalline silica in mineral mines and quarries became mandatory. An inspection program was conducted at 199 mineral mines. More than 64 compliance actions were issued to operators, requiring, for example, that they assess silica risk to workers, engage an occupational hygienist, conduct monitoring, investigate the cause of exceedances, and conduct health surveillance.

Gas management was identified as an issue in nine of 10 underground coal mines, resulting in an audit of gas drainage and ventilation. Other Issues identified included equipment not being monitored in accordance with plans and standards, gas monitoring results not displayed, and deficient risk assessments and TARPs. A review of gas data indicated that some mines were not reporting all instances of methane concentrations greater than 2.5% general body concentration. The inspectorate identified that a tailgate roadway reading of 2.5%, then the level in the airway adjacent to the longwall face was higher and potentially at the highest-risk location for an ignition source. In response to directives, mines implemented additional gas monitoring in the longwall tailgate, with the capability of remotely stopping longwall machinery operation in the vicinity.[182]

In 2017-18 directives included, for example:

- Suspending longwall cutting operations after ventilation changes resulted in methane readings above 5% measured in a cut-through.
- Review of a Trigger Action Response Plan (TARP) which allowed for the longwall shearer to be operated when methane exceeded 2.5%.

Mine fatality and serious incident investigations Queensland 2004-20 – Ten Pathways analysis of failures

Ten Pathways offers a guide to the level of mine safety performance, especially as most, if not all, fall under existing regulatory requirements. In addition to examining statistical trends concerning fatal and serious injuries, consistent with the NSW Report, fatal/serious incident investigations were examined to see what could be learned about the 10 pattern failures associated with death and

[180] The Department of Natural Resources and Mines 2017, *Queensland Mines and Quarries Safety Performance and Health Report 2016-17,* 63-64.
[181] The Department of Natural Resources and Mines 2015, *Queensland Mines and Quarries Safety Performance and Health Report 2013-14, 33.*
[182] Department of Natural Resources and Mines (2019) *Queensland mines and quarries safety performance and health report.* The State of Queensland (Department of Natural Resources and Mines) *2018-2019*, 13.

serious injury. While worker representation may affect all pathways, Pathways 2, 8 and 9 are arguably especially pertinent.

Eighteen fatal incidents in Queensland coal and metalliferous mines were analysed, by reference to an investigation report or coronial report, using Ten Pathways. This does not represent all fatal mine incidents in the period. For example, in February 2023 two mine workers died at the Dugald River mine, but the final investigation report for this was unavailable at the time of writing. This may not be a complete list, but it represents those reports (and inquest findings) we were able to locate and is arguably representative. Two further non-fatal incidents were examined, namely a 2016 truck collision/rollover incident resulting in a worker (Nigel James) suffering serious burns, and a methane explosion at the Grosvenor mine in May 2020 in which five mine workers also suffered serious burns. The Grosvenor mine incident, the subject of a Board of Inquiry investigation, is included because it could have, under slightly different circumstances, resulted in multiple fatalities. Indeed, had the methane explosion transitioned into a coal dust fire/explosion, not only is it likely the five workers would have died, but the considerably larger number of miners underground in the mine at the time would have been placed in peril. The James incident was included because it reflected a significant hazard and indicated the relevance of Ten Pathways to understanding and preventing non-fatal events.

In Table 5-5, of the 20 incidents examined, five involved being hit or crushed by machinery or parts thereof, four involved tyres exploding (being changed), three resulted from rockfalls, three from falls from height, two involved truck/vehicle collisions, two involved asphyxiation, and one (Grosvenor) was a methane explosion. The vast majority of mine workers involved were experienced and competent, and in those instances involving less experienced mine workers, significant system failures were identified. In summary, these incidents resulted from significant failures in mine safety systems. Overall, 107 failures were identified regarding the 20 incidents, an average of 5.35 per incident. One incident had a single failure, another had three, and two had four. Of the remaining incidents, 16 (80%) had five or more failures and three involved seven or more (Houston, Davis and Grosvenor). The most frequent failures were Pathway 4 (‘failures in safety systems’) found in 20 (or 100%) of the incidents, Pathway 1 (‘failures in design, engineering and maintenance’) present in 90% of incidents, Pathways 5 (‘failures in auditing’) in 75% of incidents, Pathway 9 (‘failures in communication and trust’) in 65% incidents and Pathway 3 (‘failures in risk assessment’) in 65% of incidents. Other common failures were Pathway 7 (‘failures in regulation’), present in 45% of incidents, and Pathway 10 (‘failures in rescue/emergency procedures’), also present in 45% of incidents. Pathways identified less frequently were Pathway 2 (‘ignored warning signals’), identified in 25% of incidents; Pathway 6 (‘economic/production pressures compromising safety’), identified in 15% of incidents; and Pathway 8 (‘concerns raised prior to the incident’), identified in only two incidents. Overall, these outcomes are comparable to those in our NSW report, although we analysed far more incidents. In addition, the NSW analysis of fatal incidents identified economic/production pressures more frequently due to specific criteria and review of other primary sources such as company annual reports and government economic reports (REQs).

In 2019, the Queensland regulator produced a report on lessons learned from three incidents that occurred between 2017 and 2019 in which mine workers were exposed to hazardous respirable atmospheres. In each incident, Ten Pathway failures were identified regarding the management of ventilation and safety management systems. For example, an investigation into an incident that occurred on 6 July 2017 at an underground metalliferous mine revealed that photo ionisation detectors (PID), which measure the significantly increased risk of serious harm at a concentration of

specified gases, had been erroneously deactivated on three of five portable gas detector units. This was a critical control; however, the gas detectors were tamper-proof, and the PID could be turned off without raising an alarm or notification (Pathways 1 and 4). No verification of PID operation had been performed outside of the six-monthly planned maintenance schedule (Pathway 5). Pre-start checks for the detector units were found to be inadequate (Pathway 3). Investigation of an incident involving a pump fitter working at an underground metalliferous mine on 27 September 2018, found that no risk assessment was undertaken regarding re-entry into old workings; there was a failure to identify the risk of a potentially contaminated atmosphere (Pathway 3); the area of the mine was not barricaded against entry (Pathway 1); underground pump fitters were not required to carry gas detection devices; and workers had been accessing the potentially hazardous area over a considerable period, without it being sufficiently ventilated, in defiance of the mine's safe work procedure (Pathway 4).[183]

[183] Department of Natural Resources, Mines and Energy (2019) *Irrespirable Atmosphere in a Mine or Quarry: incident learnings and recommendations*, Queensland Government, Brisbane, 5-6.

Table 5-50: Queensland mine fatalities and serious incidents 2004-2022: Presence of Ten Pathways in investigation and coronial inquest findings (N=20)

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
On 9/2/2004 Peter Marshall was killed by exploding tyre he was repairing at Zinifex Century zinc mine near Mount Isa (c)	Some evidence of poor prior maintenance but cannot prove (build-up of mud on rim)	Reference to practices of not deflating tyres, including the victim prior to the event		Recurring practice working on tyres not adequately deflated both before and after the incident. Systems in place, but non-compliance indicates failed supervision	Audits should have identified these failures but no evidence of this		Inspection after incident identified non-compliance; recommends need to rim design and tyre handling standards and continued development of AS 4457		Poor communication and 'aberrant' worker behaviour at mine not addressed. Urges consultant review safety culture	Died soon after incident in care of nurse but before RFDS arrived. Found ERT did all reasonably could though not be trained for this scenario
On 17/8/2004 Samuel Pugh (Faminco mining services) at Highway Reward Mine near Charters Towers struck by falling rock (c)	Over-drilling & charging of holes may have exacerbated risk and Faminco changed stope charge planning sheets after			Identified problems in terms of communication between principal and contractor and also emergency response procedures	OHSMS audit identified risk of rockfalls within blasted or unsupported excavations not communicated to workers		Found need guidance note for safe operation near open voids especially stopes		Audit report re rockfall risk not made available to/communicated with workers. Recommends audits should be made available	Critical of absence of first aid kit and poor radio communication though medical evidence prompt application would not probably have saved life
On 24/11/2004 Barry Cusack fell to his death at the Mount Norma mine while	Poor design & engineering Operating machinery on narrow bench very difficult & bench cluttered with		Poorly conducted hazard identification and risk assessment, leading to poor risk	Installation of bund part of mining plan but not implemented. Coroner found bund would have been			Legislative requirement for mines to have SHMS, which is signed off by the Senior Site Executive, but this is only a		Lack of formal training and supervision compromised communication. Lack of appropriate procedures or	

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
drilling holes (c)	rocks (should be clear) so machine sloping so unstable esp when not drilling & bunds should have been installed		management practices	prudent action. Training of operator not documented. used supervision and procedures over hard – engineering controls or elimination controls such as bunding			requirement for mines which employ more than 10 people. Mt Norma mine employed 9. Recommends regulatory changes		safe work instructions for operating the air track and there was an inadequate training system for the air trac	
On 21/7/2005, Joshua Leslie Hopkinson (apprentice fitter at Hardchrome Mackay) died when the drill cylinder he was working on "exploded" (c)	Cylinder partly charged when left Norwich Park mine and piston jammed in barrel		No evidence hazard risk assessed by Hardchrome	Didn't follow SWP assuming depressurised but not properly supervised. Recommended those involved in maintenance and repair of stored energy equipment review procedures for safe dismantling & all apprentices and others are appropriately supervised at all times when	No evidence these practices had been audited and evidence of presumption indicates hadn't been		Investigation not impeded by DME & WHS joint coverage. Hardchrome pleaded guilty but WHS aborted prosecution as covered by DME. DME issued alert highlighting danger of stored energy containers 2007 following 5 incidents including Joshua's. Coroner recommended be regulated, prosecutorial agency clarified and DME ensure all		Recommended those involved in maintenance transport & repair of stored energy equipment used in coal mining ensure nature of the item and the hazards are appropriately documented and displayed for the benefit and safety of both transport operators and those receiving the equipment and adequate supervision of	Died at workplace. No reference to rescue or emergency procedures

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
				working on such equipment			made aware of hazard		those working on equipment	
On 7/8/2005 Shane Davis truckdriver (employed by Korn Mining Services haulage contractor) at the Foxleigh mine was hit by drive wheel rim assembly while removing tyre (c)	Drive wheel rim wear crack. Recommended changes in practice. Lack of a physical barrier between the wheel and the worker. Deficiencies in maintenance oversight	Similar incident regarding much larger machinery at the Century Zinc Mine in Queensland on the 9th of February 2004 relating to the death of Peter Marshall (see above).	Didn't identify hazard of uncontrolled release of stored energy from the tyre. No training needs identified for removal of wheels in the mining setting. Contractor/owner always kept tyres inflated. Training drivers done quickly. Drivers unaware of hazard re rim splitting/inflation risk. No contractor employees aware of safety issue with multi-piece rims	Removal of physical barriers or cleats whilst the tyre was still under pressure and the failure to deflate the tyres. No evidence truck drivers being exposed to safety information relating to handling of multi-piece rims. Training inadequate. Deficiencies in management safety expertise	New systems being developed but no audit of existing system re tyre repair prior to incident. Coroner recommendations emphasised the need to review systems and for manufacturers to include hazard alerts when they become aware of issue	Specialist tyre repairer from Beaurepaires contracted 2 days per week flat out and no additional time to assist. Financial pressure on contract hauler but drivers paid no bonuses. Rapid expansion of coal mining meant many people lacked experience	Safety alert issued after Marshall incident but not link to this on manufacturers website. WA had recognised issue and published guideline in Feb 2005. Recommended number of regulatory actions in wake of incident (see other failures foe examples)	Tyre fitter asked manager why tyres not deflated prior to removal and told made job easier to do (manager later denied this was said) Same manager later said aware of issue from prior site & deflation delay not operationally significant.	Poor management structure re relationship & SMS between mine and contractor and safety expertise within haulage management undermined critical communication with workers. Maintenance manager said made issue known but shift supervisors denied being told Foxleigh safety manager established safety committee Manager unaware of regs or need to consult workers on SOPs and should be given them to retain	Fatal injuries. Ambulance noted lack of signage at site and recommends this and better notification of kin
On 19/9/2005 Roger Browne	Rill at incident side	High wall danger well		SOP falls from height didn't						Died in fall and medical ruling

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
contract holder for Leightons designing change to high wall fell 50m at Dawson mine Moura (c)	reasonably unconsolidated but no other issues	known. Deceased vehicle passed number of times. Coroner recommended more action re abandoned vehicles and means of tracking all mobile equipment		address this precise situation. Some ambiguity re whether, in practice, people approached the rill though the hazard was well known. Mine then issued new rules re working near high walls. Rec provisions re persons at risk of falls, locating workers, surveillance of non-operating areas						could only have survived momentarily. Body not discovered till the next day after being reported missing that night informally. Recommended improved procedures for locating persons on site & improving means to raise alarm. Better communication between police and inspectorate
On 27/2/2006 Nigel James truck driver suffered 2nd and 3rd degree burns (but survived) at the Broadmeadows mine Goonyella when his truck	Truck brakes failed due to faulty maintenance procedures. Lid missing from power steering container likely contributed to fire & possible			Appears contractor management system no applied rigorously as per regulatory requirements with regard to braking systems.						Driver alerted failure and crawled out of truck to escape fire. Investigation revealed emergency procedures not of high standard &

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
overturned after colliding with conveyer belt ramp and engine bay caught fire(i)	engine kept running. Safety signs at top and bottom of ramp re speed and gears could be misinterprete d			Safety signage issue						major review required.
On 9/4/2007 Jason Blee (Walter Mining contract mining) was crushed between shuttle car & rib at Moranbah North mine after track issue (c)	Heading width re to the 3.4 metre width of the shuttle car was considered by some expert witnesses to have contributed to the hazard. Positioning of shuttle car was critical, contributing to the incident. Number of difficulties in operation of the shuttle car, though not found critical to the incident, a number of design			Just prior to incident mine started working with contractors to bring their policies and procedures into it safety and health management system. Volume of system info challenging & ascertaining training tickets. Coroner urges mines review controls on interaction between pedestrians and machinery, training	safety health management system audited not long before this incident occurred but management denies too complex but coroner then documents SHMS changes by both contractor and mine after incident		Improve DME access to SMS to aid investigation process – prior access via cd. Issue of notification to next of kin be resolved & be included in mines SHMS Recommends law providing for tripartite investigations into incidents (ie mine, Dept and ISHR). Also consider regulating maintaining training/ competency records of miners. Govt. 28/7/2016 new recommended standard for place change mining			Didn't die immediately. Once alarm raised, rescue efforts were fast & efficient Mines Rescue trained personnel responded appropriately and quickly but those involved had little appreciation of appropriate way to proceed. Changes recommende d re notification, airlift bags etc

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	changes recommended			record, heavy lift airbags & change management						
On 17/1/2008 Michael Auld (employed by EROC PL/ Redpath Australia PL underground services contractor to BHP Billiton) at Cannington Mine Lease (NQ) crushed between working platform & Laundcruiser tray (c)			Used Take5 RA but noted quality of this low (on a scale of high, medium or low) Little correlation between hazards selected and the control measures noted. Over-reliance on this type of RA was not noted	There was no reference to a task or step of moving the vehicle closer to effect transfer of tools & equipment into the basket. I strongly suspect SWI was written on premise that material relevant to the operation of mobile equipment was included in its own safe working procedure so SWI didn't offer guidance relevant to hazard. Coroner noted remedial changes by BHPB & Redpath,	No mention of audit or identifying failures prior to event including mismatch/gaps in Redpath/BHPB systems					Although there was a delay in activating an emergency response, in the context of the injuries sustained and the longer timeline before higher level medical assistance arrived at the mine site; the comparatively minor delay was of no consequence to the prospect of survival for Mr Auld

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
				including exclusion zones taken & SMS incorporated						
On 20/2/2009 John Barker was killed when his utility collided with the back of a low loader proceeding in the same direction at the Blackwater mine	Utility tyres in poor condition, but no indication of braking/skid. Maintenance note 6 Feb indicated tyres need replacing. Some brake issues not sufficient to cause. Further no evidence dust visibility factor						No evidence of regulatory failure. Regulator issued alert following incident.		No evidence of driver distraction due to communication	Died at scene. Low loader driver unaware of collision.
On 19/5/2009 Pekka Tuppurainen was asphyxiated when the loader he was operating doing backfilling went over the edge of stope at the George	Re backfilling coroner queried whether dump & push should have been used as a control measure rather than physical barrier,	Victim had witnessed fatality from loader entry and had near miss himself prior. DME doubted included in risk register and confusion re integration of	In the context of a safety management system, why wasn't the need for temporary steel stop logs earlier identified and actioned?	No document procedure to guide operators about how to perform dump and push at a vertical edge. The manner of performing dump & push not included in any training	In the months prior to incident, Xstrata identified need to review backfilling procedure and consider use of temporary steel stop logs in this mine. . If a temporary steel stop log was in		Mines published a Guidance Note in August 2010 to disseminate to industry the lessons to be learnt from this incident. It included depiction of a steel temporary stop logs.		Procedures Xstrata identified Backfilling Stopes. predicated on the use of temporary steel stop logs. This procedure originated in George Fisher North. This	Found dead. No comment about rescue procedures etc

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Fisher North mine near Mt Isa (c)	temporary steel logs unavailable at mine	Xstrata and Mt Isa SHMS materials.		package. Remedial action included better backfilling measures	place while Mr Tuppurainen was backfilling, his death is likely to have been avoided. But coroner says unsure if this could have been done faster				procedure was not followed because workers and immediate Supervisors unaware of it and temporary steel stop logs not available	
On 17/12/2010 Wayne McDonald truck driver (LCR Group) killed by air blast from truck tyre he was changing at the Foxleigh Mine Middlemount (c)	Unable to determine service history of tyre though had been used & punctured before. Recommended changes to jack to enable safer work methods. Industry needs to move to remote tyre testing within reasonable timeline			Work method unsafe and appears to have been little if any documentation. Need recommended procedures with regard to changing tyres including use of jacks etc. Coordination issues between contractor & mine implied			No Australian Standard applicable to large diameter wheels and tyres, up to 24 inches used on mine sites so one should be developed. Noted inspectorate audit of tyres considerable number of inner tyres couldn't be tested. Govt. Recognised Standard 13: Tyre, wheel and rim management approved on 16 December 2016.		In part due to manufacturer confusion within LCR Group employees, both in management and the operational workforce as to what the appropriate pressure of the tyres was meant to be.	Three colleagues attempted rescue but unconscious & died at scene
On 6/5/2014 Paul McGuire electrician asphyxiated while calibrating gas	Inconsistencies in location of gas monitors reported in job card system &		Evidence that all risk management plan systems were practised at the mine;	System for recording location and movement of gas detectors flawed and	Inconsistencies in systems implementation and practices not detected by audits if any	Inconclusive evidence but the urgency surrounding task is also			Neither pre-shift meeting nor changeover noted relocation of gas monitor. McGuire notified	High level methane alarm in control room at 1.07pm, assumed error

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
detectors at Middlemount mine (i)	actual location & McGuire's job card had in location where (station 5 channel 7) it had been disabled. Feb 4 electrician noted this Whilst the pressure relief slide at 20 cut through A-B Heading was open, no engineering arrangement to induce the air to draw in to provide pressure relief for the seal at 0-1 cut through B Heading 901 tailgate.		however, there were incidences of lapses or a lack of diligence in the application of systems surrounding this incident. Job risk analysis not completed (2 people required) & no SLAM completed – urgency of job may have affected investigation found. No evidence found that Mr McGuire was trained, assessed or familiar with the Job Risk Analysis	ensuring this was noted was flawed. Task of calibrating 901 tailgate gas monitor not documented in mine's 24-hour plan. The investigation found that the signposting of cut-through locations was inconsistent. Mr McGuire did not have a plan of the area in his possession, and there was no record indicating he was familiar with the area. Mine system terminology inconsistent. Mine had no formal process to train electricians on conducting calibration of gas monitoring detectors, relying on	were undertaken prior to the incident	relevant. The gas detector calibration work was required completion on the day of the incident in order to maintain statutory compliance. It is possible that the deadline influenced the decision to have the task completed despite it not being adequately planned (i.e. not included in the mine's 24 hour plan).			control room & conversed with another that working in 901. When opened hatch into 901 heading tailgate overcome. There were a number of non-permanent supervisors working during the shift when the incident occurred; and • Mr McGuire was not accompanied in the return airway; • Documentation utilised inconsistent terminology, creating the opportunity for confusion.	but acting manager investigated, further alarms on personal detectors & body discovered after entering shaft at 2.26pm, underground mine ambulance & brought McGuire to first aid room at 3.22pm where resuscitation efforts failed. Re 'high high' alert no one aware it was triggered as result of a serious incident. In addition to the 'Trigger Action Response Plans' action requiring a withdrawal of personnel from the mine when a main

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
				more experienced electrician.						return airway registers in excess of 2.50% methane, safety systems such as being accompanied, having ERZ Controller inspections of return airways and the use of Personal Gas Detectors were not all adhered to and risked the safety of the first responders.
On 11/12/2014 Ian Downs crushed under wall (rib spall) that collapsed at the Grasstree mine (i)	Area of rib failure not supported according to manager support rules though under supervision of ERZ controller. Rib bolter could not reach within 3.6m of cutting head. No support standards to		Statutory inspection prior to work didn't occur due to system failures. Numerous prior inspections by ERZ controllers but none identified latent hazard of unsupported rib Downs didn't complete SLAM on task	Mine planning system had VLI activities and shift activities but not up to date. Evidence of critical communicatio n lapses. Uncertainty re ERZ1 and NERZ status. Problems with the deployment of ERZ	No audit identified multiple failings in system	Senior manageme nt culture production focused			Day shift ERZ controllers didn't communicate to MSO or oncoming ERZ controller that VLI were working on MG807. Dayshift MSO didn't communicate to nightshift MSO. VLI nightshift supervisor didn't attend pre-start	Assistance sought soon after event, quickly deteriorated and stopped breathing, CPR done at scene & later by ambulance but pronounced dead. No finding that this should

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	address risk of pressure grouting activities. Stowage permit not developed for placing stowage in MG807 roadways			controllers. Rib not meshed as required by contract between Anglo and VLI drilling. Found no evidence VLI SWP met. Also training gap. In sum multiple failings in both Anglo and VLI SMS and contractor management/ change management					meeting. Communication failures meant inspection not conducted prior to incident	have worked better
On 16/2/2014 Stephen Cave was killed by a large tyre explosion & another worker seriously injured at the Dawson Open Cut mine (i)	Lighting deficient at time of incident. Issues re fitting lock to tyre not fully resolved but inspector noted the bead seat band did not have a MMP (Surloc) ring welded to it. This important		System deficiencies imply clear failings in risk assessment	SOP0012 'Tyre Management' was not complied with by the contractor Leighton Contractors. Competencies and authorisations required by this standard to undertake tyre handling tasks were not followed.	Audit should have identified flaws in the system, including contractor management and limitations with procedures		No regulatory issues identified. Investigation dealt with a number of areas for improvement by mine, including systems and No Go Zones near work			Stephen Cave died immediately and rescue response with regard to other worker not subject to criticism

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	engineering control can contribute to preventing inflation when the lock ring is not correctly seated.			SOP0012 'Tyre Management' did not contain sufficient instruction for tyre fitting and handling tasks. Dawson Mine hadn't developed safe work instructions for tyre handling tasks. CMW did not hold the competencies of a Tyre Fitter, nor were they under a structured training program.						
Newlands coal prep plant (Qld) 30 August 2016 Ian Hansen Contractor killed by falling deck plate (i)	Inadequate task planning/ optimal engineering approach		Inadequate planning and risk assessment of task. Investigation found several risks in the task Foreseeable.	Inadequate contractor management, poor work tasking planning, inadequate safe work statement, and supervision deficiencies	Glencore/UGL contract extension clause not exercised in 2016 so had expired & further several deficiencies in SOP etc. long standing so should have been picked up by an				Evidence of poor contractor-worker management communication	No evidence regarding rescue or emergency procedures

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
					effective auditing regime					
On 5/8/2017 Daniel Springer boilermaker (Independent Mining Services/IMS) at Goonyella mine (operated by BMA leaseholder BHP) killed by spring-back in a bucket working on (c)	Goonyella Riverside mine decided to modify the external floor wear plates on a number of excavator buckets in 2014. Didn't apply the processes required within GRM-HSEPRO-0028Change Management Procedure when modifying the external floor wear plates. The mine had insufficient knowledge of what could cause a build-up of stored tension in the large external floor wear plates, so no one recognised the hazard.	Since the incident, anecdotal- and other evidence found from similar operations highlighted the hazards associated with plate structures that had been indented. A range of equipment types were involved. The common factor for all was that plate material had been plastically and elastically deformed during operations, resulting in residual stresses that	Mine did not identify any potential risks associated with modifying the external floor wear plates on excavator buckets by changing from the thin horizontal wear plates to the two large wear plates, likely due to having insufficient knowledge or awareness of what could cause a buildup of tension in the large external floor wear plates on excavator buckets. The mine did not formally assess the risk associated with modifying the wear plates. The mine did not involve any technical	Worker not trained or assessed for hot work and tasks ill-defined BHP investigation revealed didn't have 1-SAP supported maintenance strategy, which contributed to a reactive and ad-hoc maintenance The contract management process resulted in ambiguity about onboarding and supervision of the contractor personnel; The Management of Change ('MOC') process at the Mine did not provide	No evidence of audit being undertaken which should have identified contractual and safety issues if not the hazard itself which seems to have been little known		On 7/8/ 2017 DNRM issued a safety news flash to all SSEs, followed by a Directive that all coal mines in Queensland take steps to immediately review elements of their Safety and Health Management System (SHMS) relating to the removal and replacement of wear and liner plates on earthmoving equipment, to ensure that risk was at an acceptable level. The mines were required to document evidence of this review. Coroner Qld mines inspectorate issued a Safety Bulletin to all mines informing them of elements that can cause a		Evidence of poor information flows/ communication gaps with regard to BHP, BMA and workers	Daniel seriously injured, first aid rendered and site paramedics responded within 2 minutes of call. Daniel airlifted to the Mackay Base Hospital and then to the Townsville Hospital but despite emergency surgery succumbed to injuries on 7 August 2017

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	Coroner recommended smaller wear plates used as safer because the elastic spring-back potential much lower Noted hazard not limited to excavator buckets	later released violently.	expertise in assessing the risk associated with modifying the wear plates. Recommended mines ensure they have a procedure within their SHMS that requires an effective risk management process to be carried out on any modification being made to plant and equipment prior to the modification being carried out.	adequate triggers to ensure the impact of changes to standard plant and equipment design was fully assessed Coroner noted need to improve contractor management and management of change			build-up of stored tension in steel plates.			
On 31/12/2018 Allan Houston died when the dozer he was operating fell from an elevated height at the Saraji mine Moranbah (i)	Significant issues with the loading of explosives for the blasts at Ramp 2 North resulting in poor blast profile & large unfractured pieces of rock on the surface area. This		Area supervisors did not enter the hazard of the water into the 1SAP reporting system. Re ramp activities at Ramp 2 North no risk management process was applied to effectively	Activities at Ramp 2 North not conducted in the manner stated in the safe work instruction, creating additional hazards. Regulator recommends mines ensure	Audit of mines' SMHS in the affected areas should have revealed flaws and compliance gaps. No evidence of this		No evidence of regulatory failure. Recommended changes included mines utilise safety technology currently available that can be fitted to machinery that provide operators with audible and visual alert to hazards.	Water in pit hazard was raised by Coal Mine Workers at Ramp 2 North with their respective supervisors, but hazard was not managed.	Failure to respond to CMW concerns indicative of ineffective communication process at mine. Investigation recommends mines should ensure that supervisors have clear	Recovery of dozer and Mr Houston complex & took two hours. The investigation found rescue was conducted professionally considering the difficult

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	made the operation of dozers difficult and potentially hazardous. Hazard of water in the pit below where Mr Houston was working. Safety berm along the excavation edge not constructed or maintained to size required by site SHMS. Dozer not fitted with MineStar so Allan did not have access to the safety features it can provide. See regulator recommends		manage this hazard. Note some engineering, design etc failures were non-compliant with mines SHSMS too.	all hire / contractor equipment is compliant with site vehicle and mobile equipment compliance standard.			Mines should ensure that if a machine is introduced to site and has the capability to transmit function/operational data, the system should be enabled. Mines should ensure there is emergency vehicle access into pits where machinery is working on benches above.		understanding of safety and health management system requirements for tasks undertaken at work area they are responsible for	circumstances. Concerns were raised by first responders regarding the difficulty in communicating by two-way radio with Mine Control, which is situated in Brisbane. They were also heavily critical of the emergency alarm being repeated over the two-way radio making it difficult to maintain effective communication between responders. Investigation recommended number of significant improvements in emergency procedures

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Grosvenor mine Qld, 20 May 2020 Methane explosion near longwall, five mine workers seriously burned (BOI)	Earlier events in 2020. Methane drainage prior to the incident inadequately monitored/ managed	Pattern of gas exceedances for some time prior	BOI found number of failures to risk assess gas exceedances as conditions changed	OHSM regime weakened by extensive use of labour hire, especially report back mechanism	BOI identified the number of auditing failures and recommended improvements	Mining operations repeatedly conducted in manner where gas emissions generated by the rate of production exceeded mine's gas drainage system capacity (BOI)	Inspection regime tended to accept management reassurances/ some disorganisation (visits/record coordination)		Labour hire workforce afraid to report issues and union input marginalised (e.g., electronic exchange of inspection reports). Some issues raised were ignored (note only one labour hire employee gave evidence to BOI)	Rescue worked but serendipitous aspect as anaesthetist vising town on day to do COVID training stabilised miners so could be airlifted to hospital with burns unit
On 26/11/2022 Ronald Selig died when he fell 5.8m from a workshop roof which collapsed while he was repairing weather initiated damage at the Red October copper mine south of Winton	In 2021, repairs were made to the workshop's damaged end frame. These repairs were a modification to original design & installation of structure. Damaged roof didn't support workers wait because roof not repaired to OEM standard following		Failure to supply adequate PPE or ensure worker trained in working from height indicates failure in risk assessment	Worker not using fall arrest PPE which was unavailable on site. Worker not trained in working at heights. Worker changed agreed work method.	Report doesn't state if earlier repair to workshop after being contacted by heavy mobile equipment was adequate or that modifications to design etc was approved or compromised integrity. But investigation recommendations indicate structure was compromised					Worker fell while working in isolation (other worker collecting tools & gear from truck). Investigation recommended ensure emergency services are provided with detailed instructions on both the location and travel routes to enable the most efficient

Hazard and incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	storm damage. Recommended repairs or modifications to fixed plant structures are performed in accordance with the original equipment manufacturers design and instructions, so that it remains fit for its intended use and work environment.				No evidence audit undertaken					access to remote mining operations.
Total where present	18	5	13	20	15	3	10	2	13	9

(c) Source Coronial Inquest findings; (i) source regulator investigation report; (BOI) source Grosvenor Board of Inquiry Report

Discussion

The Brady Fatality Review

In response to the five fatalities in 2018-19, the Queensland government engaged Dr Sean Brady to review the previous 20 years of fatalities, as well as serious and high potential incidents, to identify their key causes. The study combined quantitative and qualitative analysis methods. Based on the qualitative analysis, Brady found that in 78% of incidents, workers were inadequately supervised, even though they were engaged in non-routine work activities requiring supervision. Across all work activities, workers were inadequately trained in 64% of incidents. Known equipment faults were identified in 21% of incidents, and a previous near miss had occurred in 19% of incidents. Worker error contributed to 64% of incidents.[184]

In response to the Brady Review, the Queensland inspectorate undertook an in-depth assessment of a random sample of SA and HPI reports to confirm Brady's findings.[185] The assessment included interviews with mine and quarry operators and workers, Original Equipment Manufacturers (OEMs), and other stakeholders to determine whether mine investigations had identified all relevant causal factors and whether effective controls had been implemented post-incident. The inspectorate found company investigations had minimal, if any, input from OEMs and other stakeholders. Further, the inspectorate found a high occurrence of worker blame; a lack of understanding/identification of what caused the SA or HPI; and a high reliance on administrative controls. Other areas of concern identified by the inspectorate included inadequate supervision, lack of equipment isolation and guarding, poor gas management practices including management of frictional ignition, issues with highwall stability, tyre management, and vehicle interactions. In response to the findings, the inspectorate advised industry that it would target SA and HPI reporting, and mine investigations, to ensure industry thoroughly investigated incidents, accurately identified causal factors, and applied effective controls.

In 2016-17, the mines inspectorate noted the poor quality of health and safety data reported to the inspectorate, including lack of information on causation, which limited 'rigorous data analysis'.[186] One of the recommendations of the Brady Report was to improve the reporting and data analysis process and procedures. In response to the Brady review, the inspectorate established the Central Assessment and Performance Unit to improve the quality of incident investigations and provide insights into the observed safety trends. Enhanced online reporting tools were also developed. However, anecdotal evidence indicates mines are not providing additional contextual information, such as photographs of incidents. As a result of these changes, an ISHR reported that information previously provided, which helped to understand the circumstances and severity of an incident, now had to be obtained from the mine, often by a formal request, delaying the provision of essential information required to assess the severity of incidents and the response required. An example of an unintended consequence associated with policy change adversely affecting worker representatives in performing their functions.

[184] These percentages appear to be based on investigation reports provided by mines to the Department. The inspectorate's review of these reports after the Brady report was published found that mines tended to identify human error as a cause in many cases.

[185] Natural Resources, Mines and Energy (2020) *Queensland mines and quarries safety performance and health report 2019-2020,* 6.

[186] The Department of Natural Resources and Mines (2017*), Queensland Mines and Quarries Safety Performance and Health Report 2016-17.*

Several studies have analysed the comparative number of fatal and non-fatal injury rates among contractors and directly employed workers in the mining industry.[187] Brady examined inspectorate concerns that contractors were overrepresented in fatalities. We were unable to generate figures comparing contractor versus direct employee fatalities, as the Queensland safety performance and health reports do not include a breakdown. One purpose of the Brady analysis was to test the view that contractors worked less safely than directly employed workers and that this contributed to the decline in safety performance (as measured by FIFRs and SAFRs). However, based on Brady's review of FIFRs and Serious Accident Frequency Rates (SAFRs), he concluded that the recent 'increase in the employee FIFR, combined with the fact that employee SAFR was reasonably comparable to that of contractors, does not support the view that employees work in a considerably safer manner than contractors'.[188] In fact, there were a further 13 coal mining fatalities between 2019-20 and 2025-26, nine of which were contractors. Furthermore, the Brady report did not consider the broader socio-economic impact of contracting (and labour hire) on safety performance, namely weakening the safety management system for all workers, particularly in their reluctance to report incidents and hazards. Quinlan, in his report to the BOI on the impact of labour-hire and changed work arrangements,[189] said coal mining fatalities involving directly employed workers in 2018-19 may have caused an uptick that may not be sustained over a longer time span.

The BOI highlighted contractor reluctance to raise safety concerns in 2020.[190] Research on the impacts of contracting conducted in Australia by David Walters, Michael Quinlan and others concluded that:

> precarious employment, contracting and sub-contracting and the reduced presence of organised labour, while giving greater freedoms to modern business nostrums concerning the achievement of price, production and delivery efficiencies, may in turn act to increase the fragmentation of safety management and serve to remove or downgrade the effectiveness of workers' voice in warning of its consequences.[191]

As highlighted in Chapter 4, union support is an important aspect of the Queensland worker representative regime. Anecdotal evidence from the Mining and Energy Union (MEU) suggests that several fatally injured contractors were not members of a union. Data on contractor numbers collected by the MEU found that there were 26,000 contractors (including labour hire) compared to 21,000 permanently employed workers in the Queensland mining industry. Information collated by the MEU indicates that most contractors are not union members. Other issues may be that contractors are more likely to perform high-risk work under poor supervision and inadequate training. Furthermore, non-permanent SSHRs who are not union members lack the support and mentoring required to perform their functions effectively.

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[187] (1) Karra, V. (2005) Analysis of non-fatal and fatal injury rates for mine operator and contractor employees and the influence of work location*, Journal of Safety Research*, 36:413-421. 116. (2) Pappas D, & Mark C, (2011) A deeper look at contractor injuries in underground coal mines, *Mining Engineering*, 63 (11):73–79. 117. (3) Buessing, M. & Boden, L. (2016) The Impact of Contract Operations on Safety in Underground Coal Mines, *Journal of Occupational and Environmental Medicine*, 58(9):952.

[188] Brady, S. (2019) *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019*, Report prepared for the Department of Natural Resources, Mines and Energy, Brisbane, 58.

[189] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 58.

[190] Queensland Coal Mining Board of Inquiry. (2021). Queensland Coal Mining Board of Inquiry Report, Part II. 34.

[192] Knights, P. & Scanlan, B. (2019), A study of mining fatalities and coal price variation. *International Journal of Mining Science and Technology*, 29: 599–602.

Brady further concluded that the industry exhibited a fatality cycle and suggested this could be explained by periods of waxing and waning vigilance associated with the period since the last fatal incident. This is certainly evident according to annual frequency rates (see Figure 5-17). However, as noted, the Chief Inspector expressed concerns about the impact of low commodity prices on safety management practices. The Chief Inspector suggested fatalities occur during periods of expansion and contraction. Quinlan discussed this issue in his report to the BOI on contracting and labour hire, citing a 2019 study by Knights and Scanlan who found an association and concluded that:

> When the price of coal falls below AUD 55/tonne in non-inflation adjusted terms the likelihood of an incident involving multiple fatalities increases. The probability can be estimated at 2 in 18 events, equivalent to 11%. The study postulates that in difficult economic times, mining companies react by downsizing direct employees. If not carefully managed, this can result in loss of knowledge around safety systems, and a reduced effectiveness of safety supervision. Because of labour cost advantages, some jobs previously undertaken by direct employees will be replaced by contractors. Increased contractor numbers increases the risk of fatalities occurring, as contractors are over-represented in accident categories involving vehicle accidents, tyre handling and crushing incidents. Mine inspectorates, mining, and mining contractor companies need to be especially vigilant to enforce health and safety management systems during periods of low coal prices.[192]

Quinlan prefaced his conclusion by stating that Knights and Scanlon acknowledged the relationship between fatalities and coal prices was not linear because one to two fatalities occurred in most years irrespective of the thermal coal price.[193]

The BOI identified production rates as a contributing factor to the Grosvenor explosion. An ISHR asserted in evidence to the BOI that mines were pushing production beyond the capacity of gas drainage and ventilation systems to remove gas emissions.[194] However, the Transport and Resources Parliamentary Committee inquiry into coal mining industry safety noted the lack of empirical evidence that industry is prioritising production over safety, notwithstanding worker submissions raising concerns on the issue. The committee recommended the Coal Mine Health and Safety Advisory Committee commission independent research into the impact of production rates on safety risk management in Queensland coal mines.'[195]

To combat complacency, Brady recommended the industry adopt the tenets of High Reliability Organisations. The Johnston Review applied this theory to 'excellence in regulation' and summarised these in the report as listed below:

> High Reliability Organisational (HRO) theory and application tells us that organisations who reliably deliver on their goals exhibit six characteristics:

[192] Knights, P. & Scanlan, B. (2019), A study of mining fatalities and coal price variation. *International Journal of Mining Science and Technology*, 29: 599–602.
[193] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 49.
[194] Queensland Coal Mining Board of Inquiry. (2020). *Queensland Coal Mining Board of Inquiry Report, Part I,* 29.
[195] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. (Report No. 29, 57th Parliament). Queensland, Brisbane, 27-28.

Collective Mindset - There is a shared sense of organisational purpose, and each member of the organisation understands how their work contributes to achieving organisational goals.

Sensitivity to Operations - The organisation prioritises effective internal communication, and creating space for employees' views to be heard, and responded to. Silos are identified and addressed.

Deference to Expertise - In HROs those who have relevant knowledge and expertise are listened to, regardless of their place in the organisational hierarchy.

Reluctance to Simplify - More highly reliable organisations avoid jumping to solutions before fully understanding problems. They do not over-simplify issues.

Commitment to Resilience - The necessary human, material and financial resources are in place to prevent problems, respond to issues when they arise, and learn from failure

Preoccupation with Failure - More highly reliable organisations track small errors of many kinds (including, for example, communication breakdowns) and address these before they become major issues.[196]

However, some experts working and researching in high-risk industries have challenged the applicability of HRO principles in some industries. Nancy Leveson, an engineer working in aerospace, explained that the characteristics of HROs proposed by Weick et al. (1999) were based on systems with stable technical processes, and these characteristics were not practical in competitive, high-risk industries where technological innovation was necessary to remain successful. Leveson criticised HRO theory for its emphasis on component failure – including technology and human error – and lack of focus on design flaws. She argued incidents could still occur when all components functioned as required; however, unwanted interactions may occur due to a design flaw. This perspective refocuses attention onto the role of intrinsically safe design and system engineering safety.[197]

Safety reporting culture survey – Queensland Safety and Health Advisory Committee

After the publication of the Brady report in 2019, more than 53,000 workers attended Safety Reset sessions. An online survey conducted during the sessions identified the impact of workforce casualisation on safety, fear of reprisal for raising safety concerns, a company focus on production over safety, and environmental hazards impacting worker health. Respondents also expressed a desire for greater enforcement, including more unannounced site inspections. The regulator noted an increase in complaints made by workers following the Safety Resets, which was attributed to workers possibly feeling more empowered to raise concerns. In response to the BOI report and the Brady review, a Consultation Regulatory Impact Statement released by Resources Safety and Health

[196] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 9 Retrieved from https://www.rshq.qld.gov.au/

[197] Leveson, N., Dulac, N., Marais, K., & Carroll, J. (2009). Moving Beyond Normal Accidents and High Reliability Organizations: A Systems Approach to Safety in Complex Systems. *Organization Studies,* 30(2-3), 227-249. doi:10.1177/0170840608101478

Queensland proposed addressing workers' fears of management reprisal for raising safety concerns through legislative enhancement.[198]

In 2024, the CMSHAC commissioned an independent research project conducted by Sentis on the state of the reporting culture in the mining industry.[199] Based on the key results outlined in Sentis's report, the Queensland mining industry has been placed at the lower end of the private compliance range for reporting culture – level 3 of the 5-level maturity model.[200] Private compliance indicates that most people tend to report hazards and incidents through appropriate channels, with a reasonable understanding of how to do so.[201] At the public level, reporting is viewed as burdensome to getting the job done, and hazard reporting is done 'in case I am being monitored'.

The Sentis report's coal sample consisted of 55% participants employed by a worksite owner, 23% contractors, 12% employed by a major service provider, and 9% labour hire. Coal had a higher percentage of contractors compared to mineral and quarrying. Only 9% of the minerals sample were contractors, 3% were employed by major service providers and 3% by labour hire firms. Within coal, exploration had the highest proportion of contractors (48%), followed by underground (31%), then surface (21%).

Across the three sectors, three main reasons were given for not reporting safety hazards or concerns. Firstly, the complexity of current reporting systems, including the time it takes to report and accessibility to the process.

> Reporting systems can be hard to access, and this can affect some segments of the workforce more than others—for example, 'What is available to the company is not available to the contractors', and 'With all reporting and processes now to be done online, the accessibility of computers and safety systems to the people in the pit is next to nothing'.[202]

Secondly, fear of reprisal and blame culture, which was most apparent in the coal sector. The third reason was lack of timely feedback or no feedback at all. For example, 'People would be more inclined to report issues if they received feedback in a timely manner', and 'The loop is always left open'.[203]

Notably, the Transport and Resources Committee's Inquiry into coal mining safety and the Queensland Coal Mining Board of Inquiry focused on fear of reporting as a specific issue for contractors and labour hire. In concurrent survey results, fear of reporting was mentioned slightly more often as a reason for not reporting by respondents employed by the worksite owner (worksite owner 13%, major service

[198] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. (Report No. 29, 57th Parliament), Queensland Parliament, Brisbane, 15.
[199] Commissioner for Resources Safety and Health. (2024).*The state of safety reporting culture in Queensland's mining industry*. State of Queensland (Commissioner for Resources Safety and Health) https://www.publications.qld.gov.au/dataset/the-state-of-safety-reporting-culture-in-queensland-s-mining-industry/resource/c7bba88d-8538-451e-b939-1edf127fa276
[200] Sentis research (based on an international sample of 42 mine sites across 19 different organisations) has demonstrated that 90% of mine sites that have completed an on-site safety evaluation sit at *public compliance* [level 2]or below. Therefore, achieving a rating of private compliance can be viewed favourably.
[201] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 21.
[202] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 26, 41 and 46.
[203] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 26, 41 and 46.

provider 11%, contractors 10% and labour hire 12%).[204] The survey found that mineral sector workers regarded senior leaders more positively than coal sector workers, perceiving that they use their knowledge to help workers identify and manage hazards and risks; are approachable for informal discussions about safety concerns; and support workers in reporting near misses, high-potential incidents, and safety concerns.[205]

Finally, 29% of survey respondents said timeframes and resources were not adequate to perform work safely. This relates to production rates and production pressure. The research concluded that improving job planning around timeframes and resources can allow workers to focus on performing work safely.[206]

Labour arrangements, incident reporting, and fear of reprisal for raising safety concerns

The BOI focused on the extent of contract and labour hire workers in the Queensland mining industry. The BOI reported that:

> Data from the Commissioner for Mine Safety and Health revealed that, by 2017, there were more contractors than direct employees in Queensland coal mines. In 2016–17, there were 11,648 direct employees and 14,090 contractors in open cut coal mines. In underground coal mines there were 2,564 direct employees and 2,723 contractors.[207]

In 2026 in Queensland, the MEU estimated that there were 26,000 contractors and 21,000 directly employed workers employed in the coal mining sector. In contrast, in NSW the MEU estimated that in 2025 37% of workers employed at open cut mines and 23% of workers in underground mines were contractors.[208]

The BOI listed the advantages to companies of retaining non-permanent labour as flexibility and cost saving. The BOI also stated:

> It would seem that another advantage to organisations is the marginalisation of the union, which serves to limit the risk of increased work stoppages through industrial disputes, reduced productivity and higher labour costs.[209]

Research and submissions to government inquires suggests the growth of labour hire appears to have reduced union presence and influence. Indeed, the effects may have been more profound given the traditionally high union density in coal mining. This research found that contractor use was associated with fractured safety and health management and corner-cutting on safety, and that this has been

[204] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 43.
[205] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 49.
[206] Commissioner for Resources Safety and Health, (2024) *The state of safety reporting culture in Queensland's mining industry.* State of Queensland (Commissioner for Resources Safety and Health), 71.
[207] *Queensland Coal Mining Board of Inquiry. (2021).* Queensland Coal Mining Board of Inquiry Report, Part II. 407.
[208] Data supplied by the MEU NSW Northern District.
[209] Queensland Coal Mining Board of Inquiry. (2021*). Queensland Coal Mining Board of Inquiry Report, Part II.* 407.

identified as a causal factor in many catastrophic incidents.[210] Three sets of causal factors have been identified:

- Cost-saving measures undermining safety, including transferring more hazardous activities to contractors.[211]
- Weakening the safety systems, including avenues for worker 'voice'.
- Regulatory capture (the regulator overly identified with the interests of the party being regulated).[212]

The primary interest in this review is that the presence of precarious workers tends to weaken legislative participative mechanisms.[213]

The BOI also identified the impact of contract labour on under-reporting of safety incidents and hazards.[214] The MEU stated that mine workers had voiced concerns about gas levels at Grosvenor before the explosion. Additionally, the MEU reported that all underground workers at the Grosvenor mine were labour-hire or contractors, which compromised their ability to be vocal about safety concerns. The BOI confirmed this heavily outsourced, casualised workforce structure, combined with the fear of losing work, had negatively impacted workers' ability to speak up about safety concerns.[215] After the Grosvenor investigation, the MEU established a union lodge at the mine in an effort to ensure a stronger collective voice on safety issues.

The BOI and the Transport and Resources Parliamentary Committee each made several recommendations to address under-reporting due to non-permanent labour arrangements. Some of these recommendations were focused on addressing the reporting requirements of labour hire companies to the regulator, reporting between the mine owner/operator and labour hire companies, and stronger protections for workers raising safety concerns.[216] The Transport and Resources Committee focused on reprisals for reporting:

> For those coal mine workers who did make public submissions, we note their stated concerns that, in doing so, they were potentially risking their jobs. In our view, this indicates that reprisal, whether perceived or actual, is present in the Queensland coal mining industry. We heard accounts of labour hire workers being dismissed from site

[210] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 23, 27.

[211] See for example Walter J, (2017) *Safety management at the frontier: Cooperation with contractors in oil and gas companies*, Safety Science, 91:394–404 at 395.

A Swedish study found temporary workers were less likely to raise safety issues than permanent workers and when they did raise concerns, they were less likely to be treated seriously. Aronsson, G. (1999) Contingent Workers and Health and Safety, *Work, Employment and Society*, 13(3): 439– 459.- Quinlan 32-33.

[212] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 29-30.

[213] Hyam J, (2018) *Employee Voice and participation, contested past, troubled present, uncertain future,* Routledge, London, 3. – Quinlan 33

[214] Queensland Coal Mining Board of Inquiry. (2020). *Queensland Coal Mining Board of Inquiry Report, Part II,* 415.

[215] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II.* 34.

[216] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II*. 446-447.

> immediately for flagging safety issues, and temporary employees who raise safety concerns being characterised as otherwise unsuited to their role, and terminated.

The committee recommended the Coal Mines Safety and Health Committee commission research:

> The CMSHAC review the terms of reference for its current study into coal mine safety reporting culture to additionally address the deficit of research around production and safety conflicts, and reprisal against workers who raise safety issues, which we have raised in this report.[217]

The committee also recommended the 'Minister consider amendments proposed in the Consultation Regulatory Impact Statement strengthening protections against reprisal with a view to legislatively implementing them'.[218]

Gas management and the Queensland Coal Mining Board of Inquiry (BOI) - the role of Industry Safety and Health Representatives

In the wake of the Grosvenor explosions, it is relevant to discuss high potential gas exceedance incidents and the compliance and enforcement actions of the inspectorate (and safety and health representatives) leading up to the event. As recorded in the Queensland mines and quarries safety performance and health reports, the mines inspectorate had expressed concerns about gas management in underground coal mines since 2017, citing depth of mining and longwall production rates as causal factors. Several frictional ignitions had occurred prior to the Grosvenor mine explosion, and in the last published report in 2019-20, the inspectorate determined that gas management required additional regulatory focus.[219] Further, the inspectorate found evidence of chronic under-reporting of methane exceedances and stated that:

> The 2019-20 reporting year saw significant effort deployed by the inspectorate to develop – in concert with industry and workers' representatives – amendments to the legislation relating to gas management and ventilation in UG coal mines. The Coal Mining Safety and Health (Methane Monitoring and Ventilation Systems) Amendment Regulation 2019 clarifies minimum requirements in methane monitoring, record keeping requirements and explosion risk signposting. The changes also included requirements for mines to either ventilate and inspect old abandoned workings or seal them, in response to a number of heatings that had, and have the potential to occur in these areas of the mine. In addition, and in recognition of the importance of preventative and mitigating controls in gas management, the regulator worked with stakeholders to develop legislation requiring the reintroduction of explosion barriers in certain circumstances, after 20 years absence in the industry.[220]

In 2018-19, the HPI focus of the coal section of the safety performance and health report shifted almost entirely to gas management. Gas management is a principal hazard with the potential to cause multiple fatalities, and the inspectorate required all underground mines to have effective gas

[217] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane. 61.
[218] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane. 61.
[219] Department of Natural Resources and Mines (2020) *Queensland mines and quarries safety performance and health report 2019-2020*, 15
[220] Department of Natural Resources and Mines (2019) *Queensland mines and quarries safety performance and health report 2018-2019*, 13.

monitoring systems. To this effect, the inspectorate released a guide on methane management in underground coal mines, outlining practice and recommendations.[221] In 2018, the North Goonyella mine withdrew workers from underground areas after an exceedance above 2.5%. While the mine workers were withdrawn, a spontaneous combustion was initiated. In 2020, the Grosvenor mine explosion occurred despite substantial efforts by the inspectorate to improve gas management in underground coal mines since 2017. These events, which stopped production at these mines, may account for the dip in HPI frequency rate in 2020-21.

At Goonyella, the investigation found evidence suggesting gas drainage was operated to manage methane rather than the potential risk of spontaneous heating.[222] Anecdotal evidence from the MEU suggests that the focus on methane exceedances, and the imperative for mines to reduce them, led some mines to implement flawed gas drainage systems to remove methane from longwall faces. A practice developed in which mines drew methane by ventilation pull into active goafs. This was contrary to established industry safe practice over many years. The focus on methane concentrations – the fuel source – took the attention away from all possible ignition sources such as spontaneous combustion associated with the ingress of oxygen into active goafs.

The MEU made representations to the BOI that mines were pushing production beyond the capacity of gas drainage and ventilation systems to remove gas emissions. SSHRs raised concerns about the industry's emerging practice of pulling methane down an active goaf, a post-mining gas drainage method. This was contrary to past accepted practice. Anecdotal evidence from the MEU indicates similar concerns were documented in SSHR mine inspection reports, and ISHRs raised the issue in other mining forums but the industry ignored it. Worker representative concerns were countered with the argument that mines had undertaken risk assessments and were managing the identified risks associated with this practice. Consequently, ISHRs believed there were no grounds for issuing a directive to reduce risk to an acceptable level. The Johnston Review noted that RSHQ stakeholders, from a variety of backgrounds, argued strongly that the reluctance to collaborate was in part due to an internal informal 'policy' against sharing information on any incident that could be prosecuted.[223] The review also found that a misconception of 'regulatory capture' contributed to an unwillingness to collaborate with stakeholders.

> The Reviewer believes that for at least some Inspectorate staff misconstruction of 'regulatory capture' is leading to self-censoring of information sharing, and reduction in collaboration and engagement.[224]

Table 5-5 describes the safety management system failures at Grosvenor using the Ten Pathways model and the BOI report as a source. The BOI found evidence of Pathway 2 – a pattern of gas exceedances prior to the incident; Pathway 1 – a gas drainage system unable to cope with the gas generated due to Pathway 6– production rates, and Grosvenor's decision not to install pre-mining gas drainage system as they were planning to sell the mine (and it is expensive); Pathway 3 – risks assessment failed to identify and control the risk of explosion by spontaneous combustion; Pathway

[221] The Department of Natural Resources and Mines (2019*), Queensland Mines and Quarries Safety Performance and Health Report 2018-19,* 13.
[222] The Department of Natural Resources and Mines (2019*), Queensland Mines and Quarries Safety Performance and Health Report 2018-19*, 15.
[223] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 42 Retrieved from https://www.rshq.qld.gov.au/
[224] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 51 Retrieved from https://www.rshq.qld.gov.au/

4 – a management system weakened by extensive use of labour hire; Pathway 8 – workers who were afraid to report issues and a union marginalised (e.g., stopping the electronic exchange of inspection reports between the inspectorate and the union, a strength identified by the worker representation research conducted in 2014 and reported in Chapter 4); and Pathway 7 – a regulatory inspection regime inclined to accept the reassurance of management. We also identified evidence of Pathway 9 – lack of communication and trust between workers and their representatives, mine management, the union and the inspectorate in the section examining HPIs.

Safety performance and health reports identified frictional ignition at the longwall face. However, the safety performance and health reports reviewed did not identify the risk of spontaneous combustion as a particular issue. Although the direct cause of the Grosvenor explosion is not known, some believe the ignition source may have been spontaneous combustion. Anecdotal reports from the MEU indicate that an SSHR inspection report may have identified evidence of 'burning' at Grosvenor before the explosion. For reasons explained below, this was not communicated to the union.

Evidence given to the BOI by ISHR Stephen Woods explained that:

> From my perspective, it is problematic having a SSHR who is a labour hire employee because the turnover of labour hire employees results in turnover of SSHRs which means they lack experience in the role at the mine in question and can make it difficult to keep up with the person who holds office. Further, I am of the view that a SSHR should have security of employment so that they cannot easily be moved on for raising concerns about safety.

The SSHR at the Grosvenor mine at the time of the explosion was a non-permanent employee, and Stephen Woods stated he was not able to establish a relationship with SSHRs as he did not have their contact details; they changed frequently and were fearful of losing their job if seen talking to an ISHR. Mr Woods stated that he had never received an HPI notification from the SSHR at Grosvenor mine. Furthermore, he stated that some Site Senior Executives (SSE) contact ISHRs and some do not.

Stephen Woods gave evidence to the BOI that the relationship between the ISHRs and inspectorate had deteriorated around late 2019. In February 2020, an inspector sent an email advising that electronic distribution of Mine Entry Records would be delivered only to the SSE and mine operators, and that it would be up to the SSE how they distributed the records. Woods stated that prior to this, ISHRs regularly received investigation reports, inspection reports, and directives issued to SSEs. Mr Woods' evidence was that the only communication of HPIs (and SAs) to the ISHRs was via a periodical that contained facts and statistics about incidents during the previous month. Further, Mr Woods stated that no periodical sent by the inspectorate referenced gas exceedances.[225] This is an example of a failure in communication and trust between contractors, union ISHRs, and management (Pathway 9).

The BOI stated that exchange of information was an important part of the regulatory framework and collaboration between tripartite stakeholders is identified as one of the ways to achieve the objects of the Act – to protect the safety and health of mine workers.

[225] Affidavit of Stephen Woods to the Queensland Coal Mining Board of Inquiry, July 2020. Retrieved from https://www.coalminesinquiry.qld.gov.au/__data/assets/pdf_file/0009/1620981/Affidavit-of-Stephen-Woods.pdf

Information *sharing and engagement with worker representatives – Coal Mines and Mines and Quarries Safety and Health Advisory Committees*

On the matter of information sharing and engagement, the Queensland Transport and Resources Parliamentary Committee inquiry noted evidence about deteriorating relations with worker representatives:

> We also note the evidence regarding current tripartite working arrangements for the coal mining sector. It appears that slight misapprehensions can have significant ramifications, which will not resolve if, as some submitters demonstrate, there has been a recent decline in the level and nature of the consultations taking place between employers, workers and the regulator.

The inquiry report made two recommendations regarding tripartite working arrangements. The first was to achieve tripartite consensus on the full-time nature of the SSHR role, and the second was to establish communication mechanisms to improve the quality of tripartite communications.[226]

The Johnston Review concluded that while most stakeholders continue to see value in retention of CMSHAC and MSHAC there is general recognition that the effectiveness of the committees can be improved. Recommendations included reinstating in the legislation the requirement for the committees to review and provide advice on legislation, standards and guidelines and to report on these matters to the governing board. The Johnston Review also recommended that committees should prioritise information sharing with stakeholders, including through publication of committee minutes.[227]

The review also recommended better engagement and information sharing at the inspectorate level, after finding:

> More than 80% of all external stakeholders who participated in the Review, regardless of background, expressed deep frustration at what they saw as inadequate sharing of information by RSHQ. This was particularly true of those stakeholders who interacted with the mining inspectorates.
>
> and…
>
> Effective regulators also create opportunities to listen to regulated communities, and, importantly, to workers; and to learn from innovations in industry. Excellent regulators work with duty holders, worker representatives and others to improve outcomes.[228]

The review commented on the lack of information sharing on lessons learnt from investigations, and the lack of detail in safety alerts and bulletins and 'a more general "drying up" of information from RSHQ ', and that it was evident that:

[226] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. (Report No. 29, 57th Parliament), Queensland Parliament, Brisbane. 23.
[227] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 42 Retrieved from https://www.rshq.qld.gov.au/
[228] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 41 Retrieved from https://www.rshq.qld.gov.au/

> RSHQ does not take the same regular, and comprehensive, approach to defining and publicising compliance priorities, and to sharing the outcomes of targeted compliance activities as its NSW counterpart does.[229]

As noted above, the MEU expressed their frustration about the inspectorate ceasing electronic exchange of inspection reports and directives. Chapter 4 identified this practice to be a strength of the representative model operating in Queensland at the time of the research.

On a positive note, on 11 November 2025 the Coal Mining Safety and Health Advisory Committee (CMSHAC) held an industry forum to share information and learnings regarding gas and spontaneous combustion detection and control in a longwall goaf. The forum aimed to give stakeholders, including statutory position holders in underground mines, an opportunity to share leading practice, focusing on experiences and knowledge associated with managing goaf-related events, including spontaneous combustion.[230]

One issue raised at the forum was change management practices associated with the release of new regulations to assess and manage the impact of changes and unintended consequences. This issue pertained to the Coal Mining Safety and Health (Methane Monitoring and Ventilation Systems) Amendment Regulation 2020, which introduced the requirement for a 243A sensor to be located at the longwall return airway. As noted above, MEU worker representatives said this focused attention on methane exceedances on the longwall, and the desire to avoid exceedances led to the practice of ventilating the goaf. According to anecdotal evidence from the MEU, SSHRs and ISHRs had raised concerns about this practice.

One of the roles of the CMSHAC before the *RSHQ Act 2020* was to review legislation, regulations etc. Anecdotal evidence from the MEU indicated that in recent times consultation has occurred after the document had been drafted, with limited opportunity to change the provisions or advice – in essence, this was information given rather than a two-way consultation. The mines and quarries safety performance and health report 2019-20 stated:

> The 2019-20 reporting year saw significant effort deployed by the inspectorate to develop – in concert with industry and workers' representatives - -amendments to the legislation relating to gas management and ventilation in underground mines. The Coal Mining Safety and Health (Methane Monitoring and Ventilation systems) Amendment Regulation 2019 clarifies minimum requirements in methane monitoring, record keeping requirements and explosion risk zone signposting.[231]

The Johnston Review commented on the role of CMSHAC. Stakeholder views on the effectiveness of CMSHAC are represented by the following comments:[232]

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[229] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 40 Retrieved from https://www.rshq.qld.gov.au/

[230] Coal Mining Safety and Health Advisory Committee. (2026) *CMSHAC gas and spontaneous combustion management in a longwall goaf—Forum summary*. 33 https://www.qgcio.qld.gov.au/documents/information-access-and-use-policy

[231] Resources Safety and Health Queensland (2020) *Queensland mines and quarries safety performance and health report 2019-20.* Queensland Government. Publications qld.gov.au. 15.

[232] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 20-21. Retrieved from https://www.rshq.qld.gov.au/

> The Committees were originally designed to bring a tripartite lens to mining health and safety issues, with the aim of providing considered advice to the Minister on these. As indicated, with the advent of the current regulatory model the Committees' previously legislated function of periodically reviewing the effectiveness of legislation, regulations, and, in the case of CMSHAC, recognised standards was removed; and an explicit function of 'providing information to the Minister about the performance of RSHQ' was introduced.
>
> …
>
> A majority of current and former members felt that CMSHAC had failed to fulfill its potential due to: an excess focus on information items rather than matters for discussion and decision; lack of clarity as to CMSHAC's role in relation to RSHQ; and lack of agreement between CMSHAC and RSHQ on whether it remained appropriate for CMSHAC to review legislation, regulations and recognised standards. (It should be noted here that a previous Minister did actually direct CMSHAC to look at particular regulatory changes to 'get around' this dispute). Some stakeholders felt that RSHQ generally had shown disrespect for CMSHAC's role.

Considering 2025 CMSHAC forum discussions and views expressed by the MEU on the nature of consultation, the RSHQ's statement about consultation on the gas management and ventilation regulation 2020 (or 2019, as the quote above indicates) needs to be interpreted in this context. The forum observed that there had been no gas explosion after Moura in 1994 until 2018. A key legislative change in 2017 established reporting of a methane concentration exceeding 2.5% as a high-potential incident and set this as the level requiring workers to be withdrawn. Following this change, there have been 5-6 ignition events. The forum enquired whether the regulator reviewed unintended consequences arising from that change, noting that mines are required to do this as part of change management.[233]

Minerals mining and quarrying safety and health representation

Figure 5-18 shows that the five-year rolling average FIFR is higher for the minerals sector than the coal sector. However, underground coal mines have a higher five-year rolling average SAFR than underground mineral mines, while surface coal mines have a higher SAFR than surface mineral mines. Quarries have the highest SAFR with an increase in 2023-24 (see Figure 5-22). Mineral mines report fewer HPIs compared to coal mines and quarries.

Gas management (and respirable dust and crystalline silica) were primary focus areas for the coal sector in the safety performance and health reports. However, the main issues in minerals and quarrying were ground falls and falls associated with elevated work (falls of objects and people) and mechanical hazards such as entanglement (see Figure 5-21). Respirable crystalline silica exposure and mine workers' dust lung disease (MDLD) were the primary focus of qualitative commentary in these reports. Equipment and vehicles falling into voids was also a recurring incident type in Western Australian underground metalliferous mines. In Queensland, a double fatality occurred at the Dugald River zinc mine when a light vehicle and a drill rig fell into a stope void.

Queensland minerals and quarrying mine workers are represented by the Australian Workers' Union (AWU). The Queensland ISHR counterpart in these sectors, the District Workers Representative (DWR), is located in the Inspectorate and funded by the government. A DWR participant in our focus

[233] Coal Mining Safety and Health Advisory Committee. (2026) *CMSHAC gas and spontaneous combustion management in a longwall goaf—Forum summary*, 12-13. Retrieved from https://www.qgcio.qld.gov.au/documents/information-access-and-use-policy

group indicated that the DWR has a cooperative and constructive relationship with Site Senior Executives and mine management.

Evidence from the Johnston Review indicated that the union representatives on the MQSHAC were generally satisfied with the committee's achievements.

> Union representatives were most positive about MSHAC's achievements, with work on competencies, mine worker health surveillance examinations, and guidance notes being highlighted as examples of successful and effective collaboration.[234]

However, the focus group identified issues in the relationship with RSHQ and the inspectorate. The DWR who participated in the focus group stated:

> We're, we're, we're, we're the underdog because we're not elected by them, and we're not puppets on a screen.
>
> ….
>
> Sort of independent in there. They don't like us. Also, we haven't got a university degree. We've got more qualifications now. Chief inspector and deputy inspector have got no qualifications, but they made it up to there. But don't forget about that. You've got to have a university degree apparently to get ahead, well I'm sorry I'll differ to that.

The Johnston Review made the following summary points regarding the Mineral Mines and Quarries inspectorate:

> …diverse opinions are shut down and are not open to constructive challenge. It is clear who are the 'favourites' and who are not…
>
> They routinely show disrespect to District Workers Representatives, and more junior [staff].[235]

Concluding observations

Queensland retains stronger participative structures than other states in the mineral and quarrying sector. DWRs appear to provide trusted, hands-on worker advocacy beyond inspectors' line of sight, including practical support for injured workers and nuanced understanding of work realities. This uniqueness is significant for safety performance and the broader analysis. However, the participative structure appears to be under threat. The empirical evidence of fatal injuries and serious accidents indicates that safety and health performance is weakening, particularly in the coal sector. Our conclusions from the qualitative evidence suggest three factors underlying the weakening performance. First, safety management systems, particularly mechanisms which support hazard reporting and worker representation, have been undermined by contracting and labour hire. Second, cooperation and information sharing between the inspectorate and worker representatives have eroded; and third, policy decisions have eroded the quality of consultation and cooperation within the safety and health consultative committees.

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[234] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel], 23. Retrieved from https://www.rshq.qld.gov.au/

[235] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel], 32. Retrieved from https://www.rshq.qld.gov.au/

The rolling five-year average FIFR trended down until 2014, then plateaued or increased slightly. This upward trend was evident in underground coal mines. With the recent fatalities in 2024-25 and 2025-26, this trend is likely to continue. SAFRs have trended up since 2013-14, which is more evident in quarries and underground coal mines. This upward trend is more marked after 2021, coinciding with changes to the governance structure of the newly formed RSHQ and deteriorating relations between worker representatives, the inspectorate, and the regulator.

The upward trend in Queensland SAFRs contrasts with NSW, where the coal SIFR trended down after 2014, when the NSW Work Health and Safety (Mines and Petroleum Sites*) Act* came into force. The NSW legislation retained mining-specific representative arrangements in coal mines but not metalliferous mines. The *Work Health and Safety Act 2011* provided for metalliferous mine workers' representation. This raises questions about why Queensland's coal mining safety and health performance has deteriorated when both states have similar representative frameworks comprising ISHRs and SSHRs.

One likely explanation for the differential performance between Queensland and NSW coal is the effectiveness of the three-tier representative regime in NSW, comprising workgroup-elected HSRs, SSHRs and ISHRs. NSW coal mine focus group participants also reported a good working relationship with the inspectorate. Another explanation for the Queensland performance is the deteriorating relationship between worker representatives in the coal sector and the inspectorate. The third explanation is the impact of contracting and labour hire on safety and health management, particularly reporting and representative mechanisms (the proportion of contractors is lower in NSW than in Queensland). The final explanation is the coverage. There are four ISHRs covering 26,000 NSW coal miners and three covering 48,000 Queensland coal miners.

Evidence from Queensland mines and quarries safety performance and health reports, and the Queensland Coal Mining Board of Inquiry, indicates that contracting and labour hire, the impact of market expansion and contraction, and quality of supervision are prominent issues that negatively affect workers' safety and health. Research around contracting and non-permanent labour has found that these practices fragment and weaken safety management systems, particularly around reporting safety and health hazards and incidents. This research was highlighted in Quinlan's report to the BOI on labour hire and changed work arrangements in the industry.[236]

The BOI found that a high proportion of workers at Grosvenor and other mines in the Bowen Basin were contractors (including labour hire workers). The BOI found clear evidence that this labour arrangement was entrenched in the Queensland coal mining industry.[237] Evidence presented to the inquiry linked under-reporting of methane gas exceedance with the high proportion of contract and labour hire workers in the workforce. Non-permanent workers were also reluctant to report for fear of losing their jobs or not obtaining permanent employment with the mine operator.[238]

Regarding non-permanent labour, contractors and labour hire workers in Queensland coal mining make up 53% of the workforce, whereas in NSW this proportion is 27%. The evidence of Stephen

[236] (1) Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, 58. (2) Queensland coal mining Board of Inquiry Report Part I (2021), 378 – 381.
[237] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II.* 34.
[238] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II*. 403.

Woods given to the BOI in 2020 clearly describes how labour hire workers and labour hire SSHRs undermined the cooperation and information sharing between the union ISHRs and the Mines inspectorate. This coincided with an upward trend in SAFRs, particularly in underground coal mines (Figure 5-22). Non-permanent work can undermine effective communication and trust between management, workers, and their representatives, which is essential in high-risk environments.

Erosion of co-operation between the tripartite stakeholders in the aftermath of the Grosvenor mine explosion raises serious concerns about RSHQ's commitment to fostering tripartite collaboration to support the objectives of the Queensland CMSHA. Our research indicates that relationships between stakeholders in the minerals and quarrying sectors are more constructive (see Chapter 7). The mineral mines DWR participant indicated that co-operative relations and information-sharing arrangements between Site Senior Executives, DWRs, SSHRs, and mine management were beneficial to safety and health at their mines. Although there is some evidence of a lack of respect for DWRs within the inspectorate,[239] the DWR interviewed as part of this project said he generally had a good relationship with the inspectors, but he had issues with the RSHQ.

Management of gas drainage in the coal sector, before and after the Grosvenor and Moranbah North mine explosions, exposed problems with consultation at the industry level, and the Johnston Review examined this issue in detail. The review presented evidence of this issue within the CMSHAC and, to a lesser extent, within the MQSHAC, and between the inspectorate and industry and worker stakeholders. The CMSHAC forum on gas drainage in 2025 raised the issue of unintended consequences of legislative change and the lack of change management procedures applied to such changes, in this case regulations around monitoring and reporting methane gas exceedances. Anecdotal evidence from the MEU suggests that worker concerns about the practice of ventilating goafs to reduce methane gas on the longwall had been raised at mine and industry level. Further anecdotal evidence indicates that consultation on legislation, etc., was limited to information provided by the RSHQ rather than considering stakeholder feedback. As emphasised in the Johnston Review, best-practice regulators collaborate with duty holders, worker representatives, and others to improve outcomes. Representatives of all stakeholders 'expressed deep frustration at what they saw as inadequate sharing of information by RSHQ, and this was particularly emphasised by stakeholders who interacted with the mining inspectorates.'[240]

Finally, notwithstanding potential flaws in Brady's recommendation that the industry should combat complacency by adopting the principles of High Reliability Organisations, his general conclusion, which goes to the complexity of causation, bears consideration. Brady recommended that incident investigations avoid oversimplifying causes by examining interactions among all contributing factors. He concluded that fatality rates will remain the same if the industry did not apply a different approach to safety. Adopting the tenets of High Reliability Organisations, such as a willingness to hear bad news and guard against oversimplification, is a worthy goal; however, the risk is that production pressure and constant change do not lend themselves to successful implementation of HRO principles.[241]

[239] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel], 41. Retrieved from https://www.rshq.qld.gov.au/

[240] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel], 41. Retrieved from https://www.rshq.qld.gov.au/

[241] Leveson, N., Dulac, N., Marais, K., & Carroll, J. (2009). Moving Beyond Normal Accidents and High Reliability Organizations: A Systems Approach to Safety in Complex Systems. *Organization Studies, 30*(2-3), 227-249. doi:10.1177/0170840608101478

Rather than looking at incident causation, we should perhaps focus on how incidents are prevented. As highlighted in the introduction to this chapter, experts on worker representation – David Walters, Michael Quinlan, Richard Johnstone, and E. Wadsworth – described the tripartite working arrangements acting as a 'prevention triangle'.[242] The review of safety and health performance in Queensland highlights the importance of tripartite collaboration in achieving the objects of safety and health legislation. Based on the submissions presented to the review of Queensland health and safety performance, non-permanent labour arrangements appear to be a key factor underlying the deteriorating safety and health performance. This issue, together with the weakening of collaborative practices between worker representatives and the inspectorate (in the coal sector in particular), has, in our view, undermined the objects of the regulatory framework established under the CMSH and MQSH Acts to achieve safe and healthy workplaces.

[242] D Walters, M Quinlan, R Johnstone and E Wadsworth, 'Representing miners in arrangements for health and safety in coalmines: A current study of practice', Economical and Industrial Democracy 2019, Vol. 40(4) pp 976-996.

Western Australia

As outlined in the introduction, Chapter 5 examines incidents and other relevant information regarding mine health and safety performance by focusing on worker health and safety representatives' contribution to achieving healthy and safe workplaces in the WA mining industry. The *Work Health and Safety Act 2020 (WA)* states its main objective is 'to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by … (a) providing for fair and effective workplace representation, consultation, cooperation and issue resolution ...and (b) fostering cooperation and consultation between workers; (ii) persons conducting businesses or undertakings (PCBUs); unions and employer organisations'. This objective was similarly expressed in the MSIA 1994.

Background – Safety and health in the Western Australian mineral industry

In Western Australia, mining legislation historically provided for a workmen's or employees' inspector, elected by the workers, situated within the inspectorate and paid for by the government. A role for Safety and Health Representatives (SHRs) was established in 1990, and as outlined in Chapter 3, the employees' inspector was required to liaise with HSRs.

In 2004, following several fatal incidents at BHP Billiton mines and facilities in the Pilbara, the Western Australian Government commissioned an inquiry into OHS systems and practice at BHP.[243] Mr Mark Ritter of the Crown Solicitor's Office was commissioned to conduct the review. Professor Neil Gunningham was asked to assist the Ritter Review by evaluating BHP Billiton's OHS systems and practices. He examined how well BHP's systems aligned with the characteristics of an effective OHS management system. Characteristic four dealt with active worker involvement. In this regard, Gunningham discussed BHP's emphasis on direct participation and behaviour-based safety strategies, stating: 'What is strikingly absent from the submission is any serious examination of the role of trade unions, or the impact of industrial relations issues on employee involvement.'[244] The MEU submitted that BHP failed to enable elected representatives in accident investigations and the opportunity to accompany the Employees' Inspector on inspections. The MEU further submitted that 'BHP's anti-unionist and anti-collectivist industrial relations agenda is driving and shaping its approach to safety. Legitimate collective process and structures for employee involvement are ignored or manipulated because BHP does not support collective representation.'[245]

Ritter recommended the MSIA and *Mines Safety and Inspection Regulations* 1995 should be reviewed in consultation with industry and union groups.

[243] Ritter, M (2004). *Ministerial inquiry into occupational health and safety systems and practices at BHP Billiton and Boodarie Iron and other matters*. Department of Industry and Resources. Western Australian Department of State Development.
[244] Gunningham, N. (2004). The Gunningham report (Appendix 4). In T. Ritter (Ed.), *Ministerial inquiry into occupational health and safety systems and practices at BHP Billiton and Boodarie Iron and other matters*. Department of Industry and Resources. Western Australian Department of State Development. 12.
[245] Gunningham, N. (2004). The Gunningham report (Appendix 4). In T. Ritter (Ed.), *Ministerial inquiry into occupational health and safety systems and practices at BHP Billiton and Boodarie Iron and other matters*. Department of Industry and Resources. Western Australian Department of State Development. 12.

> …and should include consideration of whether the MSIA and the Regulations should be amended to enhance interaction between inspectors and safety and health representatives at work sites.[246]

In response to this recommendation, the MSIA was amended to require inspectors to liaise with elected SHRs and the site safety committee, allow SHRs to accompany an inspector during a workplace inspection, and improve complaints handling.

In 2009-10, Commissioner Stephen Kenner conducted a statutory review of the MSIA 1994. The Kenner review coincided with the national harmonisation process and considered how the WA mines legislation could better align with the model OHS Act.[247] This review, as did the Ritter Review, examined the Act's framework for systematic risk management and worker representation.

Issues addressed in Kenner's review were foreshadowed five years earlier by Neil Gunningham in his Working Paper, Safety Regulation and the Mining Inspectorate – Lessons from Western Australia:

> In particular it examines the extent to which the Department of Industry and Resources (DoIR) inspectors rely on detailed prescriptive requirements to the detriment of performance and systems based approaches; the extent to which the DoIR audit process fails to monitor adequately the effectiveness of OHS management systems; the extent to which DoIR inspectors failed to consult adequately with worker representatives; the limitations of the inspectorate's current approach to enforcement action; and whether the inspectorate was sufficiently independent of the companies it regulated.
>
> …….
>
> The article argues that a failure to take account of developments in 'mainstream' OHS legislation has resulted in an approach to inspection and enforcement that falls so radically short of 'best practice' as to have seriously detrimental consequences for OHS. Although the implications of the British Robens Report of 1972 gradually influenced and shaped the mainstream OHS legislation of all the Australian jurisdictions and its enforcement, it had far less impact on the mining sector.[248]

Commissioner Kenner recommended that the industry adopt a risk management approach to mining health and safety. Kenner also recommended strengthening the role of health and safety representatives (HSRs) and consultative processes between SHRs and mine inspectors. The MEU made a submission to the Review requesting that the mining adoption of union-employed check inspectors be adopted in WA. Kenner, however, recommended that workgroup-based SHRs be maintained, rather than adopting the NSW coal and Queensland mining model of a district- or industry-based worker representative (ISHR). He also recommended that the Employees Inspector should be retained and the mines inspectorate strengthened by increasing the number of inspectors. His argument

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[246] Ritter, M (2004). *Ministerial inquiry into occupational health and safety systems and practices at BHP Billiton and Boodarie Iron and other matters*. Department of Industry and Resources. Western Australian Department of State Development. 380.

[247] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth.

[248] Gunningham, N. (2005), *Safety Regulation and the Mining Inspectorate – Lessons from Western Australia,* Working Paper 33, The National Research Centre for Occupational Health and Safety, Australian National University, Canberra*,* 1-2.

against adopting the mining-specific model of representation with union-elected district check inspectors was based on declining union membership and the belief that a union representative could not represent the interests of non-union workers.[249] However, current arrangements in Queensland and NSW provide evidence to the contrary, where union-paid ISHRs equally represent union and non-union workers' health and safety interests.

However, in 2014 the *Mine Safety Inspection Amendment Act* removed the roles of both assistant inspector and employee's inspector. This essentially eliminated the two-tier system of worker representation, and although Kenner envisaged SHR support would be provided by inspectors, in practice this relationship has not been effectively established, as discussed elsewhere in the report.

Section 53 of the Act was amended by:

> (1)(g) delete "employees, employers, and employee's inspectors in accordance with section 25," and insert: employees and employers

As noted in Chapter 3, union organisers reported that the employee's inspector was a valuable support for workplace representatives. However, Kenner argued that the deletion of the employee's inspector was justified by the significant decline in union presence in metalliferous mining.

The recommendations addressing safety management systems and hazard management plans were not formally incorporated into legislation until 2020, when the *Work Health and Safety Act WA* came into force. A separate set of mine safety regulations was retained and revised in 2022. The WHS Act WA strengthened the role of HSRs by giving them the power to issue provisional improvement notices (PINs) – reflecting the model Act.

In 2010, in response to the Kenner's review, the WA Department of Industry and Resources (DOIR) implemented the Reform and Development at Resources Safety (RADARS) strategy, funded by a levy established by an amendment to the regulations. However, the risk management approach recommended by Kenner and the recommendation to implement a Mine Safety Management System were not formalised in legislation until the WHS Act (WA) 2020. Notwithstanding, the RADARS strategy shifted the focus from prescription to risk management.

RADARS also committed to supporting positive cultural change, focusing on collaboration and participation in delivering safety and health programs.[250] This is strikingly similar to regulator concerns about fatalities in Queensland in 2018, where, in response to the Brady Review, the RSHQ implemented the Safety Reset program. Mine safety reviews in NSW in 2005 and 2014 also resulted in changes in compliance and enforcement policy, oversight of safety management system implementation, and worker consultation. The *Wilkinson Fatality Review* in 2014 identified low-level controls as a common underlying causal factor, and recommended the regulator undertake targeted assessments of critical controls for major mining hazards. NSW, Queensland and WA have all identified an overreliance on administrative controls as a contributing factor to incidents but continued to rely on voluntary compliance.

[249] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth.179.
[250] Kenner, S. J. (2009), *Review of the Mine Safety and Inspection Act 1994*, Report to Western Australian Minister for Mines and Petroleum, Perth.148.

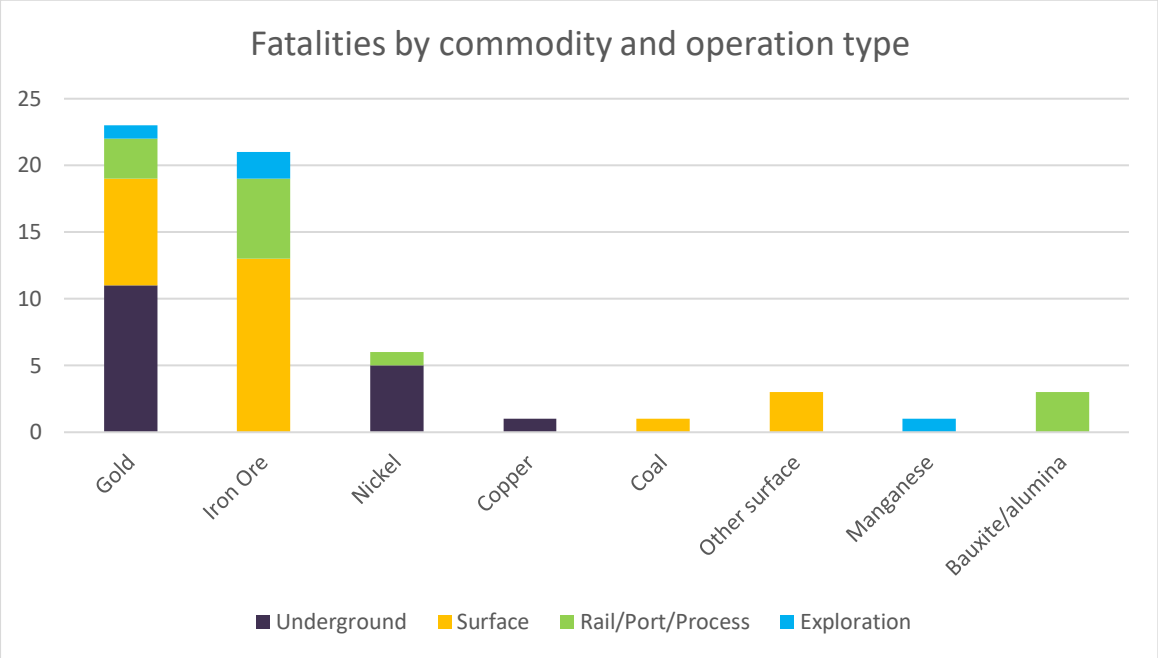
This review of WA mine health and safety performance examines how the mining industry has used, or failed to use, HSRs to comply with the object of worker participation in the *Mines Safety and Inspection Act 1994* and the *Work Health and Safety Act 2020* (WA).

Results

Fatal injuries – underground and surface mining and surface facilities

There were 58 fatalities in the Western Australian mining industry between 2004-05 and 2023-24. The following figures were constructed using data published in the WA Safety Performance Report series. Figure 5-31 shows that there were more fatalities at surface metalliferous mines than underground metalliferous mines. There are two operational coal mining companies near Collie in WA – Premier Coal (operated by Yancoal and Griffin Coal), and there was one fatality in coal mining over the reporting period covered in the review. Most surface fatalities occurred at iron ore operations, including processing plants and port and rail facilities. Surface fatalities occurred at surface gold mine operations. Figure 5-31 shows that gold and iron ore mines have a higher fatality rate than other types of metal mines (due to the greater number of mines).

Figure 5-31: Western Australian mining fatalities by commodity and operation type – 2005-06 to 2023-24



In underground gold and nickel mines, fall of ground, fall over an edge into a stope, and falling from a height were hazards associated with fatalities. In surface mines, vehicle interactions, unplanned mechanical movement or unintended action and being struck by falling objects were the most common fatal hazards. Iron ore is mined using open-cut mining methods. Most of the fatalities in iron ore mining were associated with maintenance activities, and fitter/machinist was a common occupation. One underground gold mine fatality and two exploration fatalities were associated with hot working environments.

Figure 5-32 shows the number of fatalities in underground and surface operations over a 20-year period. The incidence rate[251] has declined since 2018-19. In response to a 'spike' in fatalities in 2008-09 and 2010-11, the Department of Mines and Petroleum (DPM /the regulator at that time) undertook a review of all fatalities occurring between 2000 and 2012. The review noted several fatal incidents involved work being performed outside the scope of established procedures without supervision. The report identified recurring fatal hazards including falling while working at height, being in the line of fire of objects or suspended loads and being struck or crushed by machines and heavy components. The report also noted that three of the top 10 critical activities involved runaway vehicles, vehicles over edges, and vehicle collisions.

The reduction in the fatal injury incidence rate in 2017-18 coincided with the Department of Mines Industry Regulation and Safety (DMIRS/the regulator at that time) publication of hazard registers for mining fatalities and serious injuries. The registers contain information from investigations regarding the key hazards that contributed to fatalities and serious incidents, including root causes and preventative measures that could have averted the incident. In 2019-20, DMIRS focused on examining if mine sites were identifying and managing recurring exposure to hazards and engaging with health and safety representatives.

Figure 5-32: Western Australian fatalities by operation type and all mining annual incidence rate.

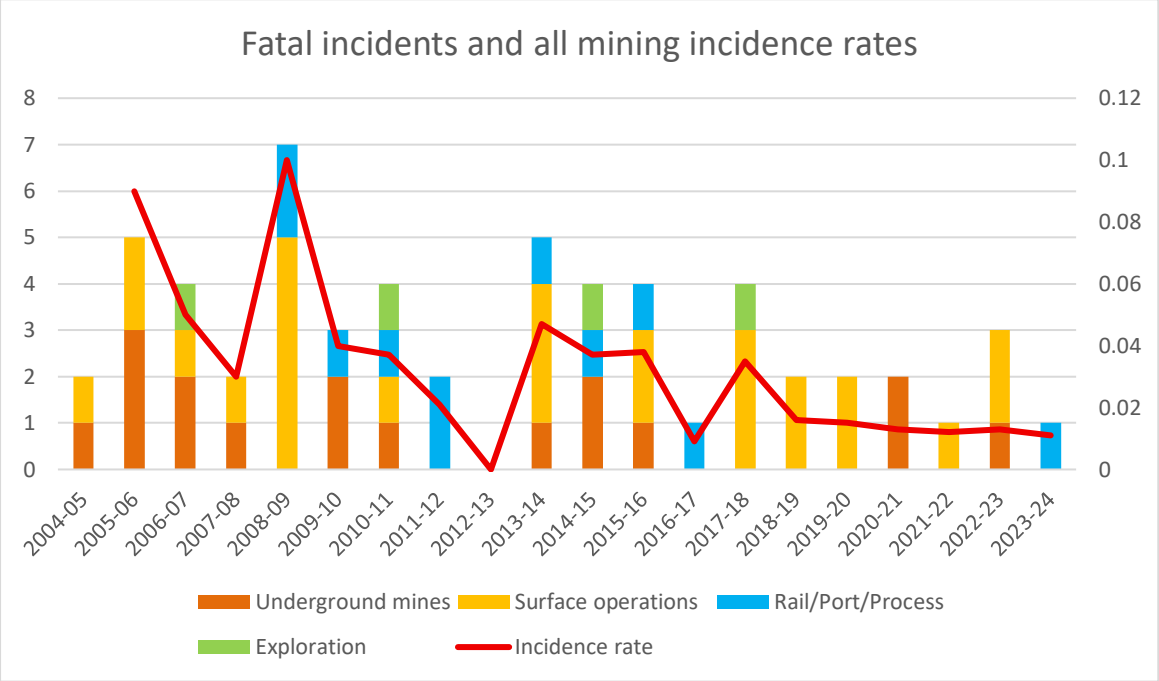


Figure 5-33 compares incidence rates in underground metalliferous mines against surface operations and coal mining. The coal mining incidence rate reflects one fatality, which occurred in an open-pit coal mine in 2018. Although more fatalities occur in surface operations, the incidence rate is higher in underground mining operations (due to fewer hours worked in underground mines). The incidence rate in underground metalliferous mines dipped sharply after 2010 and may be associated with the implementation of the risk-based approach to health and RADARS strategy, but there could be other reasons.

[251] WA uses incidence rate (fatalities per 1,000 workers) rather than frequency rates (per 1,000,000 hrs worked).

Figure 5-33: Western Australian fatality incidence rates for underground and surface mines or facilities

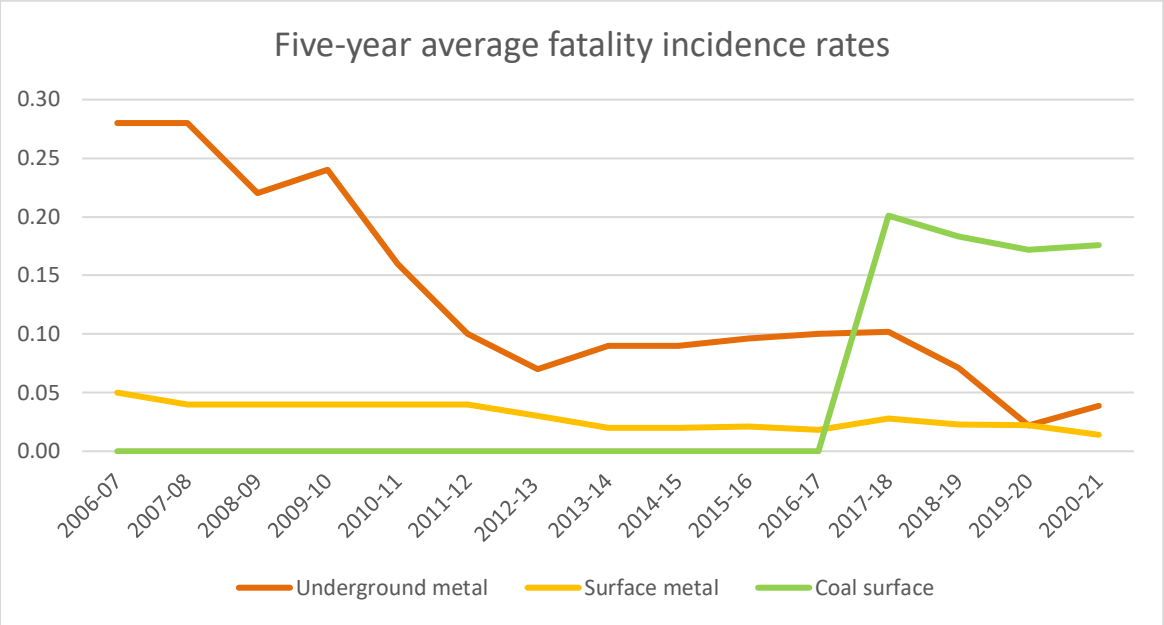


Figure 5-34 shows the nature of employment of workers who were fatally injured – contractors or directly employed workers.

Figure 5-34: Western Australian fatalities and type of employment – 2007-08 to 2023-24

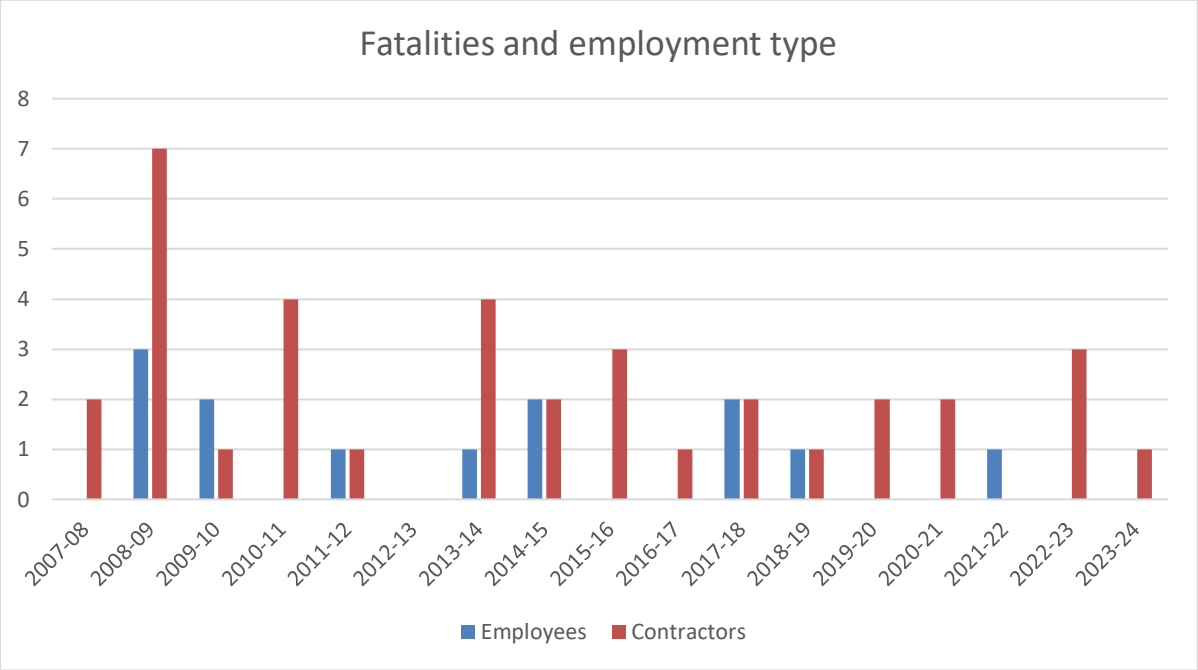
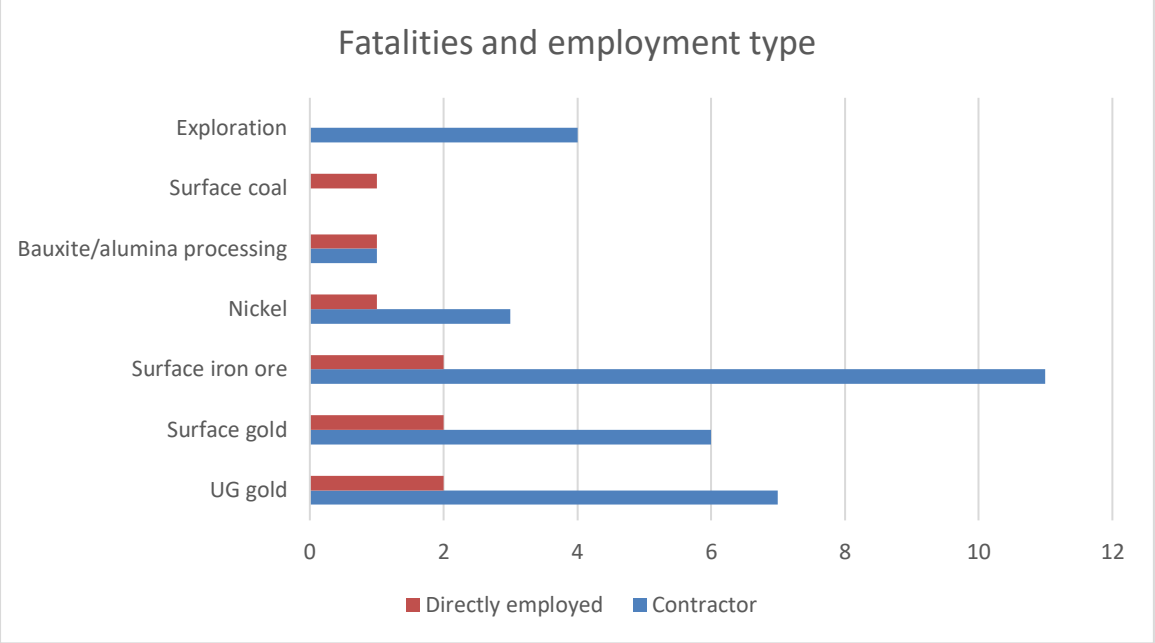


Figure 5-35 shows the comparative number of contractor and direct employee fatalities by commodity mined. In this sample of 41 incidents, 78% of workers were employed by contractors or labour hire companies or were subcontractors.

Figure 5-35: Western Australian mining fatalities and employment type – 2007-08 to 2023-24



Serious injuries – underground and surface mining and surface infrastructure

Serious injuries are defined as an injury that results in the person being disabled for two weeks or more. Because the definition of serious injury changed after the implementation of the WHS Act (WA) in 2020, and the performance report format changed, serious injuries after 2020 are not included. Figure 5-36 shows that the overall serious injury incidence rate has plateaued or declined only slightly, except in coal mining, where the rate has increased. Overall, underground mining had a higher incidence rate than surface operations, and of the mining sectors, coal consistently had the highest serious injury incidence rate. The higher coal serious injury incidence rate may be explained partially by return-to-work practices in the sector, as suggested by the lower disabling injury frequency rate shown in Figure 5-37. Note: Data on nickel, copper, bauxite, etc., were difficult to extract from the performance reports, so they are not shown in this chart.

Figure 5-36: Western Australian serious injury incidence rates – underground, surface, and coal mines

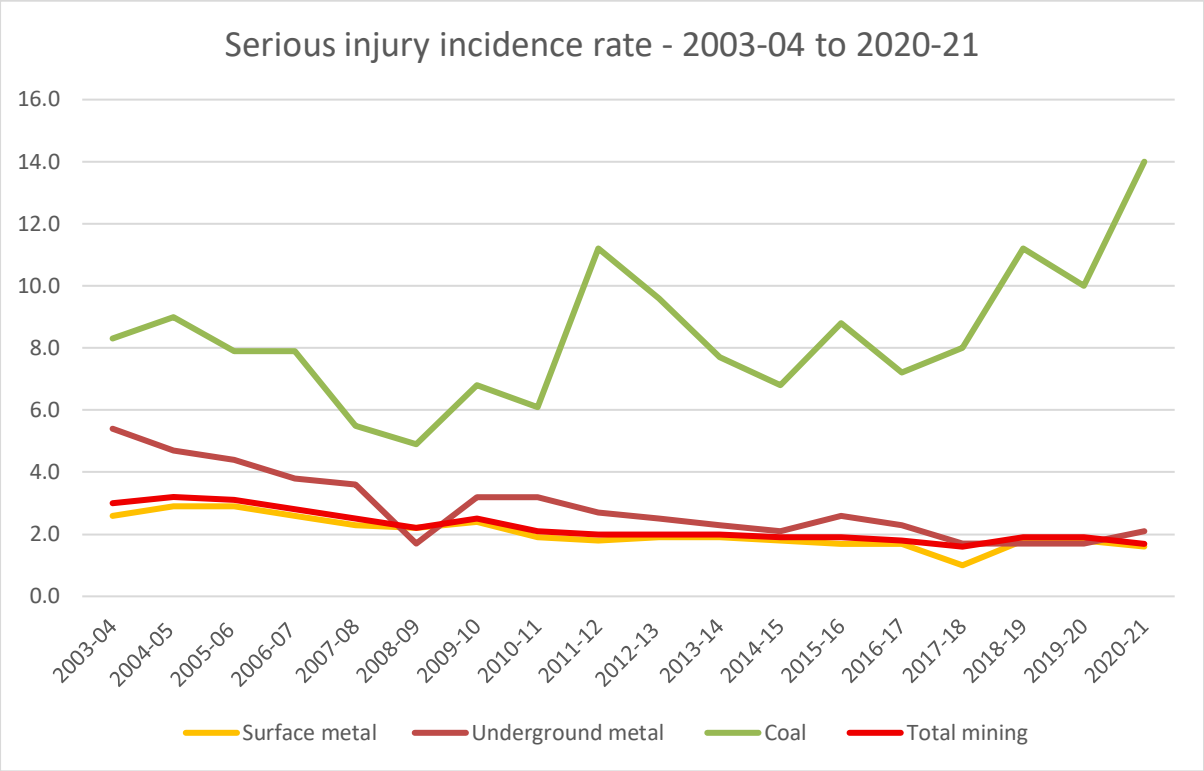
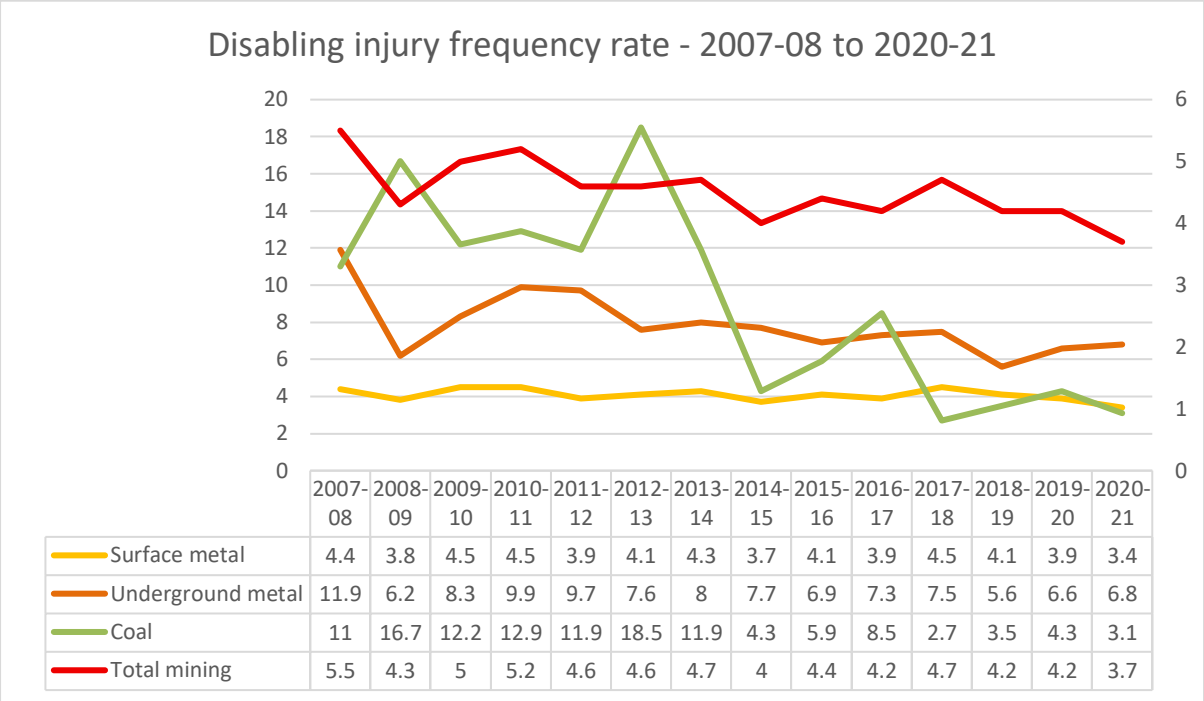


Figure 5-37 compares industry performance by operation type and sector using Disabling Injury Frequency Rates (DIFRs). A disabling injury results in the person being unable to perform their usual duties or being restricted in the range of activities or hours worked in their usual role.[252] The department began collecting data on disabling injuries around 2001 after concerns that companies were manipulating lost-time injuries by keeping people at work and assigning them other duties.

Figure 5-37 indicates the disabling injury frequency rate declined in the coal mining sector but remained steady in underground and surface metalliferous operations.

[252] This measure was later replaced by Restricted Work Injury (RWI) defined as a 'work injury' (not LTI) that 'results in the injured person being unable to fully perform his or her ordinary occupation (regular job) any time after the day or shift on which the injury occurred, regardless of whether or not the person is rostered to work, and where alternative or light duties are performed or hours are restricted'.

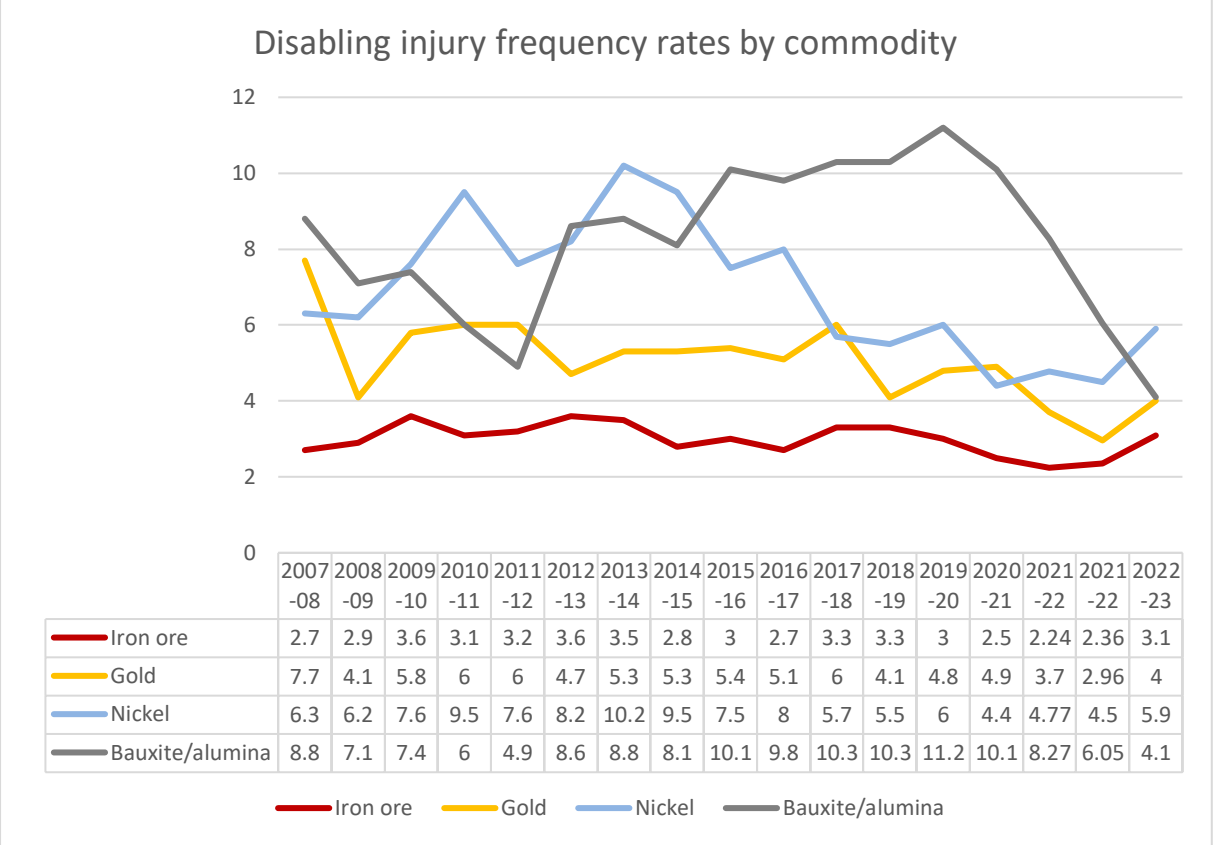
Figure 5-37: Western Australian disabling injury frequency rates – underground, surface, and coal mines



	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Surface metal	4.4	3.8	4.5	4.5	3.9	4.1	4.3	3.7	4.1	3.9	4.5	4.1	3.9	3.4
Underground metal	11.9	6.2	8.3	9.9	9.7	7.6	8	7.7	6.9	7.3	7.5	5.6	6.6	6.8
Coal	11	16.7	12.2	12.9	11.9	18.5	11.9	4.3	5.9	8.5	2.7	3.5	4.3	3.1
Total mining	5.5	4.3	5	5.2	4.6	4.6	4.7	4	4.4	4.2	4.7	4.2	4.2	3.7

Figure 5-38 shows that nickel (largely underground) and bauxite and alumina (refineries) have a higher disabling injury frequency rate than iron ore and gold mining.

Figure 5-38: Western Australian disabling injury frequency rate by commodity mined



	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2021-22	2022-23
Iron ore	2.7	2.9	3.6	3.1	3.2	3.6	3.5	2.8	3	2.7	3.3	3.3	3	2.5	2.24	2.36	3.1
Gold	7.7	4.1	5.8	6	6	4.7	5.3	5.3	5.4	5.1	6	4.1	4.8	4.9	3.7	2.96	4
Nickel	6.3	6.2	7.6	9.5	7.6	8.2	10.2	9.5	7.5	8	5.7	5.5	6	4.4	4.77	4.5	5.9
Bauxite/alumina	8.8	7.1	7.4	6	4.9	8.6	8.8	8.1	10.1	9.8	10.3	10.3	11.2	10.1	8.27	6.05	4.1

Discussion

In 1991, an inquiry report into mining health and safety in WA concluded that the decline in injuries and fatalities in the WA mining industry was due to the reduction of persons involved in underground mining and that improvement was 'thus the accidental by-product of the increase in less hazardous kinds of mining rather than the result of improved safety management'. General OHS regulation adopted the Robens framework, including general duties, risk management, HSRs and OHS committees, in the 1980s. In contrast, the MSIA 1994 failed to update the principal mining act, instead introducing amending regulations and other voluntary guidance, although it did adopt SHRs and OHS committees. The legislation operated in parallel to the general OHS legislation.

The Ritter Review of the MSIA in 2004, which included a report by Gunningham, and the Kenner Review of the MSIA in 2009 identified two issues of relevance. First, the legislation failed to mandate a risk-based approach, and the inspectorate failed to apply a risk-based approach to inspection. The second issue was a lack of engagement with SHRs. Despite these shortfalls in the regulatory framework and the overly prescriptive approach to inspection in the early 2010s, Figures 5-33 and 5-36, show that the downward trend in fatal and serious injury incidence rates, which commenced in the 1990s, continued into the 2000s, with upticks in 2005-06, 2008-09, 2013-14 and 2017-18. The continued downward trend may be attributed to increase automation in both underground and surface mining (see discussion below). However, the number of fatalities and the number of contractor fatalities remain unacceptably high.

Contracting/labour-hire, union membership and worker health and safety representation

In his report prepared for the Ritter Review of OHS systems and practice of BHP Billiton, Gunningham noted a distinct absence of reference in BHP documentation to union involvement in worker representation.[253] Several other pieces of evidence suggest that other mining companies operating in the Pilbara and Goldfields in WA shared an individualist, rather than collective, approach to worker representation. Our review and analysis of significant incidents identified media comments by unions about worker intimidation for reporting safety incidents and concerns (with no reference to SHRs). The NSW review in this report revealed evidence of regulatory impediment of an AWU WHS entry permit holder with regards to representation of non-union contractors concerning safety issues at Newcrest mines in Orange.[254] Newcrest was also the operator of a gold mine in the WA Goldfields (Telfer mine) at that time and presumably adopted the same individualist approach to worker representation. This evidence comes from the MARS Landmark report, which surveyed worker self-reported compliance and participation behaviour without reference to the role of HSRs or union involvement in participation.[255] Later, in 2023, the Department of Mines Industry Regulation and Safety (DMIRS) announced a focus on involvement of HSRs by PCBUs. Like Kenner, our 2009 WA focus

[253] Gunningham, N. (2004). The Gunningham report (Appendix 4). In T. Ritter (Ed.), *Ministerial inquiry into occupational health and safety systems and practices at BHP Billiton and Boodarie Iron and other matters*. Department of Industry and Resources. Western Australian Department of State Development. 12.

[254] *Portfolio Committee No.2 – Health, Report No.63 Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales,* Legislative Council of NSW, Sydney, December 2023, 50.

[255] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 144.

groups reported minimal engagement with the inspectorate, despite the *Mine Safety Inspection Amendment Act* 2009 mandating inspector engagement with SHRs.

In 2012-13, the then Department of Mines and Petroleum (DMP) stated:

> For the first time, the mining industry achieved an average employment level above 100,000. Thus, the steady performance in many of the indicators has been achieved with a less experienced and more transient workforce, often working on very large construction projects ... this has exposed workers to changing risk profiles, placing significant demands on the management of safety as workplaces adjust.[256]

A review of the WA industrial relation system in 2018 reported that union membership in WA had declined from 16% in January 2011 to 11% in 2016 and was substantially lower than all Australian union membership, which sat at16% in 2016[257] (in 2022, it was reported to be as low as 10%).

Notwithstanding the steady safety performance noted by DPM in 2012-13, in 2013-14, five mine workers lost their lives in work-related accidents, which the DPM described as 'a stark contrast to the outcome for Western Australian mining operations in 2012-13'. Four of the five workers fatally injured in 2013-14 were employed by contractors or labour hire.[258] Figure 5-34 shows the number of contractors fatally injured between 2007-08 and 2023-24, and Figure 5-35 indicates that 78% of workers fatally injured between 2007-08 and 2023-24 were contractors.

In 2010, unions called for a Parliamentary Inquiry following several fatal incidents. However, this was rejected by the Minister for Mines and Petroleum, who claimed that the new, risk assessment-based, cost-recovery model was designed to achieve safer working conditions for WA miners by delivering better safety standards.[259] Kenner's Recommendation 9 stated:

> That implementation of a risk management model to safety and health regulation be implemented by a combination of amendments to the MSI Act and enactment of new regulations.[260]

However, the WA government did not implement Kenner's recommendation to develop a risk-based legislative regime for the WA mining industry, including the requirement to develop safety management systems and major hazard management plans as in other state jurisdictions until 2022, when the *Work Health and Safety (Mines) Regulation* commenced. This requirement was managed systematically through fragmented, specific hazard plans.

The government implemented instead the *Mines Safety and Inspection Levy Regulations 2010* to fund the RADARS strategy. In 2015, after several fatalities in 2013-14, the unions again called for a Royal

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[256] Department of Mines and Petroleum, 2014, *Safety performance in the Western Australian mineral industry – accident and injury statistics 2012-13*. Resources Safety, Department of Mines and Petroleum, Western Australia, 45.

[257] Ritter M. and Price S. (2018) *Ministerial review of the state industrial relations systems. Interim report (2018)* Department of Mines, Industry Regulation and Safety, Western Australia. 64-65.

[258] Worker and union concerns were identified in AI searches initially carried out to identify the employment status of workers fatally injured and commodity mined as this was consistently included in DMIRs reports.

[259] See media report https://www.wa.gov.au/government/media-statements/Barnett%20Liberal%20National%20Government/Minister-rejects-union%2C-Labor-calls-for-parliamentary-inquiry-into-mine-safety-20100806

[260] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 198.

Commission into mine safety.[261] The WA Minister for Mines and Petroleum denied that the incidence of fatalities had risen and rejected union demands. However, despite the overall decline or plateau in fatality rates, contractor fatalities outnumbered directly employed mine worker fatalities between 2007-08 and 2023-24. In the context of the high number of contractor deaths, DMP raised concerns about contractor management and supervision.

In several fatal incidents involving contractors, union representatives (or organisers) identified and reported safety concerns at the site before the fatality occurred. For example, in 2009, when a contract scaffolder fell 10 metres after stepping onto a section of unfastened grid mesh flooring, unions and workers had previously alleged a 'dangerous culture' where reporting safety lapses was discouraged or met with intimidation. John Holland, the construction company involved, was self-insured, and Comcare reported two similar incidents involving unsecured grid mesh in the week leading up to the fatal incident. In 2010, following the death of a mine worker who fell from a height while removing an escape ladder in an underground gold mine, the Australian Workers' Union (AWU) alleged workers were victimised for reporting safety issues associated with unsecured explosives, poor ventilation, and inadequate escape ladders. Subsequently, the WA Mines and Petroleum Minister launched an independent investigation into the Department of Mines and Petroleum's handling of safety complaints at several eastern goldfields mine sites; however, the allegations were not upheld. The Minister claimed the unions were using a safety campaign to recruit members. An AWU spokesperson said workers came to the union because they were too scared to raise issues on the job, for fear of management reprisal.[262]

In 2011, a conveyor services contractor was fatally crushed at an iron ore port facility when a 40-tonne mobile crane toppled while lowering a loaded belt reel onto a winder platform. The contractor was working alone, unsupervised, on a small platform in a 'line of fire' position when the crane toppled. A union representative raised concerns about safety and the frequency of fatalities at the site (this was the seventh in five years), suggesting systematic issues in supervision and safety enforcement. Another incident in 2013 involved a contract electrician who was trapped between a motor cable termination box and an access ladder fixed to a tripper unit (the tripper conveyor was operating in automatic mode). The Electrical Trades Union and the Construction Division of the CFMEU reported that, before the incident, they raised specific concerns about safety practices on the mine site, which they said the company ignored.[263] DMP media statements supported union claims about safety at the site, stating there had been several incidents at the mine, involving 'ineffectual isolation and lock out/tag out processes'. The Australian Mine Safety Journal reported that following the fatal incident, the State mining engineer Simon Ridge issued a direction under section 21.1 (O) of the *Mine Safety and Inspection Act 1994*:

> The direction requires that greater direct supervision and safety checks are provided across all FMG mine sites. It requires that all isolation and lock out/tag out procedures are verified by a supervisor and where applicable an Elected Health and Safety Representative.[264]

[261] https://www.abc.net.au/news/2015-05-23/unions-wa-call-for-royal-commission-into-deaths/6491952
[262] https://www.abc.net.au/news/2010-08-11/indepedent-scrutiny-not-a-sign-of-distrust-moore/941276
[263] https://www.adelaidenow.com.au/business/breaking-news/fortescue-receives-reprimand-after-deaths/news-story/2973b4ad915c1ef65784e21b47bcdb8d
[264] https://www.amsj.com.au/christmas-creek-mine-put-notice-fatality/#:~:text=The%20direction%20requires%20that%20greater,fatality%20free%20year%20during%202012.

By 2020-21, DMIRS estimated that 58% of reported work hours were attributed to contractors and urged, 'Sites are encouraged to be mindful of the risks introduced with larger workforces and a greater proportion of contractors.'

In 2018-19, DMIRS announced a focus 'on the importance of safety and health representatives and acknowledging the work they do to help improve workplace safety'. In 2020 and 2022, after the *Work Health and Safety Act* 2020 and the *Work Health and Safety (Mines) Regulations* 2022 (WHS Mines Regulations) came into force, DMIRS stated:

> WorkSafe Mines Safety is working to increase the understanding and importance of PCBUs consulting and involving workers in designing and implementing safe systems of work. One of the associated outcomes of this priority area is for PCBUs to engage in genuine cooperation and consultation with workers and their representatives to achieve healthy and safe workplaces. Under the Work Health and Safety Act 2020 (WHS Act), consultation is a legal requirement. Effective consultation is a two-way process between a PCBU and its workers where you should talk to each other about health and safety matters; listen to the concerns of workers and raise your concern; seek and share views and information; and consider what your workers say before making a decision that affects them.[265]

In 2024-25, the Department reiterated the importance of addressing workers' safety concerns, stating: 'Educating PCBUs about the importance of involving workers, such as health and safety representatives and safety committees, in the design and implementation of safe work systems remains one of WorkSafe WA Mines Safety's priorities.'[266]

In 2022, the Western Australian Government commissioned a study on the mining industry, known as the Mental Awareness Respect and Safety (MARS) Landmark Study.[267] It primarily focused on mental health and respectful and inclusive workplaces in response to concerns about gender equity and sexual harassment. However, one focus area examined worker views on safety compliance and participation, including worker involvement in implementing new technology and associated work design. The study found that workers' perceptions of their safety compliance and participation were relatively high, with 88% of workers agreeing that they followed safety procedures and 78% agreeing that they took the initiative to participate in and promote safe workplace behaviours. However, only 40% of workers reported engaging in policies and practices aimed at reviewing and improving their work design.[268]

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[265] WorkSafe Western Australia, 2025, *Safety performance in the Western Australian mineral industry – incident and injury statistics 2022–23*. Department of Local Government, Industry Regulation and Safety, Western Australia, 30.

[266] WorkSafe Western Australia, 2025, *Safety performance in the Western Australian mineral industry – incident and injury statistics 2023–24.* Department of Local Government, Industry Regulation and Safety, Western Australia, 32 pp

[267] Duncan, A., Kalsi, J., and Mavisakalyan, A. (2022), *Towards a healthy and safe workplace in the mining industry: A review and mapping of current practice*, Bankwest Curtin Economics Centre, September 2022. A report prepared by the Bankwest Curtin Economics Centre for the Department of Mines, Industry Regulation and Safety, Government of Western Australia, 2022.

[268] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 144.

One organisational driver MASRS found to be strongly associated with safety compliance and participation was how change was managed. Worker surveys indicated that only 20% of workers thought change was managed and handled well. The study concluded that 'The poor management of change is a key finding for the industry, as this is frequently associated with incidents and dangerous occurrences.'[269]

The study also examined incident and near-miss reporting. While most workers said they had not experienced any incidents or near misses in the previous 12 months, those who did indicated that 26% of notifiable incidents experienced during the period were unreported. The report concluded that

> This number of notifiable incidents that are unreported is a concern, as these include serious injuries or illnesses, or dangerous incidents which should be reported to the Regulator without delay. In addition, 36% of all experienced near misses in the past 12 months were unreported, which reflects a high degree of non-reporting.

Despite the DMIRS focus on the importance of HSRs in designing and implementing safe work practices and procedures, the MARS study did not consider the role of HSRs or worker consultation as organisational drivers of worker safety compliance and participation. There is little evidence of a narrative around 'worker voice' and the impact of contracting on health and safety management, particularly the fear of reprisal for raising safety concerns and reporting incidents and the undermining of representative mechanisms. The objects of the Act clearly identify a role for union organisations and workers' representatives, yet, as in Queensland, the Act makes little reference to union engagement. Media reports tend to suggest that union concerns about safety standards are driven by a recruitment agenda, not genuine safety concerns.[270]

New technology – AI, automation and robotics

Perhaps one reason for the downward trend in fatalities is the introduction of automated remote-operation haul trucks and underground boggers.

In 2011, a research project undertaken by the Centre for Social Responsibility in Mining (based on research by McAree and Lever, 2010) stated:

> The strongest growth in automation is expected over the next 10 years and is expected to involve a gradual shift towards automation at the systems level and eventually leading to fully autonomous operation cycles.[271]

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[269] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 148-149.

[270] See for example media reports (1) https://www.abc.net.au/news/2015-05-23/unions-wa-call-for-royal-commission-into-deaths/6491952 (2) https://www.wa.gov.au/government/media-statements/Barnett%20Liberal%20National%20Government/Minister-rejects-union%2C-Labor-calls-for-parliamentary-inquiry-into-mine-safety-20100806

[271] McNab, K.L. and Garcia-Vasquez, M. 2011. *Autonomous and remote operation technologies in Australian mining. Prepared for CSIRO Minerals Down Under Flagship, Minerals Futures Cluster Collaboration, by the Centre for Social Responsibility in Mining, Sustainable Minerals Institute*, The University of Queensland. Brisbane. ii.

According to the *Australasian Mine Safety Journal*, interest in setting up Remote Operating Centres increased during the COVID pandemic.[272]

The MARS research project examined workers' views on the introduction of new technologies at their mines. Some of the technologies mentioned by respondents included autonomous machinery, GPS and satellite technology, communications, fatigue monitoring, and AI and machine learning. Although automation removes workers from some mining hazards and risks, the authors cite research identifying mental health issues such as monotony on the one hand and stress associated with high decision load at times. The MARS research found:

> A general consensus is that the structure of work will change, and companies need to support their workers in ensuring that their work in the future is not only physically safe, but also mentally healthy (e.g., ensuring that jobs remain stimulating, workers have an understanding of how machines make decisions, building a culture of organisational trust to reduce uncertainties, insecurities and anxieties related to the introductions of new digital technologies), and that workers are continually upskilled and reskilled to remain relevant and current in a changing work environment.[273]

In the Pilbara region of WA, Rio Tinto was an early adopter of autonomous haul trucks, with their operation overseen 'remotely' from Perth. We asked WA focus group participants, several of whom worked in the Pilbara, about their experiences with automation and other new technologies.

A haul truck driver observed:

> Automation Risks – Workers have concerns about AI and autonomous machinery, such as autonomous trucks 'driving around' stopped vehicles, removing human fail-safes. Remote control operations transfer risk to workers who must manage manual cues despite available automation.

An HSR stated, in regard to train operations:

> Data access - New digital reporting systems often lock data under individual logins, preventing incoming operators from seeing historical hazard data – a sharp contrast to previous paper logbooks.
>
> …
>
> Communication - Electronic rostering uses push notifications to change shifts without consultation, removing the opportunity for workers to provide feedback or ask questions.

HSRs who participated in our focus groups clearly had concerns about automation and AI and could provide useful feedback to mine management about the risks introduced by new technologies. An HSR working at a Port facility identified some of the limitations of AI:

[272] https://www.amsj.com.au/the-rise-of-remote-operating-centres-in-mining/

[273] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 40.

> Practical and Skill-Based Limitations - … it is not well-suited for reactive tasks where an experienced human operator is superior. Over-reliance on automation will lead to a significant decline in operator skills.
>
> …
>
> Lack of Moral and Situational Awareness - automation lacks the moral and situational awareness to anticipate unpredictable human actions and prevent harm to life, making the human operator monitoring the system a scapegoat when incidents occur.

Given the findings of the MARS research about incident reporting and the lack of worker involvement in job design, HSRs should be viewed as a valuable health and safety resource in establishing and maintaining safe systems of work around autonomous and remotely controlled vehicles and plant.

Methods

To examine RSHQ and industry effectiveness in involving workers and worker representatives, we reviewed performance and incident reports published on the WorkSafe WA website. Quantitative and qualitative data on mining incidents were primarily gathered from Western Australia's 'Safety performance in the Western Australian mineral industry' report series, 2004-05 to 2024-25, and Significant Incident Reports (SIRs) published after 2015 (this includes incidents that occurred before 2015). The mines regulator publishes these reports jointly with WorkSafe WA. We also searched for Coroner's Inquiry reports, but located only two.

Information on mine owner/operator, commodity mined, and operation type (used to construct Figure 5-27) was identified using Google AI searches when this information was not included in the regulator's reports. Google AI appeared to access information from investigation reports and court prosecution summaries, as well as media reports such as union media releases, news reports, and mining publications, and therefore included regulatory reports that could not be found on the SafeWork WA website.

Fatal incident analysis – recurring hazards and pattern failures

The DMIRS identified 'repeat hazards' in their analysis of fatal investigation reports. A stated focus of the inspectorate is 'checking whether sites are identifying and managing recurring exposure to hazards.'[274] In 2014-15, DPM concluded the "industry appears not to be learning from past tragedies" and developed a communication strategy to draw attention to recurring hazards. The initial focus was on control selection for hazards commonly associated with fatalities.

In 2019-20, DMIRS, Mines Safety and the Mineral Industry Advisory Committee

> …conducted further analysis of repeat hazard exposures when assessing the Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019 (Brady Review) and how it applies to the WA mining industry. We discussed the Brady Review findings in relation to supervisory experience, the age and inexperience of those involved in the recorded fatalities, and the use of different metrics in relation

[274] WorkSafe Western Australia, 2020, *Safety performance in the Western Australian mineral industry – incident and injury statistics 2019-20.* Department of Local Government, Industry Regulation and Safety, Western Australia, 1.

to fatality frequency rates. This review will provide input into formulating strategies for future work toward reducing fatalities.[275]

Despite the focus on primary hazards and recurring incidents, fatalities associated with vehicles, striking/crushing by falling mechanical equipment or falling objects, and falls from a height continued to occur. In June 2023, an asphalt contractor was fatally injured when he was struck by an asphalt roller while working on a mine expansion project. In 2024, a contract fitter was struck by a remotely operated 25-tonne mobile crane that rolled over a slope. Several other incidents involved toppling and rolling equipment used for elevated work. In 2023, a contractor was struck and killed by a rolling crane, one of several crane incidents in the 20 years reviewed. Following this incident, the DMIRS noted that contractors were overrepresented in fatal incidents, and WorkSafe WA said overreliance on contractors and inadequate contractor safety management in the WA mining industry was a systemic risk factor. AWU WA Secretary, Brad Gandy, expressed shock at the frequency of fatalities in the WA mining industry, stating that despite repeated warnings, the industry was failing to prioritise safety and called for a shift away from focusing solely on production and profits.[276]

Ten Pathways model of recurring incident causes

Mining is over-represented in workplace fatalities in Western Australia. In 2023, mining employed 10% of the WA workforce (around 140,000) but accounted for 15% of workplace fatalities between 2000 and 2020. A Department analysis of mine fatalities between 2000 and 2012 found that workers in maintenance activities and contractors were over-represented, as were those who had been on-site for less than 12 months (49% of fatalities) or were working under a supervisor with less than two years' experience (66% of fatalities).[277] Global research has extensively documented the higher risk for workers new to a workplace and for contractors, and the latter was first raised as an issue in a report to the WA government in 1997.[278]

In collaboration with the mines inspectorate, a then PhD student (now graduate) at Edith Cowan University, Tanya Jenke, applied the Ten Pathways model to fatality data (71 incidents in total) during the period 2000-2018, and surveys based on the model were conducted at annual roadshows (with an interruption due to COVID-19) between 2017 and 2023.[279] The Jenke et al study of fatality registers indicated that 66% of fatal incidents included factual information associated with multiple Pathways, while in 15% of incidents no 'pathway' could be identified, and in 18% one pathway was identified as having a causal relationship. Pathway 1 'design, engineering and maintenance failures' was present in 66% of fatal incidents, followed by Pathway 4 'management systems failures' with 55% of incidents, Pathway 3 'failures in risk assessment' present in 41% of fatalities and Pathway 2 'warning signals that were ignored' was present in 39%. This is similar to our analysis of 53 incidents described in Table 5-

[275] WorkSafe Western Australia, 2020, Safety performance in the Western Australian mineral industry – incident and injury statistics 2019-20. Department of Local Government, Industry Regulation and Safety, Western Australia, 1.

[276] See media report https://www.abc.net.au/news/2023-06-14/worked-killed-in-pilbara-mine-accident-identified/102478778

[277] Department of Mines, Industry Regulation and Safety, (2023) *Applying Professor Quinlan's Ten Pathways to Death and Disaster in the WA Mining Industry*, WorkSafe Western Australia, pdf for distribution.

[278] Western Australian. Prevention of Mining Fatalities Taskforce (1997) *Report on the Inquiry into Fatalities in the Western Australian Mining Industry*. Available at https://catalogue.nla.gov.au/catalog/410947

[279] Jenke T, Boylan JL, Beatty S, Ralph M, Chaplyn A, Penney G and Cattani M (2022) Fatality risk management: Applying Quinlan's Ten Pathways in Western Australia's mining industry. *Safety Science* **146,** 105494. https://doi.org/https://doi.org/10.1016/j.ssci.2021.105494 and Department of Mines, Industry Regulation and Safety, (2023) *Applying Professor Quinlan's Ten Pathways to Death and Disaster in the WA Mining Industry*, WorkSafe Western Australia, pdf for distribution.

7. We identified Pathway 1 in 72% of incidents, Pathway 4 in 71% of incidents, Pathway 3 in 37% of incidents, and Pathway 2 in 21% of incidents. The hierarchy is the same, but the percentages differ slightly, possibly due to the different sources used and the criteria applied.

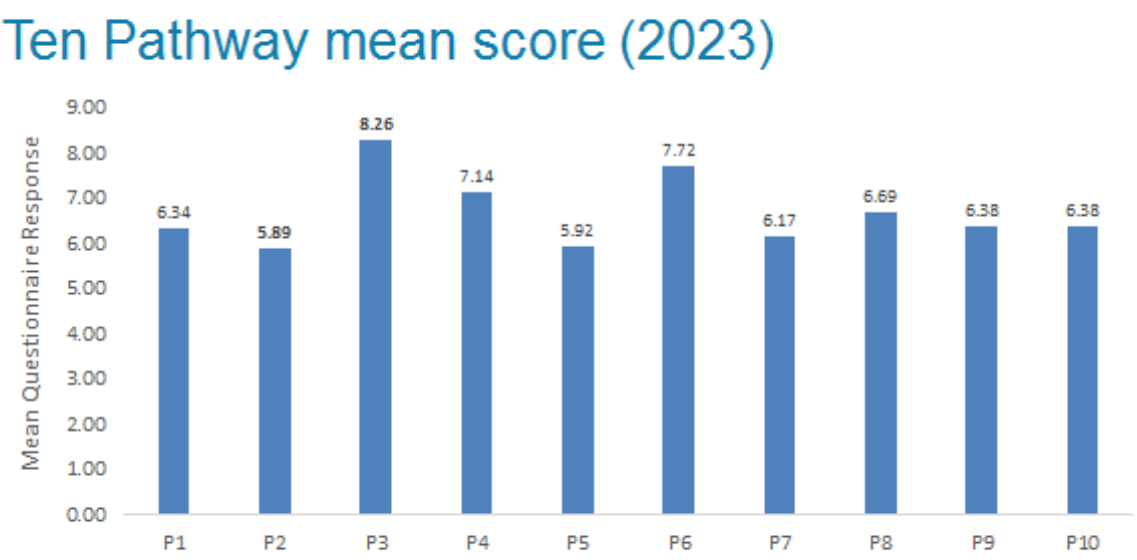
Jenke found all pathways were relevant and argued they should be used as both an investigation and systems development/self-auditing.

The four surveys conducted between 2017 and 2023 involved 2,478 respondents, with responses ranked by how well they believed a pathway was being managed (i.e., the higher the score out of 10, the more confident respondents were that this pathway was being addressed). Figure 5-39 presents the results for 2023, while Figure 5-40 compares results across the four surveys. An upward trend was discernible for Pathway 1 (design, engineering and maintenance), Pathway 3 (risk assessment), Pathway 4 (management systems), and possibly Pathway 6 (economic/production pressures), while the remainder remained unchanged, except for Pathway 10 (emergency response procedures), which trended down. The mean score was 6.55 in 2017, 6.96 in 2018, 6.71 in 2019 and 6.69 in 2023. Overall mean scores showed no significant trend over time. The scores indicate a moderate level of confidence in the existing systems to manage serious risks. Only Pathway 3 and Pathway 10 scored above 7, and Pathway 2 and Pathway 5 scored lowest (both below 6), followed by Pathway 7 (regulatory failure), Pathway 8 (prior concerns being raised) and Pathway 9 (poor management/worker communication/trust). As noted elsewhere, Pathways 2, 8 and 9 are those most directly affected by the effectiveness of worker representation. Also, most respondents were managers, supervisors, and safety personnel, and their scores were, on average, significantly higher than those of health and safety representatives (HSRs).

In 2023, DMIRS roadshows included a presentation on learnings from the Ten Pathways model developed by Quinlan.[280]

[280] Department of Mines and Petroleum, 2015, *Safety performance in the Western Australian mineral industry – accident and injury statistics 2014-15*. Resources Safety, Department of Mines and Petroleum, Western Australia, 1.

Figure 5-39: Survey Result 2023 Roadshow of Ten Pathways (degree to which respondents believed pathway was being managed)



Considering the fatality and roadshow survey results together, four Pathways attracted particular interest, namely:

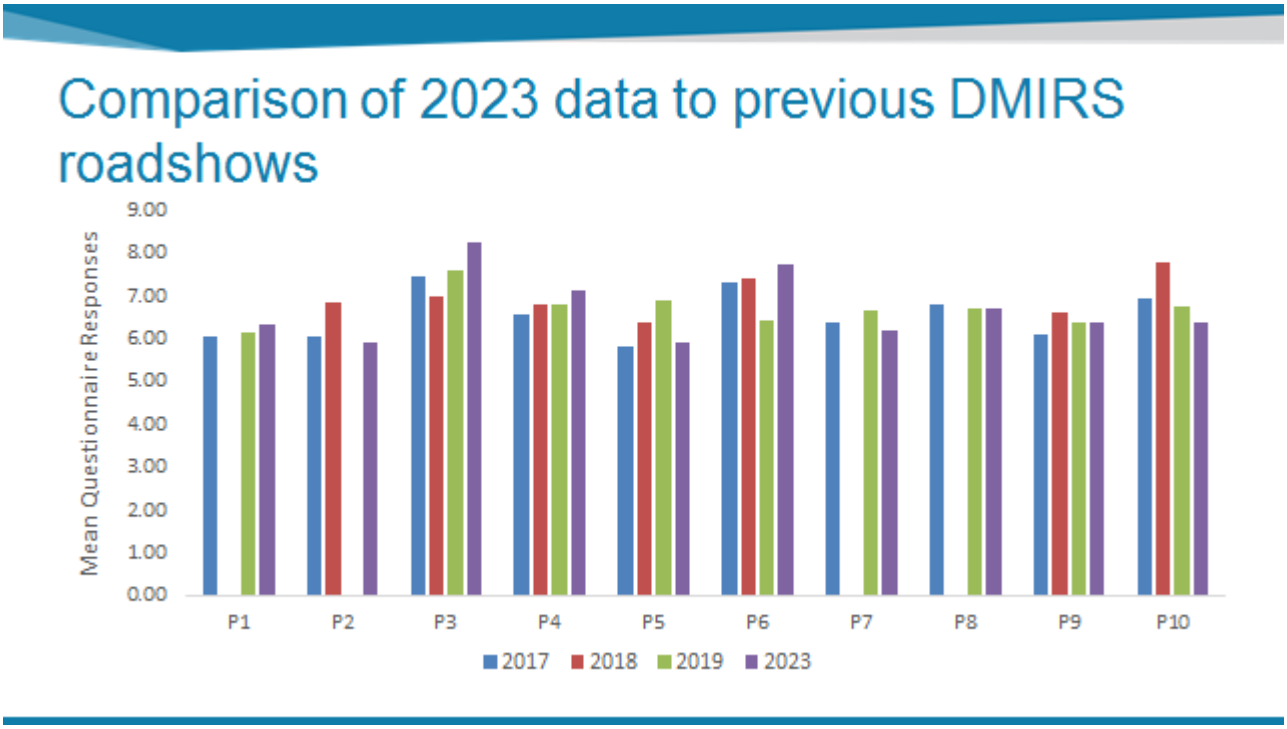
- Pathway 1: Design, engineering, technical and maintenance flaws had the second lowest score in the Roadshow surveys.
- Pathway 4: Failures in safety management systems were the second most common pathway on the register.
- Pathway 5: Failures in auditing had the lowest score on the Roadshow surveys and is the fifth most common Pathway identified on the fatalities register.
- Pathway 9: Poor management – worker communication and trust were the third-lowest mean in the Roadshow surveys.

These findings broadly align with the incident analysis undertaken in all states for this project and included in this chapter. Moreover, examinations of mine and industrial disasters in other countries and Jackson's study of serious incidents in coal and metal mining in NSW have identified the importance of Pathways 1 and 4.[281] Further, the low score for management/worker communication and trust is significant because it is one of the three pathways most directly associated with weak worker representative structures. These pathways are most directly affected and improved by

[281] Quinlan, M. (2014), *Ten Pathways to Death and Disaster: Learning from fatal incidents in mines and other high hazard workplaces*, Federation Press, Sydney; Jackson, H. (2021) *Benchmarking occupational safety performance of the coal and metalliferous mining industry in New South Wales, Australia*, PhD Thesis, University of Newcastle; and Jackson, H. (2023) Single fatality and serious injury incidents in coal and metalliferous mining in NSW, Australia: Can the root cause be found in the political economy of resources and energy?, *Safety Science*; 165:1-18 https://www.sciencedirect.com/science/article/pii/S0925753523001364

stronger representative structures along the lines already described in coal mining in NSW and Queensland and metalliferous mining in Queensland.

Figure 5-40: Roadshow Survey Responses 2017-23 Comparison



Importantly, in the Western Australian context, each pathway can be linked to regulatory requirements in current Western Australian mine safety legislation. These include, most notably perhaps, Mines Safety Management System (MSMS) requirements in the 2022 Work Health and Safety (Mines) Regulations, notably reg 34: Duty to identify hazards; reg 617: Managing risks to health and safety; reg 621: Duty to establish and implement MSMS; reg 622: Content of MSMS; reg 623: Performance standards and audit; reg 625: Review; reg 625A consultation requirement and regs 625B-D incorporating contractors into the MSMS.[282] To ensure safe operation of a mine, these regulations require a framework that provides a systematic approach to identifying, assessing, managing, controlling, and communicating health and safety risks. There is also a requirement that systems be kept up to date regarding corrosion/obsolescence of safe work procedures, training/competencies and other critical tools. The review process incorporates Mine Safety Management System (MSMS) component reviews (triggers, reg38 review control measures and reg618 review control measures); to ensure effectiveness (including control monitoring via KPIs); reviewing performance standards (reg623) and audits, including a system review – as a minimum every three years (reg625) or as the result of a regulator's notice. Overall, mine operators must identify all principal mining hazards at the mine; conduct a risk assessment that involves a comprehensive and systematic investigation and analysis of all aspects of risk to health and safety associated with the principal mining hazard; and consider principal mining hazards individually and cumulatively with other hazards at the mine. In presenting this information at the 2023 Roadshow, Inspector Peter Nissen emphasised that responses to fatalities often entailed implementing another layer of controls. Inspector Nissen said a far more effective approach was to eliminate failure points in existing systems, so they operated effectively and thereby met legislative requirements. The 2023 Roadshow referred to specific incidents across jurisdictions that would have constituted failures with regard to legislative requirements. The mine

[282] We are indebted to WA Mines Inspector Peter Nissen for identifying these alignments.

legislative alignment with Ten Pathways is not confined to Western Australia. A similar alignment can be identified in Queensland and New South Wales, if not elsewhere..[283]

Western Australia has incorporated some of the key elements of the Ten Pathways model into its regulatory strategy. For example, *WorkSafe: The way forward 2023–24 to 2025–26* identified four key priorities: repeat hazard exposures, psychosocial hazards, respiratory hazards, and consultation and representation. Regarding repeat hazard exposures, Ten Pathways was identified as a driver of this prioritisation.[284] In late 2025, the Regulator drew on Jenke's research and the Ten Pathways model in its targeted actions to prevent fatalities.[285]

Table 5-6 shows the results of our analysis of failures identified in coronial reports using the Ten Pathways model. Only two coronial reports could be found for the 58 fatalities. Table 5-7 provides a brief description of 53 fatalities, including pattern failures, and provides many examples of recurring failures. The most common failures identified in our analysis using Significant Incident Reports were Pathway 1, 'engineering control failures' (72%); Pathway 4, 'safety management system failures' (71%); and Pathway 3, 'inadequate risk assessment' (21%). In eight fatal incidents, we identified evidence of other pathways that regulatory investigations do not consistently explore. Pathway 8, 'worker concerns not acted upon', was raised by union representatives, suggesting that the safety functions of site-based health and safety representatives were not utilised or valued by mine management, a focus area the department took up in 2016-17. In 38% of incidents, we also identified evidence of prior similar incidents or a deteriorating safety management system (Pathway 2).

Examples of these incidents are listed below:

- In 2008, a mobile maintenance supervisor was struck by an arm of a tyre handler device that sprang off when a heavy earthmover tyre was overinflated. The investigation noted a series of tyre-related incidents in the Australian mining industry between 1987 and 2008 resulting in seven fatalities.
- In 2009, a high-pressure de-scaling contractor fell approximately 25 metres through an inspection port while cleaning a flash tank. A similar near-miss involving the same worker occurred in 2006.
- In June 2011, during refurbishment works at a processing plant, a contract scaffolder fell in an area where dismantling had commenced on the previous shift. In 2009, a contract scaffolder fell 10 metres when he stepped onto a section of unfastened grid mesh flooring. Two similar incidents involving unsecured grid mesh occurred at the same facility on 12 March and 18 March 2009 (the day before the fatality), according to Comcare. The union reported workers were intimidated for raising safety concerns.
- In 2015, a contract fitter was removing a guard beneath a bulldozer engine when the belly plate fell onto his chest. In a similar incident in 2009, a contract workshop fitter was struck by a bulldozer belly plate, which fell on him while carrying out maintenance.
- In 2015, a contractor was using an EWP to load explosive emulsion into pre-drilled holes when the EWP basket moved upwards, crushing him against the roof of the crosscut. The investigation found that three of five operators interviewed, including an underground supervisor, had inadvertently set off the EWP basket controls by leaning on them. A similar

[283] We are indebted to Mark Parcell for his examination and information in this regard.
[284] Department of Energy, Mines, Industry, Regulation and Safety (2024) *WorkSafe: The way forward 2023–24 to 2025–26*, WorkSafe Western Australia, Perth, p9.
[285] We are indebted to Dr Marcus Cattani and Dr Tanya Jenke for this information.

incident had occurred in 2005 when a blasting contractor leaned over the basket, activating the controls. There was also a fatal incident in NSW in 2014 on a processing plant construction site (Boggabri Coal Mine/Theiss).

- In 2019, a 110-tonne directly employed haul truck driver, navigating a narrow single-lane ramp, rode over a deficient windrow, resulting in the truck colliding with a 'step in' on the wall. In 2015, a loaded dump truck's front and rear left tyres mounted a hard rock windrow when the driver failed to negotiate a left-hand bend. The truck rolled over, and the operator fell about 3.75m from the cab to the ground.
- In 2020, a bogger operated by a contractor fell into an open stope. This was the third fatality in WA since 2000 due to boggers falling into stopes. In 2007, a bogger fell into a stope while the contract operator was backfilling. In 2010, a bogger operator drove into an open stope void and fell 24 metres.
- In 2024, a fitting and machining contractor was struck by an unmanned 25-tonne mobile crane that rolled down a slope. This incident was the second fatality at the mine within 18 months. Regulators issued the operation 10 safety breaches in the two years preceding the accident (Google AI generated information). In 2011, a conveyor services contractor was crushed when a 40-tonne mobile crane toppled while lowering a loaded belt reel onto a winder platform, within a week of another fatal crane accident in Karratha.

Table 5-6: Western Australian coronial reports: Presence of Ten Pathways in an analysis of coronial findings (N=2)

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
On 11/4/2010 Wayne Ross, an experienced bogger operator, died when he fell 25m down an unprotected stope at the Perseverance Nickel mine Leinster.	Used bollards & warning signs, but no physical barrier. Bolts missing from loader seat made fatality more certain outcome. Recommended emphasis on technological remedies to hazard, including physical barriers. No recommendation re use of lap seatbelts.	Bollards & signs used following incident in July 2001 when operator partially entered stope while constructing CMS pad.	Reliance on Daily Planned Inspection (DPI) completed by operator, which labelled task low risk. Inspector raised problems with reliance on such low-level risk assessment because, if labelled low level didn't go to the next stage RA requiring supervisor sign-off – supervisor unfamiliar with CMS bund procedures too.	Procedure could be read to allow loaders to operate between bollards and open stopes, even when not backfilling, provided the shift supervisor authorised. Issues with procedures/ ambiguity & implementation. Mine developed new regime including engineering controls.	Reference made to evolution of systems but no reference to independent audit which may have identified deficiencies in system and worker knowledge of procedures.		Dept inspector recommended a notice be issued requiring use of a formal team-based risk assessment & consider alternate technologies for operating near the stope & physical barriers. Coroner recommended engineering controls along with lower order controls.		While procedures were in place in the sense that they existed on paper and that steps were taken to see that they were brought to the attention of personnel, it seems neither their existence nor their details were necessarily known or regularly implemented by all relevant personnel.	Sustained fatal injuries & died shortly after fall.
On 2/6/2011 Shaun McBride scaffolder (Celtic Scaffolding) at the jetty of Rio Tinto Iron Ore Dampier operation, was killed when the cantilevered platform being used to	Hooked to part of the scaffolding structure, which collapsed. Safety equipment made for negative buoyancy, and couldn't be removed before		Take 5 required wearing of fall arrest protection which operator was wearing but unclear how effectively it was hooked up.	Independent expert deemed task as one of the most dangerous dismantling operations he had witnessed as single wedge.			Mines Dept issued safety alert in 2012 after incident requiring changed work methods including observers, safety ring and personal floatation device (PFD)			Died soon after fall which was not observed but incident heard. Worker and two fishing crewmen jumped into water but couldn't locate due to poor visibility. Water rescue unit also

dismantle scaffolding collapsed and he fell 4.8m into water 15m-18m deep & didn't resurface.	he became unconscious. Celtic developed a pin lock system after the incident. Also need to wear PFD over water.						when over water. Coroner recommended PFD.			failed to locate, and the body was recovered by police divers two days after the incident. Rescue efforts were deemed timely but failed due to poor visibility.
	2	1	2	2	1	0	2	0	1	1

Table 5-7: Western Australia Mine Safety Department significant incident reports 2004-05 to 2023-24: Presence of Ten Pathways in analysis of significant incident reports (N=48)

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
UG gold mining Fall of ground	On 15 Feb 2014, a **directly employed** lone worker was using an LHD (bogger) to clean-up an underground development heading that had been fired the previous day. After partially bogging the face, it appears he exited the machine and received fatal injuries when about 6 metres of the hanging wall collapsed onto him.	The ore drive developed by airleg mining methods, the installed ground support (spot bolting, friction rock stabilisers) was ineffective.									

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
UG gold mining Fall of ground	On 11 Oct 2022, a **contract old raise bore operator** undertaking drilling activities was removing the raise bore head assembly from the lower level of a raise bored excavation when they were struck by falling rock. He was positioned under an unsupported roof.			Inadequate risk management - the off-centre position of the reamer resulted in difficulty hanging a rubber curtain.			Project schedule – contract for development and production, above target production.				
UG gold mining Fall from height	On 5 August 2020, a **contract rise miner** fell 15 metres down the newly excavated emergency escape while installing permanent ladders in the escape rise.				No specific procedure requiring fall arrest gear to be worn. Supervision of lone workers.				AWU organiser complaints and allegations of workers reporting safety concerns being bullied and victimised. Specific safety breaches such as unsecured explosives, poor ventilation, and inadequate escape ladders.		Lone worker, emergency comms inoperable.
UG gold mining Fall from height	On 6 August 2009, a **directly employed** service crewman fell 38 metres through an ore pass grizzly onto the muck pile while	Lack of edge protection/ physical barriers around the void.		Failed to identify or control the risk of falling through the grizzly during this specific manual activity.	Lone work, contrary to procedure. Lack of a specific procedure for placing covers on grizzlies.						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	covering the grizzly to manage dust during tipping operations from higher levels in the mine.										
UG gold mining Hot working environment	On 30 Nov, 2015, a **contract jumbo offsider** collapsed while undertaking heavy physical work in hot, humid underground conditions.				Heat stress monitoring and controls.						
UG gold mining Open void/ Fall from a height	On 13 July 2020, a bogger operated by a **contract bogger operator** fell into an open stope. Markings labelled "bund" were observed on the walls either side of the drive six metres from the stope edge.		Third fatality in WA since 2000 due to boggers falling into stopes.		There were no delineators or other markings in the drive to indicate distance to the stope edge.	Possible lack of auditing stopes for bund placement.					
UG gold mining Vehicle interaction	In March 2006, a **subcontracted worker** lost control of the concrete agitator truck down the main decline, and the truck struck the decline sidewall.										

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
UG gold mining Vehicle interaction	On 15 December 2020, **a fly-in-fly-out subcontracted truck operator** was out of her vehicle and walking in the underground decline after her truck broke down. Another truck, which was tramming up the decline, struck the worker on foot.	Minimal safe areas for pedestrians in the decline.			Insufficient information, instruction, and training to ensure positive communication.						
UG gold mining Mechanical Unplanned movement	On 1 July 2005, **a blasting contractor** was using an elevated work platform, standing in the charge-up basket, when it moved upwards, crushing him against the roof of the cross-cut. He was leaning over the front of the basket and accidentally activated the control stick.	Design of basket controls (no secondary guard). Rill slopes can restrict forward movement of the charge-up basket and result in the basket being too close to the roof. Work from a charge-up basket is often undertaken at the front of the basket, so the worker can reach the charge-up hose.			The operating procedure did not identify the potential crush hazard. The offsider had not been tasked with spotting and was not trained to use the EWP.						
Surface gold mining Fall from a height	In January 2009, **a directly employed haul truck operator** fell while	No safe facility for cleaning windscreens, such as purpose-built									

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	cleaning a windscreen.	access platforms or fall-arrest systems, to eliminate the risk of falling during routine maintenance tasks.									
Surface gold mining Mechanical/ Unintended activation.	On 14 May 2014, a **contract worker** became trapped between the mast and frame of a forklift truck. The forklift was stuck on the crest of a ramp providing pedestrian access into a process building while a mobile crane attempted to lift the front of the forklift. The control level for the mast's tilt cylinder was inadvertently activated, causing the mast to close.	Possible lack of communication of engineering system of work – sling was not positioned on marked slinging points and worker incorrect positioning.			Possible inadequate supervision and procedures.						
Surface gold mining Vehicle interaction	In June 2008, a loaded haul truck, operated by a **subcontractor,** collided with a stationary bulldozer after	Vision obstructed by cabin pillar and doorframe. Road design - park up areas. and windrow heights.			Transport management procedures such as parking and positive communication s.						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	the tyres on the left side of the truck dug in as he was turning on a waste dump.										
Surface gold mining Vehicle rollover	On 6 September 2015, a **contract driver** was driving a loaded dump truck to the waste dump. The truck's front and rear left tyres mounted a hard rock windrow when he failed to negotiate a left-hand bend. The truck rolled over onto its right and the operator fell about 3.75m from the cab to the ground. No evidence of braking and seat belt not used.				No information about shift length or roster and how many shifts/hours worked prior to the incident.		Absence of braking and truck's gradual path into the windrow—behaviours often associated with inattention or fatigue.				
Surface gold mining Vehicle interaction	On 13 October 2022, a dump truck driven by a light **vehicle contract fly-in-fly-out operator** collided with a light vehicle on a single lane ramp.	Preliminary reports suggest impeded vision on a pit ramp.									
Surface gold tailings dam	On 4 December 2013, **a tailings infrastructure**	No physical barrier or restraint to		The risk of 'pipe slide' was not adequately	No exclusion zone downslope						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Falling object/ struck by	**development contractor** was struck by a section of pipe when the 60 m length of pipe was moved at the other end and became unstable rolling down the embankment.	prevent the pipe rolling.		assessed for the specific terrain where the work was being performed.	of potential hazard.						
Surface gold Process plant maintenance Falling object/ struck by	On 26 July 2016, **a shut-down maintenance contract boilermaker** was inside a thickener tank removing a rake shaft in the centre of the tank when the gantry above him failed and collapsed.	The gantry bridge had deteriorated due to corrosion. Structural integrity not assessed by a competent person. The boilermaker was instructed to remove the rake shaft, which was not designed to provide primary support.			Failure to ensure responsibilities for construction work, including demolition and maintenance, of plant and structures under regulations 4.18 to 4.22 of the Mines Safety and Inspection Regulations 1995.						
Surface gold Process plant construction Mechanical/ unplanned movement	In April 2024, **a fly-in-fly-out fitting and machining contractor** was struck by an unmanned 25-tonne mobile crane that rolled down the slope.										
Surface iron ore mining Fall of ground	In September 2021, **a directly employed drill**										

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	and blast operator was engulfed in a ground when the worker was carrying out charge up activities. While stemming a charged shot hole for blasting, the ground subsided into a cavity, engulfing the worker.										
Surface iron ore mining Vehicle interaction	On the night shift of 15 August 2018, **a labour hire haul truck driver** lost control and crashed into a windrow. The haul truck was descending a ramp with a full load of ore exceeding the speed limit (79Km/per hour).	Lack of engineered systems such as road features to force operators to slow down before a ramp. Evaluate the location and type of speed warning devices.									
Surface iron ore mining Vehicle interaction	On 4 September 2008, **a heavy-duty fitter contract apprentice** was driving a Toyota Land Cruiser when a haul truck ran over it.	Intersection design failed to mitigate interactions between heavy and light vehicles. Poor visibility on the dirt service road and lack of signage			Inadequate transport management procedures – intersection give-way hierarchy, standardised comms			Push for Traffic Management and Segregation			

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Surface iron ore/ services Falling object/ struck by	On 20 February 2007, **a contract transport truck driver** was unloading tyres from his truck. The load moved when he climbed onto the tray to retrieve the tie-down chains, knocking him from the truck. He was crushed by tyres that subsequently fell.				Failed to observe exclusion zones and procedures for truck drivers which specify staying in the truck or other designated area.						
Surface iron ore mining Falling object/ struck by	On 30 May 2009, **a contract workshop fitter** was struck by a bulldozer belly plate, which fell on him while he was carrying out maintenance on a bulldozer at a waste dump.	The belly plate was not attached according to the OEM specifications and had non-standard fasteners. A "come-a-long" (hand-operated hoist) had been attached to only one side of the plate. Poor maintenance records failed to note non-standard fasteners.		Inadequate JHA - the belly plate, combined with accumulated mud and debris, weighed over **400 kilograms**, far exceeding safe manual handling limits.	Guards and plates are inspected and maintained to OEM specifications. Lack of cleaning before maintenance - mechanical damage or modifications were not visible. Failed to relocate the machine to a workshop with proper pits or hoists.	Lack of equipment auditing against OEM specifications.		The regulator announced it would "step up" its inspection and auditing program, increase the frequency of on-site audits, and Issue **prohibition notices** when non-compliance is identified.			
Surface iron ore/ maintenance	On 16 August 2011, **a directly employed fitter** was struck by a	The worker did not have appropriate					Alternative method used to save time.				

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Falling object/ struck by	hydraulic cylinder which dropped suddenly from the gantry onto the loader boom as the fitter was working beneath it.	licensing for high-risk work.									
Surface iron ore maintenance Falling object/ struck by	On 1 December 2013, **contract fitters** were working under a 2.5 tonne cab, which was suspended from an overhead crane when the rigging failed in overload, dropping the cylinder.	No maintenance manual to guide the lifting process. The cab was improperly secured, creating slack in the chains when the cab moved from a resting position on another piece of equipment.			No SWP for the cab installation. There was no spotter, and neither could see the crane load indicator or rigging.						
Surface iron ore maintenance Falling object/ struck by/crushed	On 27 January 2020, **a contractor** was trying to exit a telehandler when he fell to the ground. The vehicle continued moving, and the worker became caught and crushed between the vehicle and a fence.		Prohibition notices were issued in 2014 and 2015 regarding crane and EWP operations. A 2015 incident where a crane tipped over during safety testing.							Union concerns about tight schedules and communication issues.	
Surface iron ore maintenance	On 24 December 2010**, a contract**	The strut had been removed from the truck									

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Mechanical/ release of stored energy	**fitter** was conducting work on the front suspension of a haul truck when an uncontrolled release of high-pressure nitrogen gas and hydraulic oil occurred, and he was struck by a component of the suspension strut.	by the preceding night shift but had not been depressurised according to OEM procedures.									
Surface iron ore maintenance Mechanical/ release of stored energy	In August 2008, **a contractor mobile maintenance supervisor** was struck by an arm of a tyre handler device that sprang off while a heavy earthmover tyre was being overinflated.	Lack of equipment -no tyre safety cage to contain parts in the event of a failure. Workers confused regarding the correct tyre pressure level. Lack of tyre and rim management plan that covers the entire lifecycle—from selection and storage to disposal	A series of tyre-related incidents in the Australian mining industry between 1987 and 2008 resulting in 7 fatalities (33% of incidents)		Insufficient training and verification of competence. Failure to establish exclusion zones			DMP released Safety Bulletin No. 89 on 13 November 2009 on the operation of tyre-handling machinery.			
Surface iron ore maintenance Mechanical/ unplanned movement	On 19 July 2016, **a contract fitter** was working on the deck of a blast-hole drill rig, replacing a head slide. He was having trouble, leading	The head-slide could not be fitted from the rig's deck due to distortion and mechanical damage. Inadequate maintenance		No task-based risk assessment despite pre-check noting issues with uncontrolled movement.							

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	to several failed attempts. While he was checking the alignment of the head-slide and bracket, the centraliser arm closed unexpectedly. The rig had not been powered down, nor had it been isolated.	compromised the platform's structural integrity. The problem identified by pre-check had not been addressed.									
Surface iron ore processing plant Mechanical/ unplanned movement	On 14 August 2013, **a contract electrician** was greasing an electric motor while the tripper conveyor was operating in automatic mode. He was caught between the motor cable termination box and an access ladder fixed to the tripper unit, which moved in an open access area.	Working on live machinery which was not isolated from the power supply.	The DMP noted several incidents at the mine appeared to involve 'ineffectual isolation and lock out/tag out processes.						The ETU stated they raised specific concerns about safety practices and the nature of the work being undertaken prior to the accident, which they claimed were ignored.		
Surface iron ore processing plant Fall from a height	On 4 June 2011 during refurbishment works, a **contract scaffolder** fell in an area where dismantling had commenced on	No guard to prevent inadvertent access as required by the standard.			The scaffolding procedure did not identify digester entry points with differentiated numbering and there was a lack of appropriate signage.						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	the previous shift.										
Iron ore port facility Fall from a height	On 2 June 2011 **a contract scaffolder** (Celtic Scaffolding) was killed when cantilevered platform being used to dismantle scaffolding collapsed and he fell 4.8m into water 15-18m deep & didn't resurface	Hooked to part of the scaffolding structure which collapsed. Safety equipment made for negative buoyancy, and worker couldn't remove it before he became unconscious. Celtic developed pin lock system after incident.		Take 5 required wearing of fall arrest protection which operator was wearing but unclear how effectively it was hooked up	Independent expert deemed task as one of the most dangerous dismantling operations he had witnessed as single wedge			Mines Dept issued safety alert in 2012 after incident requiring changed work methods including observers, safety ring and personal floatation device (PFD) when over water. Coroner recommended PFD			Water rescue unit also failed to locate the worker Rescue efforts deemed timely but failed due to poor visibility.
Surface iron ore port loading facility Falling object/ struck by	On July 7, 2011, **a conveyor services contractor** was crushed when a 40-tonne mobile crane toppled while lowering a loaded belt reel onto a winder platform, pinning the worker against the structure.	Mechanical failure and overloading. The weight of the reel, combined with the crane's positioning, led to it toppling onto its side.	The incident occurred within a week of another fatal crane accident in Karratha.	Reports indicated the incident occurred in a **constrained area** near the belt winder platform, which limited safe positioning for both the crane and the worker. Failure to conduct a proper **Job JHA** for this specific lifting operation. The risks associated with the heavy lift in that location were	DMP review of fatalities between 2000 and 2012 noted that many incidents involved work being performed **outside the scope of established procedures** wit hout supervision. The contractor was standing alone on a small platform in a 'line of fire' position when the crane failed.				Union rep. raised concerns about safety and the frequency of fatalities at the site (this was the seventh in five years), suggesting systematic issues in supervision and safety enforcement.	Systematic issues in supervision and safety enforcement.	

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
				not sufficiently mitigated.							
Iron ore rail infrastructure Vehicle interaction/ Struck by	On 24 February 2009**, a directly employed** rail track machine operator was struck by a train in a siding,	Rail plant operating in sidings with inadequate 3.5-metre track separation. Reports noted an eight-minute time synchronisation error in equipment timers governing train control. Machine design, lack of infrastructure barriers, time synchronisation issues.			Extreme worker fatigue (potentially 19 hours awake)			Inadequate track separation leads to recommendations for improved machine design, better infrastructure barriers, and stricter time synchronisation protocols.			‘
Iron ore port facility Falling object/ struck by	On July 29, 2008, a **directly employed** maintenance worker was crushed by a collapsing scissor lift.			The court found an inadequate hazard assessment.	The court found inadequate instruction and supervision. Lack of training and competency in the operation of EWP.						
Surface iron ore construction project. Fall from a height	On 13 March 2009, **a contract scaffolder** fell 10 metres when he stepped onto a section of grid mesh flooring that had not yet been fastened to the underlying steelwork. John		Two similar incidents involving unsecured grid mesh at the same facility on **12 March** and **18 March 2009** (the day before the fatality), according to Comcare.		Lack of effective systems to ensure flooring was secure before allowing access. Despite prior incidents, the company failed to implement adequate controls.					Unions and workers at the time alleged a ‘dangerous culture’ where reporting safety lapses was discouraged or met with intimidation.	

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	Holland Pty Ltd was a self-insured licensee in the federal Comcare scheme.										
UG Nickel mining Fall of ground	In September 2006, **a contract air-leg miner** was hit by a large rock under an unsupported roof while drilling, stripping the sidewall of a stope. The mid-shift blast crew found him lying between two rocks, weighing about 0.75 tonnes and 1.3 tonnes, which fell under gravity from the point where the back and sidewall intersected.	The ground support rock-bolts had not been extended to the work area. The number of rock bolts in the area was at least one fewer than required by the mine's own minimum standards.		Management failed to undertake a rigorous risk assessment of the area prior to widening the tunnel.	Failure of contract management and supervision of the lone worker. The mid-shift blast crew identified the worker was missing.					Poor communication between management and contractor	A firing crew, preparing to fire the mid-shift blast, noticed, his tag still on the tag-board. They found him lying near the stope sidewall stripping face.
UG Nickel mining Open void/ Fall from a height	In August 2007, a bogger operated by **a contractor** fell into a stope while backfilling.	There was no bund wall across the drive at the edge of the stope. The bogger was equipped for remote-control use but was being operated in manual mode at the time of the accident.		Remote control, a safety control for working near open underground edges, was not used.	There was a lack of visual warnings (paint markings) on the drive walls.						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
UG Nickel mining Open void/ Fall from a height	On 11 April 2010, **a directly employed bogger operator** drove into an open stope void and fell 24 metres. He may have been constructing a bund.	No physical barrier was in place near the edge of the stope void. The cabin design and external obstructions limited the operator's forward visibility as he approached the edge.	Previous incident as described above.	The operator's field-level RA did not identify the high-risk nature of the task. Mines should not rely on 'field-level' RA's performed by a single worker.	Lack of protocols and supervision to prevent warning controls being removed without the presence and approval of authorised persons. Inadequate lighting and dust contributing to poor visibility.						
UG copper mining Ground/Fall of ground, rockfall Stuck by	On 11 May 2015, **a directly employed worker** was standing outside the LHD clearing a blocked stope with a water spray when a rock rolled from the open stope.	There was no bund in front of the stope. Lack of fit-for-purpose equipment - could not be performed inside the safety of his reinforced vehicle cabin. Failed to implement remote control technology.		Court proceedings commented on the identified but uncontrolled hazard.	The mine had not enforced strict **exclusion zones** around the high-risk area until a permanent safety barrier could be established.						He was working alone, and his absence was only noted when he did not appear for the shift change.
Nickel-copper-cobalt mining Rail infrastructure Mechanical release of stored energy/ struck by	On 11 September 2019**, a contract truck driver** was fatally injured when a tarpaulin mechanism failed on a road train trailer.	Mechanical failure – The **tarpaulin tube (tarp tube) fractured** as it approached the closed position. The location of the tarp operating		Inadequate RA – risks associated with mechanical hazards had not been mitigated through design or operational procedures							

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	While operating the switch, the tarp tube failed, causing the swing arm to strike him. He was operating it by a switch adjacent to the trailer's front end.	switch required the operator to stand in a hazardous zone.									
Alumina process plant (Bauxite mine) Open penetration/ Fall from a height	On 2 September 2009, a high-pressure **de-scaling contractor** fell approximately 25m through an inspection port while cleaning a flash tank from inside a process vessel.	There were no physical barriers across the internal manhole to prevent falls through the opening into the lower vessel chamber.	A similar near-miss involving the same worker occurred in 2006.	The risk of an open manhole during de-scaling was not effectively managed.	De-scaling contractor working alone at night – SMS failed to provide a safe work environment – contractor management.			Following the investigation, it became a requirement to install safety bars across inspection portholes wider than 30cm.			
Alumina process plant (Bauxite) Electrical/ Unintended activation	On 29 September 2009**, a directly employed electrician** was troubleshooting a problem preventing the outer door of the refinery from closing when he was caught between the lift car and shaft	During fault-finding, an electrical safety device preventing the lift from moving without the lift car doors being closed was bypassed.			Management failed to ensure clear written safety procedures that could have prevented exposure to the hazard.						
Surface Coal mine Electrical/ unintended activation	On 26 April 2018, **a directly employed** face shovel operator was crushed between a	The emergency shutdown switch was positioned on the outside of the machine,		Failed to conduct an RA which identified the crush hazard and	The standard operating procedure for the shovel was inadequate and did not include	The regulator recommended an audit of shovels and excavators to identify crush					

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	hydraulic access ladder and handrail of the face shovel while investigating a sudden loss of power. The pit face collapsed, and overburden material rilled against the shovel, putting tension on the pull-wire of the emergency shutdown switch.	making it difficult to access from the platform without being in the line of fire of the ladder. The emergency shutdown and ladder switches were located next to each other and were not labelled.		implement controls.	operating or resetting the two pull-wire switches (i.e., isolation).	hazards to workers accessing emergency switches.					
Gold exploration Mechanical - Release of stored energy/struck by	On 22 November 2022, **a contract exploration driller's assistant** was struck while clearing a blockage in the sample hose when the hose and dust deflector box detached from the cyclone of a dust collection trailer.	High-pressure compressed air was used to unblock the sample hose (incorrect medium). The wear bend detached because an insufficient number of bolts/nuts were installed, or the weld failed under the pressure and lack of secondary restraint.			Inadequate pre-start and maintenance checks to ensure all fasteners and bolts were correctly installed.						
Iron ore exploration Environmental heat	In 2010, a **contract exploration geologist** collapsed after spending a day				Failure to monitor lone workers and ensure procedures for						

Hazard	Details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	collecting samples at an exploration site in the north of the State.				heat stress controls.						
Iron ore exploration Environmental heat	In October 2017, two **contract field technicians** conducted a remote walk of about 18km in around seven hours, with the temperature peaking at 37°C. While returning to their vehicle, one of the field technicians collapsed and became unconscious.			No task-based RA performed before starting field work to address the risks posed by the environment to establish appropriate work–rest, acclimatisation and hydration regimes	Inadequate heat stress management, including lack of hydration testing and no system to train or assess workers or supervisors working in remote locations to recognise the symptoms of heat stress and how to respond.						
Manganese exploration Falling object/ struck by	On 20 January 2015, **a contract fitter** was removing a guard beneath a bulldozer engine when the guard, supported on one side with a chain block, fell onto his chest.	The hinge plate was broken and did not secure the left-hand side of the engine guard to the chassis. The belly plate had non-standard OEM modifications		No job hazard analysis (JHA) or job safety analysis (JSA) was performed for this task.							
		27/48	6/48	11/48	24/48	2/48	2/48	3/48	3/48	2/48	2/48

Table 5-8: Western Australian focus group participants high potential incident: Presence of Ten Pathways in HPI form assessment (N=4)

Incident details	P1 Engineering	P2 Prior warnings	P3 Risk assessment	P4 OHSM/SWP & audit	P5 Contractor mgt	P6 Production pressure	P7 Reg failure	P8 Worker concern	P9 Communications	P10 Emergency mgt
Fire or explosion - battery exploded while the truck was inside the light vehicle maintenance workshop due to overcharging.	1	0	0	0	0	0	0	0	1	0
Mechanical/uncontrolled movement 2020, runaway train.	1	1	0	0	0	0	0	0	1	0
Mechanical/fall of equipment -2023, an excavator was being moved. The excavator had leaking rams, so it kept creeping; questions were asked about safety. While the machine was being moved, the bucket came out of the tray and shunted the dump truck forward. Both operators in the dump truck sustained injuries.	1	1	1	1	0	1	0	1	1	1
Vehicle collision – 2017, a passenger truck coming down a 300m ramp. Trucks cross at the end of the ramp. Lost brakes and slammed into a windrow. No one hurt.	1	0	0	0	0	0	0	0	0	0
	4	2	1	1	0	1	0	1	3	1

Concluding observations

The Western Australian Government was a late adopter of Robens-style risk-based legislation. Commissioner Kenner carried out a statutory review of the prescriptive *Mines Safety and Inspection Act 1994* (MSIA) in 2010 and recommended adopting a risk-based, performance-focused regulatory framework.[286] Kenner also recommended introducing a cost-recovery model to ensure the mining regulator had a sustainable, independent funding source to improve safety standards. However, a risk-based framework was not implemented until 2020, when the *Work Health and Safety Act WA* came into force. A levy was implemented via an amendment to the MSIA in 2010. The Department responsible for mine safety regulation, then known as DoIR, used the levy to implement the Reform and Development at Resources Safety Strategy. Prior to 2020, the implementation of risk management processes, safety management systems and major hazard management plans essentially relied on voluntary compliance with codes of practice and guidance. After 2010, the fatality incidence rate and the disabling injury frequency rate trended down, except for an uptick in the fatality rate in 2013-14.

Regarding worker representation, the WA mining industry has had SHRs since the early 1990s, and the MSIA retained this arrangement. The Kenner review acknowledged the commitment of SHRs in WA mining workplaces and recommended retaining mine workgroup-based SHRs and mandating training soon after election.[287] Kenner also acknowledged the importance of the relationship between SHRs and the inspectorate but noted that many SHRs interviewed said they rarely saw an inspector.[288] Finally, Kenner recommended retaining the position of Employees' Inspector as the link between workers and the inspectorate, rather than adopting the NSW and Queensland mining-specific model of site check inspectors and district check Inspectors. His argument was based on declining union membership and the belief that union representatives could not represent the health and safety interests of non-union workers.[289] However, hazards and risks affect union and non-union workers alike, and the interventions of a union-employed industry representative benefit all workers. The employees' inspectors were abolished by amendment to the MSIA in 2014, effectively removing the link between workers and the inspectorate, leaving SHRs with minimal support.

In response to several fatalities, union officials voiced workers' concerns about poor site health and safety standards leading to the incidents (see Table 5-7), as workers (and SHRs, now HSRs under the WHS Act 2020 WA) feared reprisals for raising safety concerns. The objects of the WHS Act WA clearly define a role for workers and unions (worker representative organisations) in contributing to the achievement of health and safe at workplaces. From 2019, DMIRS acknowledged the important role of HSRs, developed HSR training material, and provided online support and guidance on HSR roles, duties, and workplace consultation. However, our WA field focus groups found little evidence of remotely located HSRs accessing this support. Further, based on our review of fatal incidents and focus group findings (see Chapter 6), the HSR model does not provide consistent and effective representation for workers.

[286] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 198.
[287] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 297
[288] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 324-325.
[289] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 179.

The high proportion of contract workers in the WA mining industry and recurring hazards were two of the main concerns identified in the safety performance reports. Unlike in Queensland, there was a distinct lack of narrative on how contracting and casualisation undermined safety management systems and affected incident reporting. The MARS Landmark research report provided independent empirical evidence of non- or under-reporting of serious incidents and near-misses and concluded this was a serious concern for industry. As discussed elsewhere in the report, a strong voice is required to elevate worker concerns to organisational levels – both the regulator and the mining companies.

Despite the number of fatal incidents and the failure to learn from these, the FIFR has trended downward since 2013-14. However, since 2003-04, the SIFR has plateaued or declined only slightly. One explanation may be the adoption of automation in WA mining operations. However, regarding workforce preparedness for future health and safety, the MARS Landmark research found that workers perceive mining companies lack good change management practices, and workers believe they have not been consulted sufficiently on work design issues. Furthermore, our research indicates that under-reporting or non-reporting of incidents and hazards, and a lack of worker engagement on job design when implementing new technologies, are two issues that undermine health and safety management in the WA mining industry.

Tasmanian health and safety performance - coal and metalliferous mining industry

Tasmania has two active coal mines and five active metalliferous mines. WorkSafe Tasmania is the regulatory body for mining health and safety in Tasmania, overseeing compliance with the *Work Health and Safety Act 2012* and the *Mines Work Health and Safety (Supplementary Requirements) Act 2012*.

In the aftermath of the Beaconsfield incident and following coronial recommendations to address the inspectorate's lack of coal mining knowledge, and representation problems already alluded to, an arrangement was made for an NSW ISHR to visit and inspect the Cornwall Colliery annually. A Legislative Council Select Committee undertook an inquiry into mine safety regulation and reported in 2009, confirming the inspectorate's chronic understaffing and extending requirements for the mining industry under the general OHS legislation, while still adopting the philosophy of post-Robens OHS legislation.

Legislative revisions in Tasmania in the late 2000s addressed deficiencies revealed by the Cornwall Colliery, Renison and Beaconsfield mine incidents regarding safety management systems/major hazard plans, risk assessment, and reinstituting hazard-specific regulations to address well-known hazards and require the reporting/notification of incidents. In 2012, the *Mine Work Health and Safety (Supplementary Requirements) Regulation* introduced more detailed requirements for risk assessment, the preparation of major hazard plans, and WHS management systems.[290] However, changes did not strengthen the role of worker representation. Mine safety audits in 2012 and 2014 noted the dire lessons of the Pike River Mine Disaster, where New Zealand had followed a similar path to Tasmania in repealing most mine safety regulations as part of the post-Robens OHS reforms.

Methods

Information published on WorkSafe Tasmania's web page was reviewed to obtain data on fatal and serious injury incidents and incident rates. WorkSafe Tasmania publishes annual mining safety snapshots that report serious injuries per million hours worked, include comparisons with the previous year and the previous 10 years, and report the number of fatalities over the previous 10 years. Snapshots for 2019 to 2023 are currently available on the WorkSafe website.[291]

This review found limited information on the health and safety performance of the Tasmanian mining industry. As with the other states, we reviewed coronial investigations between 2000 and 2020 and analysed them using the Ten Pathways model to examine the failure points in health and safety management, particularly worker concerns and communication and trust between management and workers.

Results

Fatal injuries and serious injuries in the Tasmanian mining industry

A report published in 2019, titled *Tasmania Industry Overview Statewide Analysis: 2019 Work Health and Safety Performance*, stated that the mining industry's SIFR reduced significantly over the previous

[290] Mine Work Health and Safety (Supplementary Requirements) Regulation *2012* https://www.legislation.tas.gov.au/view/whole/html/inforce/2020-12-13/sr-2012-134

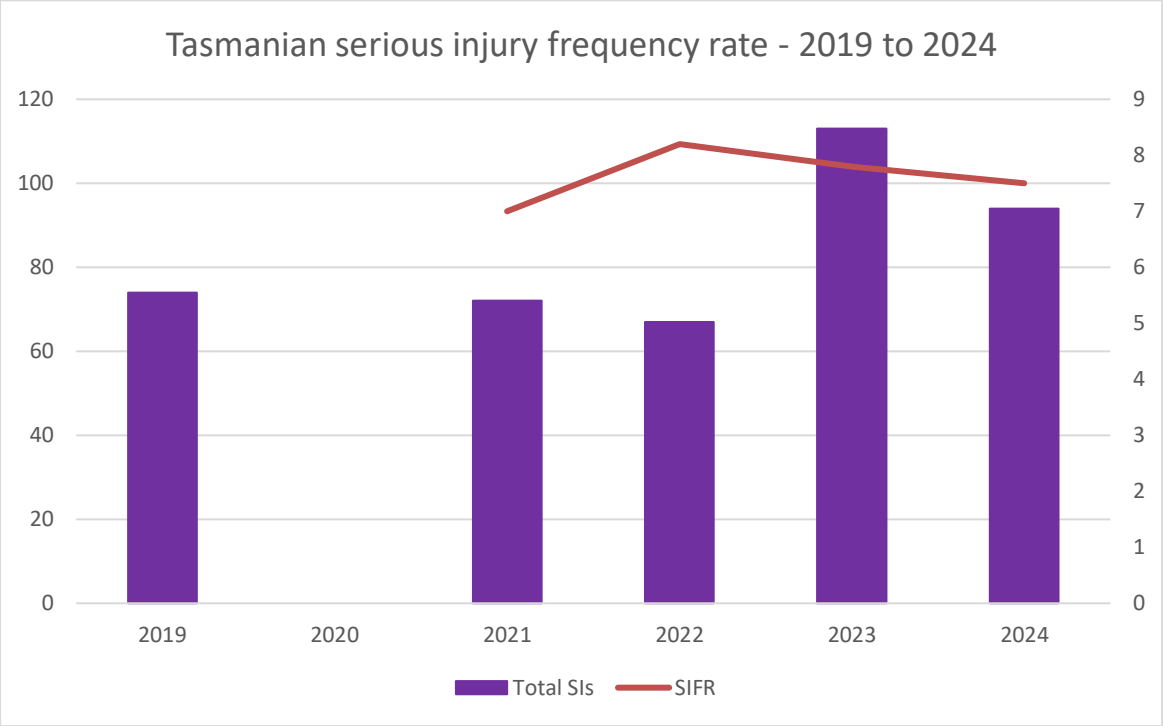
[291] https://worksafe.tas.gov.au/topics/Health-and-Safety/safety-by-industry/snapshots/mining-industry-snapshot

10 years, with the three-year rolling average frequency rate of 3.8 in 2019 compared to 7.9 in 2010.[292] In 2024, construction material mining (quarries) had the highest SIFR at 34.6 per million hours worked. The most common causes of injury were identified as hitting objects with part of the body, body stressing, and slips, trips and falls. This suggests WorkSafe Tasmania is focusing on high-frequency, low-consequence incidents rather than fatal hazards and may reflect the fact that WorkSafe Tasmania does not have a mining-specific inspectorate.

Safe Work Australia's serious claims frequency rate for metalliferous mining (Figure 5-8, p150) indicates Tasmania has a relatively poor performance regarding serious injuries (fatal injury frequency rates were not reported by Safe Work Australia due to the small number) in mining compared to other jurisdictions. Fatal injuries at the Mt Lyell copper mine in 2014 and Henty Gold in 2020 resulted in FIFRs of 45 and 35 per million hours worked, respectively.

Figure 5-41 shows the annual SIFR between 2019 and 2024. Tasmania adopts the WHS Act definition of a serious injury.

Figure 5-41: Tasmanian annual serious injury frequency rate 2019-2024



Mine Fatality Investigations in Tasmania 2000-2020

Table 5-9 examines the findings of coronial inquests into mine fatalities between 2000 and 2020 (the most recent), alongside the Ten Pathways model, which provides further insights (independently vetted by someone knowledgeable about these incidents).[293] In the Beaconsfield fatality, this

[292] https://worksafe.tas.gov.au/__data/assets/pdf_file/0006/572127/2019-industry-report-Statewide.pdf#:~:text=Statewide%2C%20the%20serious%20injury%20frequency,the%20serious%20injury%20frequency%20rate

[293] DJ Jones (2008), *In the Matter of the Coroners Act 1995 and in the Matter of Inquests touching the Deaths of Jarrod Keith Jones, Matthew David Lister and Sidney Thomas Pearce*, Coroners Court of Tasmania; Rodney Chandler (2009) *In the Matter of the Coroners Act 1995 and in the Matter of an Inquest touching the death of Larry Paul Knight, Findings, Comments and recommendations*, Coroners Court of Tasmania; Rodney Chandler (2010) *Adrian Brian Hayes: Record of Investigation into Death*, Coroners' Court of Tasmania; Simon Cooper (2021) *Findings, Comments and Recommendations of Coroner Simon Cooper following the holding of an inquest under the Coroners Act 1995 into the deaths of Craig Gleeson, Alistair Lucas and Michael Welsh*, Coroners Court

information was augmented by an independent investigation that was undertaken to inform the Coronial Inquest.[294] Coronial inquests were conducted into two separate fatal incidents (Renison and CMT) which occurred at the same mine within a short period, where two miners died in one incident and a single miner in the other. Most fatalities involved a single fatality, but as just noted at Renison and CMT, two miners were killed in a single incident. As a caveat, while the coronial inquests were relatively thorough, the Beaconsfield event was arguably investigated most thoroughly, including issues of worker representation/involvement that were not considered in all coronial inquests. As with inspectorate investigations, the level of detail and the questions asked (or at least reported in the findings) vary, so other failures contributing to the event may not have been explored. Of the 10 fatalities, six were the result of falls of ground, three from falls from a height and one miner died in a mud-rush.

The number of mine fatalities resulting from rockfalls is significant. Notwithstanding the follow-up initiatives by the Tasmanian mines inspectorate with regard to ground support (especially the types of bolts used) and a series of audits conducted by the mines inspectorate in 2010, 2012, 2014 and 2017 (as recommended by the Beaconsfield Coroner) ongoing issues with inadequate ground support remained. Recommendations to introduce significant mine-specific safety regulations concerning ground conditions/strata were not made a mandatory element of principal hazard management plans (PHMP).[295] The Coroner noted this deficiency regarding the fatality at the Savage River mine in 2017, and it has finally been addressed in the 2026 draft regulations. Despite a succession of legislative changes, reform of mine safety legislation after Beaconsfield has been convoluted, partial and belated. Even if the 2026 draft regulations are implemented, Tasmania will still lack a modern and comprehensive regulatory framework. For example, the Beaconsfield investigation and subsequent mine inspectorate audits identified significant shortcomings in worker representation and involvement of the type needed in mining and adopted in jurisdictions like NSW and Queensland. This issue remains inadequately addressed. The 2026 draft regulations include two related measures.[296] Regulation 5 (2) on control measures states that:

> The mine operator of a mine must ensure that a control measure that is the subject of a request by a health and safety representative under WHS Regulation 38(4) is reviewed and as necessary revised, whether the request is made directly to the mine operator or notified to the mine operator under subregulation (3) by another person conducting a business or undertaking at the mine.

Further Regulation 5 (4) states:

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of Tasmania; Simon Cooper (2022) *Findings, Comments and Recommendations of Coroner Simon Cooper following the holding of an inquest into the death of Nathaniel Owen Beesley,* Coroners' Court of Tasmania; Simon Cooper (2025) *Record of Investigation into Death (Without Inquest) of Cameron Goss*, Coroners Court of Tasmania.

[294] Quinlan, M. (2009), *Report on OHS management at the Beaconsfield Joint Venture Gold Mine, Tasmania up to and including the time of the rock fall incident at the 925 level of the mine that occurred at around 9.23pm, resulting in the death of Larry Paul Knight and the entrapment of Todd Andrew Russell and Brant George Webb* (expert report prepared for Greg Melick SC, Independent Investigator appointed by the Tasmanian Government), 30 August 2007.

[295] Quinlan, M. (2010) *First Audit of Mine Safety Unit and Office of Chief Mines Inspector Workplace Standards Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2012) *Second Audit of Mine Safety Unit and Office of Chief Mines Inspector Workplace Standards Tasmania*, WorkSafe Tasmania, Hobart; Quinlan, M. (2014) *Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart; Rowan, G (2017) *Audit of the Office of Chief Inspector of Mines Tasmania, Workplace Standards,* Tasmania, Hobart.

[296] For Consultation Draft *Mines Work Health and Safety (Supplementary Requirements) Regulations 2026.*

> (4) A health and safety representative for workers at the mine may request a review of a control measure under WHS Regulation 38(4) as if the circumstances referred to in subregulation (1) were included in WHS Regulation 38(4)(a).

This is similar to a measure in WA mine safety regulations introduced in 2022 that enables a HSR to request a risk assessment.

Returning to Table 5-9, some pathways were present in all incidents apart from the Welsh and Beesley fatalities. Following the Welsh incident, the coroner recommended a shift to block caving instead of sub-level caving if the mine re-opened, indicating serious concerns about the pre-existing mining method. Beesley had expressed concerns, but apparently not to mine management. At the other extreme, in both Beaconsfield (Knight) and the second Renison fatality (Pearce), eight of the 10 pathways were present, and seven at Cornwall Colliery (Hayes). Overall, the most common failure pathways were inadequate management systems (present in seven of the eight fatal incidents) design, engineering and maintenance (six); failures in risk assessment, management systems and auditing (six for all three), regulatory failure (four), prior concerns raised (three), ignored warning signals (three) and poor management trust and communication (one). These are conservative counts. In several other cases, there was ambiguity about whether the failure occurred or contributed to the fatality. Consistent with Jackson, in some cases multiple failures occurred within the same pathway. The state of management/worker relations was seldom explored, although the independent Beaconsfield investigation identified this as a significant problem. Whether workers or others had expressed concerns before the incident was sometimes explored (again, the Beaconsfield investigation explored this in depth). In the second Renison fatality, the coroner noted one mine worker had expressed concerns, but others hadn't. However, a quote from the mine worker adds something to this interpretation:

> …we were in this kind of cycle of the mine's life where we were under the pump to actually just make it, well, make it bloody survive... Because metal prices were at a really bad low that they were going at three and a half thousand dollars a ton or so…which was just a critically bad… situation. Everyone was focused on the bogger… because we actually needed the bogger out, we needed it more than we actually kind of let on… We'd… expend about I think it was about eight hundred thousand bucks on it, right, about three weeks earlier, on this … major overhaul… and that was our prime bogger… and it was sent in down there because …that ore was very high …grade, and also therefore heavy…You are there to actually mine it safely… But you have got to …just actually get in there and mine it …because …it is meshed, grouted, …cable bolted. …well I have seen it happen too many times now in my own mining life which is roughly like thirty odd years, where that - mines is going bad tend to become a little bit – well slip …shod. HIS HONOUR: A bit reckless perhaps?
>
> WITNESS: Yeah, reckless, right. Not through any kind of…failings of the people, but the fact that when you are under the pump, mines are going bad, like I have been laid off at about seven mines in – since the early eighties you know. So I understand how…these situations do arise where there is no cash. … [T]here is no cash to say, okay, stop that heading, leave it let it settle, sign it off… You have got to get in there and actually mine it…so hence you cut corners or – you don't mean to cut corners, but that is how it is actually evolves… because well these days you know we don't have a fully staffed mines department.

This excerpt from a longer quote is significant when viewed in the context of the financial difficulties the mine experienced, which the Coroner referred to at a number of points. It indicates that cost

concerns (due to the low price of tin) and the need to increase production were driving both attitudes and decisions at the mine. As the quote implies, these pressures have a chilling effect on mine workers' willingness to raise safety concerns identified elsewhere in this and the NSW report. However, as with Beaconsfield, it could not be conclusively shown that financial/production pressures contributed to the event. Rescue and emergency procedures were not found to have failed in any case, and the rescue at Beaconsfield was an outstanding achievement, although it was made more difficult by unstable ground at level 925, where the men were trapped.

Overall, pathway failures were found in six of the eight inquests, with a total of 36 failures equating to an average of six per incident (or 4.5 if all incidents are included), with three having seven or more failures. This is broadly consistent with the pattern of failures found in fatal events in other jurisdictions. Only one of the 10 fatalities involved a coal miner, reflecting the dominance of metalliferous mining in the state, but also that metalliferous mining is hazardous. Several of the coroner's findings, together with periodic mine inspectorate audits, reinforced the need for the state to bring its legislative framework up to standard. While the draft regulations are a further step in this direction, this process is not near completion in regulating known hazards or strengthening worker representation provisions.



Coal skip and historic photograph at Miners' Memorial near St Mary's Tasmania

Table 5-9: Tasmanian Mine Fatalities 2000-20: Presence of Ten Pathways in Coronial Inquest Findings (including independent Beaconsfield Investigation)

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Rockfall – on 30 October 2000, Adrian Hayes was killed by a fall of mudstone at the Cornwall Colliery, Fingal. Note: coronial inquest not handed down until 2010, when a number of issues, including absence of regulations, were already identified by the Renison inquest. No charges were laid against Cornwall Coal.	Consistent pattern of rockfalls indicated need to modify mining methods. WST investigation identified deficiencies with the continuous miner which was subsequently modified (investigation found 'grossly deficient')	Number of rockfalls and concerns raised from late August. Multiple falls in October, including a number on days leading up to the incident. Coroner stated that the rockfalls should have resulted in the crew being withdrawn until Cornwall Coal worked out the reasons.	Deteriorating conditions from late August should have sparked a risk assessment, but this didn't occur, and there was no discussion of suspending mining or moving crew on 30 October	Change in mine manager, with a new manager who regularly spent time away from the mine/Tasmania (absent for over 11 days immediately prior to the incident). Unclear if 'deputy' held a certificate. There was no strata control plan or TARP in place.	Ambiguous. No reference to independent audit of mine operations in lead-up to incident. Internal monitoring found wanting An inspection was carried out by two NSW coal mining inspectors in May 2000, but neither Cornwall Coal nor WST acted on their recommendations	No	Considerable regulatory gaps (e.g. unlike NSW no govt manual on inspections by managers, deputies etc and changes to extraction processes etc). Tasmania lacked mine/coal mine specific regulations. Inspector didn't visit the mine for 6 5 months prior to the incident and criticism of WST. Coroner criticised WST's investigation and failure to prosecute.	Mine deputy raised concerns prior to the incident, but no action was taken to move the crew or suspend operations. Prior manager was very alert to concerns raised Manager did not go UG when told of difficult conditions. Coroner stated that he should have ordered the crew to withdraw.	No evidence of poor relations, other than the deputy's annoyance with the mine manager at not going UG.	Fall resulted in injuries that proved fatal – emergency response not applicable.
Rockfall - On 6th June 2001, Jarrod Jones and Matthew Lister were killed by a rockfall at the Heemskirk 1670 Level of the Renison mine (Note coronial findings not handed down until 2008) No charges were laid	Rock breaker being operated by men defective but effect unclear. Issues of inadequate ground support and previously undetected fault.	No evidence of this.	No formal risk assessment carried out before miners sent in. Shift boss inspected the area and considered it to be safe. This was the usual practice at Renison in those days. Nowadays,	Lack of coordination of checking areas before re-entry and general lack of communication, poor recording of ground support (Note: Mining operations contracted out and transition re changing	No evidence of this.	Mine under financial pressure, with retrenchments in lead up to incident including low price of tin. No evidence that this played a role in the incident.	Pointed to absence of mine specific regulation and associated failures.	No evidence of this, although one worker refused to use the rock breaker previously because it was faulty.	No evidence of this.	Worker died immediately – emergency response not applicable

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
			rehabilitation is preceded by a risk assessment and usually involves a geotechnical engineer.	contractors at time. Jones was labour hire & Lister engineer in training. One operator Barminco had no geotechnical support at mine)						
Rockfall -On 5th May 2003, Sidney Pearce was killed by a rockfall at the Huon 1359 Level of the Renison mine (Note: Coronial findings not handed down in). Charges were laid against managers and the company.	Inadequate ground support issues remained and were identified by both the audit and the internal report referring to Huon 1359. Absence of critical internal geotechnical support amidst challenging conditions There was a design and technical failure, as the mining of the 778 crosscut to retrieve the bogger created a small and	2001 double fatality should have been warning signal even though in different area of mine. 25 April 2003 bogger front buried by rill coming down. Bogger recovery/ extraction of ore underestimated ore.	Risk assessments undertake by consultants following the 2001 fatalities and in wake of changing conditions not fully implemented nor systematically reviewed	Ongoing problems re systematic management of mine and risks including communication issues, slow implementation of improved ground support and ownership complexity & changes. Two managers prosecuted for failures by WST	Consultants audit September 2001 criticised many facets of mine operation. Critical audit recommendations not met	Mine under financial pressure, with retrenchments in lead up to incident. Huon ore body critical to mine future but urgent need to spend money (including more assessment) to mitigate serious risks Also, appears some risk taking to bring down the oxidised rill and recover the bogger. In a well-resourced operation, staff would not walk into an open stope to place recovery	WST failed to follow up on recommendations and audit ground support changes made after June 2001 & therefore missed loss of internal technical staff. Answers to 2002 WST desk top audit misleading re technical expertise but not followed up. Gaps in regulation contributed to incident	One miner warned of conditions in the area but others didn't due to economic pressure/job losses.[i] Others at mine including lower managers raised concerns re ground support	No evidence of this.	Worker died instantly – emergency response not applicable.

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	highly stressed pillar. Ground support in the area was inadequate.					chains or explosives. The oxidised ore and the bogger would have been abandoned after safe recovery attempts failed.				
Rockfall – On 25 April 2006, Larry Knight was killed and two other miners trapped by a rockfall at the 925 level of the Beaconsfield mine No charges were laid	Inadequate ground support was identified, and questions were raised about mine design. Rockfalls continued even after changes to mine methods following the October 2005 fall	Pattern of unplanned falls of ground over two years prior to incident, including major fall including 925 level in October 2025	Failure to undertake full risk assessment following October 2005 fall (didn't consider existing ground support regime)	Collected but failed to systematically analyse rockfalls. OHSMS too focused on behaviour-based safety	Only partial audit undertaken and recommendations including those re worker involvement not implemented	Mine under administration at time of fall but no clear evidence compromised safety	Mine-specific legislation absent following post-Robens reforms and inspectorate severely under-resourced	Experienced mine workers and at least one supervisor raised concerns about mine safety/methods (3 of 4 underground supervisors had safety concerns)	No health and safety representatives, mine safety committee ineffective and evidence of poor management/ worker communication and trust	Rescue of two trapped miners excellent though made more difficult by structural integrity of affected levels
Collapsed work platform/fall from height - On Monday, 9 December 2013, Craig Gleeson and Alistair Lucas fell 700m 20m from a loading station at level 18 of the Mt Lyell Mine when part of the machinery which they were	Deficiencies in the structural strength of a temporary platform made with King Billy pine (softwood) & unsecured. Finds there	No evidence of a history of using a wooden platform prior to the incident. The platform had been used for many years without incident.	No risk analysis of using wooden platform prior to incident. A risk assessment would probably have resulted in use of an	SOP failed to specify use of skip bin as fall arrest device or wearing fall protection. The mine had a policy on harnesses, but there was no supervision at the time of the	No audit identified limitations of the wooden platform prior to the incident (or monitoring, for that matter). No evidence that the task was formally audited against the	No evidence of this.	No evidence of this. The mine was inspected regularly. The legislation required a risk assessment for the task.	No evidence of this.	No evidence of this.	Found rescue effort timely. Gleeson died instantly, and Lucas on the way to hospital

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
working on fell onto timber boards they standing which broke and dislodged Charges were laid against CMT. The company pleaded guilty and was fined $225,000 in December 2016.	should be no further use of temporary work platforms. This was the main issue. One of the platform's 2 bearers had structural flaw. Not engineered or bolted together, so when bearer failed, no alternative load paths available and it collapsed.		engineered platform.	incident, and it was revealed that they didn't always wear them. Confusion re whether SOP, JHA or Risk Management Procedure was to be used on task. Although SWP in place, the risk controls were used and enforced inconsistently.	procedure through a planned inspection or task observation.					
Mud-rush On 17 January 2014 Michael Welsh was working a booger alone at draw point TD 14 on level 1315 when engulfed and killed by a mud- rush - a sudden and extreme release of rubble, water and mud. Charges were laid against CMT and its manager, but proceedings were discontinued following a decision not to allow critical evidence.	Inconclusive. Sub level caving increased risk of mud rush and use rare. Recommends if mine reopened moves to block caving Mining method successfully used at Mt Lyell for many years. However, the increasing depth and	Prior mud rush incidents at the mine (indeed fairly regular) However, these were not ignored. Investigations often involved specialist consultants and resulted in changes. The draw point where the mud rush occurred was clearly creating problems, but was being	No. Mud rush risk was being actively reviewed over time as were water levels	No. Mud rush part of mine's principle hazard management plan. Also TARPs being complied with but over-reliance on administrative controls	Mud rush management plan being audited as were water levels but auditing of TARPs didn't always occur	No evidence of this.	No evidence of this. The mine was inspected regularly and WST was involved in mud rush incidents and investigations.	No evidence of this.	No evidence of this.	Died immediately but working in isolation Found rescue effort timely and professional

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
	narrowing orebody increased the risk of mud rushes.	managed as per the site's TARPs.								
Rockfall On 17 March 2017 Nathaniel Beesley was killed by a rock fall while engaged with SRG Global in scaling operations for the Savage River Mine. No charges were laid against the PCBUs.	No evidence of this. Pattern of rockfalls suggested ground conditions issue. Manual scaling rare at mine (only where no alternatives but coroner found there were none	Pattern of significant rockfalls in decade prior to incident including 3 in December 2016, 3 in January 2017. SRG engaged in response. 2 March 2017 scaler injured by main rope failure possibly due to being by falling rock. However, these were not ignored. In fact, the reason for the manual scaling was to make the wall safe to construct a catch fence to prevent rocks from falling onto the haul road.	No evidence of this. SRG risk assessment initially deficient but rectified after being required to do so by Grange prior to the incident No evidence of this.	No evidence of this.	No evidence of this.	No evidence of this.	No evidence of this. Following rockfalls in 2010 WST ordered Grange to develop mine method to eliminate but continued. No regulations re scaling but WST made regular visits. Coroner recommended ground strata be including in list required to have PHMP. The mine was visited regularly and WST was closely involved in rockfall incidents. Grange had a PHMP in place for ground control.	Deceased expressed concerns about rope scaling activity to friends and another miner to SRG manager but coroner doubts these were relevant to death	No evidence of this.	Died instantly
Fall from height on 23rd January 2020 at the Henty Gold Mine. Miner Cameron Goss died	Yes. The design was based on an assumption that a stope	No evidence of prior warnings or causes for alarm.	Yes. The risk assessment did not consider risk of the backfill	Yes. The mine design and approval process was quite	No evidence that audits were carried out or were ineffective.	No evidence that economic pressures compromised safety.	No evidence of this. The mine was regularly visited by mines inspectors and the	No concerns were expressed by workers or others before the incident.	There was no evidence of poor management-worker	Mines rescue personnel, along with police,

Hazard/Incident details	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
when a large void opened up in the floor beneath his loader on the 1880 level. The loader and Cameron Goss fell about 10 metres into the void and he died as a result of his injuries. Charges were laid against the PCBU, which pleaded guilty and was fined $150,000 in April 2024.	had been filled with high strength paste fill, which would have provided a stable platform for bogging. In fact, it had been filled with low strength paste and waste rock.		slumping into a previously-mined void, mainly because of the incorrect assumption about strength of the backfill.	comprehensive but did not trigger a detailed assessment of the backfill.			legislation required a risk assessment for each task.		communication and trust.	ambulance and mines inspectors attended the site quickly after being notified. The evidence Mr Goss died instantly. The recovery was complicated and lengthy but ultimately successful.
Total number present	6	3	6	7	6	0	4	3	1	0

Tasmanian focus group participant high potential incident forms - Ten Pathways analysis

Table 5-10 describes the incidents selected by focus group participants to conduct a Ten Pathways analysis. Due to the small number of focus group participants, only two forms were received. Engineering failure and prior warnings ignored were identified in both incidents.

Table 5-10: Tasmanian focus group participant high potential incident assessment: Presence of Ten Pathways (N=2)

Incident details	P1 Engineering	P2 Prior warnings	P3 Risk assessment	P4 OHSM/SWP & audit	P5 Contractor mgt	P6 Production pressure	P7 Reg failure	P8 Worker concern	P9 Communication	P10 Emergency mgt	Total failures
Ground/strata - Roof fall which could have caused injuries if it had occurred during a shift.	1	1	-	-	1	-	-	-	-	-	3
Ground/strata - Intersection fell in at change of shift. There could have been a number if it had occurred at a different time.	1	1	-	1	0	1	0	1	0	0	5
	2	2	0	1	1	1	0	1	0	0	Ave 4

Concluding observations

Limited conclusions can be drawn about worker representation from the review of Tasmanian mining industry health and safety performance, beyond the observation that HSR arrangements under the WHS Act, in conjunction with the lack of a mining-specific inspectorate, have resulted in inadequate oversight of the management of fatal hazards. Mine-based HSRs draw their support from NSW ISHRs, who visit the two coal mines annually.

Concluding observations on mine health and safety performance

Mine health and safety performance in four state mining jurisdictions was reviewed to evaluate the effectiveness of different models of worker representation operating in each state. Tripartite co-operation is a common feature in all Australian WHS legislation. We examined how each mining jurisdiction's representative arrangement supported achievement of the objects of WHS legislation. Queensland mining and NSW coal mining currently have mining-specific representative arrangements, which provide SSHRs supported by a union- or government-paid elected industry representative who can carry out their representative roles without fear of reprisal. On the other hand, NSW metalliferous mining, WA, and Tasmania have the HSR model provided under the general WHS legislation.

Before undertaking a more detailed examination of findings based on the evidence reviewed in this chapter, the Queensland dust diseases collaboration between the tripartite stakeholders warrants acknowledgement. The MEU and ISHRs played a pivotal role in facilitating expert diagnostic services from the US to review historical and current radiologic images and developing these skills in Australia. All stakeholders have contributed to and continue to contribute to the ongoing management of environmental dust in mining workplaces, health surveillance, and diagnosis of MDLD.

Summary of findings

We used both quantitative measures of performance and subjective assessments of a range of reports to evaluate health and safety performance. Based on available data in each jurisdiction, we found that five-year rolling average fatal and serious injury frequency rates were the best quantitative performance measure, but on their own provide limited means of evaluating the impact of worker representative arrangements. Information in reports helped build an understanding of the regulatory and socio-economic context and factors weakening or supporting worker representation in each state, identifying aspects that undermine it.

The comparisons, using SafeWork data, were of limited value because the dataset did not include contractor fatalities and injuries and did not distinguish operation types (underground or surface). Despite different ways of measuring rates (NSW and Queensland use frequency rates while WA uses incidence rates), FIFRs enabled a subjective comparison of trends in each state over a 20-year span. Comparisons of SIFRs (SAFR in Queensland) were slightly more problematic, mainly because legislative changes in definitions within a state jurisdiction created a break in the comparable measure. For instance, in NSW, the classification of serious injuries changed when the WHS (MPS) Act came into force, and in WA the classification changed when mining transferred to the WHS Act WA in 2020. In addition, the WA annual performance report used different measures of serious injury, e.g., serious injuries or disabling injuries. As for FIFRs, comparing state trends for SIFRs enabled a subjective (within state) comparison over a specified reporting period. NSW trends were used as a performance benchmark, which was particularly useful for metalliferous mining, as NSW data provided 10 years of performance under mining-specific representative arrangements and 10 years under general WHS arrangements. Before legislative change in NSW in 2013, coal and metalliferous SIFRs were roughly equivalent. After the change, the metalliferous mining SIFR trended up, while the coal SIFR trended downward. Three other confounders were identified, limiting any conclusions that could be drawn about comparative performance based on representative arrangements. Firstly, the extent to which different jurisdictions, sectors, and companies manipulated the 'absence from work' criteria for classifying a serious injury. Secondly, when comparing all sector rates, the proportion of surface to

underground operations varies by state. The third factor is the extent of automation in each state. WA iron ore mining is highly automated.

Comparing FIFR/SIFR trends across states, NSW coal mining showed a clear downward trend after 2013-14, when new mining-specific legislation came into force; this was more apparent for serious injury rates. Several SSHR NSW focus group participants believed this legislation formalised the representative arrangements and strengthened the legitimacy of their role in management's eyes. In contrast, before the change in NSW legislation in 2013, coal and metalliferous SIFRs were roughly equivalent. After the change, the metalliferous mining SIFR trended upward. Another factor that may have contributed to this improved performance in coal mining was the inspectorate's targeted and compliance-priority assessment programs. However, the interventions applied equally to metalliferous mines, but the same performance improvement was not observed in this sector. The fragmented representative structure in metalliferous mines may have limited the workforce's awareness of the programmes and the dissemination of reports and compliance notices. Effective representative arrangements aid communication and increase the impact of regulatory interventions.

In the Queensland coal sector, legislative provision for worker representation remained largely the same between 2013-14 and 2024-25. However, health and safety performance, as measured by FIFRs/SIFRs, deteriorated after 2020-21. Placing fatal and serious injury (accident in Queensland) frequency rates within the context of industry debates on the performance of the tripartite relationships highlighted failures or conflict in the socio-economic and regulatory environments that were thought to weaken the consultative/representative mechanisms built into the legislation.

In the socio-economic environment, the growth of contract and labour hire work arrangements and their propensity to weaken safety management systems, particularly hazard and incident reporting and representative mechanisms, was revealed by the Queensland Coal Mining Board of Inquiry[297] and the Transport and Resources Parliamentary Committee Inquiry.[298] In the regulatory environment, changes to the regulatory governance framework, under the *Resources Safety and Health Act 2020,* undermined tripartite relations in the Coal Mining Advisory Committee and the long-term practice of sharing inspection reports (as noted in Chapter 4). These changes coincided with an increase in fatal and serious accidents around 2020.[299]

In WA underground metalliferous mining (predominantly gold mining), the fatal injury incidence rate dipped sharply between 2005-06 and 2012-13, then plateaued (with a slight increase) until 2017-18, after which it dipped again in 2019-20. The surface mining rate (predominantly iron ore) trended downward over the same period. In response to the Kenner review, WA implemented a levy on mining companies, which funded the RADARS (Reform and Development at Resources Safety) program. This program was responsible for developing risk management guidance on managing principal mining hazards. The inspectorate identified recurring hazards, developed a hazard register and communicated findings via annual roadshows. Ten Pathways was promoted as part of the roadshow.

[297] Queensland Coal Mining Board of Inquiry. (2020). *Queensland Coal Mining Board of Inquiry Report, Part II*, 415.
[298] Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. (Report No. 29, 57th Parliament), Queensland Parliament, Brisbane.
[299] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel], 41. Retrieved from https://www.rshq.qld.gov.au/

The Kenner review reaffirmed the importance of health and safety representatives and noted the importance of the relationship between the inspectorate and HSRs.[300] However, the recommendations to formalise HSR elections and provide mandatory training were not implemented until 2022, when the Work Health and Safety (Mines) Regulation came into force. We conclude, therefore, that the safety performance of the Western Australian mining industry is due to other factors such as the impact of the RADARS program and the introduction of automation. Despite the positive (or neutral) trends, the number of fatalities, particularly contractor fatalities, is high.

Following an increase in fatalities in each mining jurisdiction, state governments commissioned reviews to examine possible causes/underlying failures. In 2012, WA DMIRS undertook a review of fatalities between 2000 and 2012. In addition to identifying that a common factor was working outside of procedures and poor supervision, the DMIRS identified recurring hazards, including falling while working at height, being in the line of fire of objects or suspended loads, being struck or crushed by machines and heavy components, runaway vehicles, vehicles over edges, and vehicle collisions. In response to their findings, the department developed and promoted two fatal hazard registers and adopted the Ten Pathways model for identifying pattern failures.

NSW commissioned the *Wilkinson Fatality Review* in 2014 to examine if economic factors may have contributed to four fatalities in 2013-14. Wilkinson concluded that the common underlying factor was an overreliance on people-based controls rather than engineering controls. Wilkinson's recommendations initiated the NSW inspectorate program of targeted assessments focussing on critical controls for principal mining hazards. He also highlighted the importance of identifying incident causes and publishing these findings early after the incident. Investigation information releases and consolidated targeted and compliance priority assessment reports were a major source of information relied on in our current review.

In 2018, Queensland commissioned a review of fatal incidents between 2000 and 2018. This review, known as the *Brady Review*, identified risk assessment and supervision failures, and an industry cycle of vigilance and complacency associated with fatal incidents, as contributing factors. He recommended the Queensland mining industry adopt the tenets of High Reliability Organisations, and in response the mining regulator promoted the concept of a 'reporting culture'. Brady also warned against oversimplifying incident causation and recommended that industry should look to the interaction between factors. Brady's recommendations on identifying and preventing recurring failures, focusing on higher-order controls, and enabling workers (and PCBUs) to report incidents without fear of reprisal, are valuable contributions to incident prevention.[301]

The NSW Resources Regulator was the only state mining regulator to publish detailed assessment reports. We reviewed the inspectorate's consolidated targeted assessment and compliance priority assessment reports to identify qualitative differences in performance as measured by the number of notices issued in response to assessment findings, as well as inspector opinions. Our purpose in undertaking this review was to evaluate worker representative consultation and participation and determine if coal mines and metalliferous mines differed in this regard. Worker participation was not

[300] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 279 & 325.
[301] Brady, S. (2019). *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019.* Queensland Legislative Assembly. http://nla.gov.au/nla.obj-2496221169 [1]

a focus of any assessment program -—except the program that examined reporting health and safety concerns -— which was undertaken in response to concerns about reprisals for reporting hazards, primarily in the metalliferous sector. The reporting of safety-related issues campaign, conducted in metalliferous mines, found that feedback to workers on concerns raised was not always systematic and relied upon verbal communication between supervisors and workers. This finding is consistent with the Queensland CMSHAC report on the reporting culture.[302] Another compliance priority assessment program, which targeted supervision and communication, examined worker understanding of hazard risk management, their ability to identify hazards and controls, and supervisor understanding of inspection responsibilities and requirements. Overall, the assessment rating for supervision and communication in coal mines was 96%, compared to 86% in metalliferous mines. Observations on worker consultation and participation were limited, but where documented, they noted worker involvement in coal mines and a lack of involvement or worker understanding of hazards in metalliferous mines.

In Queensland, where both coal and minerals mining require dedicated units within the inspectorate (like NSW), there was insufficient information on health and safety compliance or on interaction with metalliferous District Worker Representatives or SSHRs to form a view on the effectiveness of mining-specific representative arrangements. The Western Australian mining industry is predominantly minerals mining. WA Mine Safety's Significant Incident Reports contained insufficient information on worker consultation regarding hazards and risks associated with fatal incidents to contribute to an understanding of worker engagement in risk control of major mining hazards. A small number of media reports spoke of worker concerns and union concerns about company poor performance with regard to risk management. For example, the Electrical Trades Union reported concerns about lack of electrical isolation (working live), which was echoed by the Chief Inspector of Mines, who also stated that 'all isolation and lock out/tag out procedures are verified by a supervisor and where applicable an Elected Health and Safety Representative'. In Tasmania, the Beaconsfield coronial inquiry report (analysed using the Ten Pathways model), and subsequent mine inspectorate audits, identified significant shortcomings in worker representation and involvement of the type needed in mining and adopted in jurisdictions such as NSW and Queensland. The coroner recommended strengthening worker representation arrangements. Twenty years later, the 2026 draft regulations include two related measures to review control measures if requested by a worker health and safety representative.

All mining jurisdictions undertook an analysis of common fatal hazards. WA picked up on recurring types of incidents and the failure of mine health and safety management systems to control the fatal hazards such as ground or strata failure, inrush and inundation, fire on mobile plant, falling objects, falling from a height (including equipment and operators falling into stopes), vehicle interactions, and being struck by or crushed between objects. We reviewed 107 regulatory and coronial investigation reports and analysed them using the Ten Pathways model to identify recurring failures, with a focus on 'worker voice' (see Table 5-11). The number of failures identified depended on what the investigation looked for – engineering component or failure of engineering rigour applied to design and monitoring (77%) and safety management systems failures (75%). In NSW, regulatory

[302] Commissioner for Resources Safety and Health. (2024). *The state of safety reporting culture in Queensland's mining industry*. State of Queensland (Commissioner for Resources Safety and Health) https://www.publications.qld.gov.au/dataset/the-state-of-safety-reporting-culture-in-queensland-s-mining-industry/resource/c7bba88d-8538-451e-b939-1edf127fa276

investigations were supplemented with other primary sources such as company annual reports and government economic reports published by the Office of the Chief Economist. This approach identified more failures associated with economic and reward pressures (72% compared to 25% of all reports analysed). In general, coronial inquires uncovered more failure points than regulatory investigations, which focus on engineering, risk assessment, health and safety management, and audit failures – factors under the control of the OHSMS. Most investigations did not explore worker concerns (identified in 21%) or worker-manager communication and trust (identified in 31%). Investigations rarely promote 'worker voice' and failures with regard to enabling workers and worker representatives to give their views on incident causation and how to achieve safe and healthy workplaces, which is one of the objects enshrined in OHS/WHS legislation.

Table 5-11: Summary of Ten Pathways analysis – regulatory investigation or coronial inquiry reports

Sector	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
NSW coal fatality investigation (n=18)	18	10	18	16	11	13 (72%)	8	7 (39%)	9 (50%)	6
Underground (n=10)	10	4	10	8	6	7	5	3	4	4
Surface (n=8)	8	6	8	8	5	6	3	4	5	2
NSW metalliferous fatality investigation (n=11)	11	9	10	11	7	8	6	7	7	4
Tasmanian coronial (n=8)	6	3	6	7	6	0	4	3	1	0
Queensland investigations and coronial (n=20)	18	5	13	20	15	3	10	2	13	9
WA coronial (n=2)	2	1	2	2	1	0	2	0	1	1
WA Significant Incident Reports (n=48)	27	6	11	24	2	3	1	3	2	2
Percentage of incidents (n=107)	77%	32%	56%	75%	39%	25%	29%	21%	31%	21%

To obtain a worker perspective on failure points, mine workers were asked to complete a Ten Pathways assessment on a high-potential incident or hazard exposure with which they were familiar. The form used questions derived from Ten Pathways, but contractor management was added as a separate pathway and safety management system and audit failure was combined under the heading 'Procedures and audit'. In total, 81 completed forms were received: 53 from NSW (coal and metalliferous), 22 from Queensland (all coal), four from Western Australia (all metalliferous), and two from Tasmania (all coal). Given the small numbers from WA and Tasmania, it was not possible to make more than a cursory comparison, and it is more meaningful to make observations based on responses from all jurisdictions. When mine worker assessments are compared with the analysis based on investigation reports, the following is observed:

- As for the analysis based on fatality investigations, every pathway was represented in these assessments.

- There is agreement on the most common failure points, namely Pathway 1 'Failures in design, engineering' (73%); Pathway 3 'Failures in risk assessment' (60%); Pathway 4 'Failures in safety procedures/audit (54%); and Pathway 9 'Poor management/worker communication' (58%).
- Contractor management was identified as a failure in 27% of incidents, reinforcing the importance of this issue, as indicated elsewhere in this report.
- Mine workers identified failures associated with Pathway 2 'ignored warning signals' (64%), Pathway 6 'production/cost pressures compromising safety' (64%) and Pathway 8 'prior concerns by workers or others' (48%) in more incidents compared to investigation reports. As noted elsewhere in this report, Pathways 2, 8 and 9 are those most directly connected to worker representation.
- There is a more even spread of pathways identified in mine worker HPI forms than the results from fatality investigations.

Most of these reports came from coal mine workers where the SSHR/ISHR regime operates and might be seen as implying this system is not as effective as expected. However, that interpretation has two problems. One obvious cautionary point is that the small number of responses from Tasmania and Western Australia means that such comparisons are not meaningful. Another cautionary point is that where we could compare larger numbers of HPI forms under the SSHR/ISHR regime (NSW coal mining) and the HSR regime (NSW metalliferous mining), metalliferous respondents identified more pathways/failures overall than their coal mining counterparts (see Table 9-1), Chapter 9 p 410.

Finally, another observation is worth making. It should not be surprising that mine workers identified more failure pathways, because we asked respondents to assess each of the 10 pathways. In contrast, official investigations/coronial inquests do not specifically do this. Moreover, when Ten Pathways was surveyed over several years as part of the Western Australian inspectorate's annual road show and for Jenke's PhD (see Chapter 5), workers/HSRs tended to score lower on addressing pathways than managers, including safety managers, who also responded. This indicates they had less confidence in the systems in place or were more aware of gaps/deficiencies.

Conclusions

The mining-specific representative model is working effectively in NSW coal mining and Queensland coal and metalliferous mining; notwithstanding, Queensland SSHRs and ISHRs have come under pressure in recent years, as revealed by the Grosvenor BOI, the Transport and Resources Parliamentary Committee inquiry and the Johnston Review. In WA and Tasmania, worker representation under the general WHS provisions and how this has operated is largely invisible in regulatory and other reports. In WA, Kenner praised the commitment of HSRs and acknowledged their contribution to health and safety and the importance of the relationship between HSRs and the inspectorate; however, he did not recommend WA adopt the check inspector regime operating in NSW and Queensland at the time of the review. In Tasmania, the Beaconsfield inquiry identified the need for stronger worker representative arrangements.

Six observations emerge from this review:

1. The first observation relates to data and the lack of consistency between jurisdictions about how serious injuries (or accidents in Queensland) are defined, which makes high-level performance comparison between states difficult.

2. There is some evidence that the general WHS Act model of worker representation has not been effective in elevating 'worker voice' in NSW metalliferous mining, WA and Tasmania, while the NSW and Queensland coal mining experiences show that the union supported mining-specific representative arrangements are working well, as evidenced by the SIFR and inspector targeted and compliance priority assessment programs, and Queensland interventions and contributions to Mine Worker Dust Lung Disease (MDLD) and gas, spontaneous combustion and ventilation management.
3. The third and related observation is that harmonisation has resulted in a levelling down of representative arrangements in those states (or sectors within a state, as is the case with NSW), which has not delivered better performance (as outlined above).
4. Labour arrangements: non-permanent labour has weakened safety and health management systems, particularly reporting incidents and raising concerns, and representative mechanisms (see Grosvenor Queensland Coal Mining BOI[303] and subsequent Transport and Resources Parliamentary Committee inquiry).
5. Related to labour arrangements, the fifth observation is that production pressure and cost-cutting in response to market fluctuations undermines worker representative mechanisms by, for example, reducing time for inspection and favouring a flexible, non-permanent workforce, leading to increased turnover of ISHRs/HSRs. Evidence for this was found in the BOI report, which identified production rates as a contributing factor to the Grosvenor fire and explosion and Queensland MEU Callide Lodge member survey of 1,010 Queensland coal mine workers, comprising union and non-union members, which found 80% of workers indicated that companies valuing production over safety was their biggest safety concern.[304]
6. The sixth observation is that the relationship between the ISHRs/SSHRs/HSRs and the inspectorate is an important feature of the tripartite representative model operating at the mine site level and within Industry Advisory Committees. Evidence for this is drawn from the NSW metalliferous mining targeted and compliance priority assessments reports, the Queensland Coal Mining BOI, and the Johnston Review reports.[305]

The review of safety and health performance in NSW, Queensland, WA and Tasmania showed that the mining-specific representative arrangements are more effective in elevating 'worker' voice. The findings also highlighted the importance of tripartite collaboration – unions, industry associations and the regulator – and the tripartite prevention triangle in achieving the objects of safety and health legislation. Investigations should consider all the failure points described in the Ten Pathways model and consider worker perspectives. Finally, as recommended by the Queensland *Brady Review*, we should not look for single causes but rather consider the interaction of contributing factors. Rather than looking at incident causation by focussing on failures at lower levels of the socio-technical system (within the control of the safety management system), we should focus on how incidents are prevented, including by ensuring external factors are considered and managed.

[303] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report, Part II.*
[304] Reported in Transport and Resources Committee, (2023) *Inquiry into coal mining industry safety*. (Report No. 29, 57th Parliament), Queensland Parliament, Brisbane, 25-26.
[305] Johnston, S. (2025).Independent review of the Queensland resources safety and health regulatory model. Queensland Government, Queensland, Brisbane.

Chapter 6 Health and Safety Representatives (HSRs) in metalliferous mining in Western Australia

Introduction

Metalliferous mining plays a major role in the economy of WA and in the economy of Australia as a whole. Western Australia is the world's largest iron ore supplier. Recent figures indicate that it produced 949 million tonnes, accounting for 38% of the global supply of iron ore in 2023. Most of this was, and continues to be, produced by some of the largest global mining companies, prominent among them Rio Tinto, BHP and FMG, all of which operate mainly in the Pilbara region. Direct full-time equivalent employment in Western Australia's iron ore industry rose to 60,695 in 2023, some 47% of direct full-time equivalent employment in Western Australia's minerals mining industry.[306] Again, much of this employment is found in the mines of the Pilbara.

Unionisation in these mines is low, estimated at less than 5%, following a substantial decline since the 1980s, largely the consequence of concerted efforts by mining employers to rid the industry of trade union organisation altogether.[307] However, in recent years, the unions involved have made renewed efforts to establish a presence in the Pilbara mines.[308] In parallel, regulatory provisions for the election of HSRs mean a framework exists for the appointment and activity of a group of worker representatives on health and safety in iron ore mines. Research from many countries and sectors suggests these representatives are most likely to be effective when supported by trade union organisation at their workplaces.

In this chapter, therefore, the key questions address what happens when statutory provisions on mine worker representation and consultation on workplace health and safety apply, but at least one prerequisite for the effectiveness of worker representation—trade union organisation—is almost entirely absent. This chapter analyses the experiences of current and recent HSRs in several large iron ore mines and related employment, and the union organisers who endeavour to support HSR activities in the Pilbara. The chapter is based on a qualitative analysis of information from discussions between participants and the researchers across nine focus groups. These discussions provided rich detail on how health and safety arrangements operate in the metalliferous mines where most participants were employed. It included extensive material on past and current experiences of hazards and efforts to manage their risks in these mines, from the perspective of mine workers generally. It also included contextual information on the work regime in these mines and perceptions of employers' and

[306] Government of Western Australia (2025) Western Australia Iron Ore Profile – May 2024 Accessed 10 Feb 2026
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.watc.wa.gov.au/media/wxehzmmd/wa-iron-ore-profile-may-2024.pdf
[307] See Ellem B.(2017) *The Pilbara: From the Deserts Profits Come,* UWA Publishing, Crawley WA; and more recently, Vassily A. (2025) *Striking Ore: The Rise and Fall of Union Power in the Pilbara,* Monash University Publishing Clayton Victoria.
[308] Vassily A. (2025) *ibid.*

management's priorities, as well as the features and consequences of the human resource management systems and practices operating in the mines. To maintain focus on the aims of the present research, the analysis in this chapter concentrates on the experience of representation and consultation on mine workers' interests in health and safety, although the wider context that influence this are identified. Much of the rich detail concerning the nature of the health and safety issues the participants described — which were typical of those described in metalliferous elsewhere in this report — has been omitted, in the interests of brevity, focus and protection of the anonymity of the participants.

Under the regulatory provisions, HSRs do not necessarily have to be trade union members or representatives, but all participants in the study were, in fact, trade union members. As with the other chapters in the report that present the findings of the qualitative study by state, the following account begins with an outline of the methods used. This is followed by an account of the findings of the study that is based on the analysis of the group discussions held with the participants.

This part of the chapter is organised into sections that first outline the organisation of employment in the mines where the participants were employed and the arrangements in place through which they became HSRs. The analysis of their experiences as current or former HSRs is then organised into a series of subsections, based in part on the content of the legislative provisions concerning rights, functions, supports, and facilities for representation and consultation on health and safety in mining in WA. As well as drawing upon on the nature of the company health and safety arrangements for health and safety and the exercise of HSRs' rights and functions in relation to them.

Sub-sections consider, in turn, experiences of carrying out the functions of HSRs and their involvement in identifying hazards, assessing risks, and reviewing health and safety management systems. This includes their experience of arrangements for addressing Principal Mining Hazards (i.e., activities that might result in multiple fatalities), as defined under the Work Health & Safety (Mines) (WHS) Regulations for Western Australia 2022.[309] It also includes their experiences with dust exposure, monitoring and control (which, although not included in the list of Principal Hazards in metalliferous mines in the Regulations, participants clearly regarded as such), and other hazards they identified. Attitudes towards, and experience of, safe work procedures/safe operating procedures SWP/SOP), Job Safety Analysis (JSA) and 'Take-5s' are also explored. Throughout, the main aim is to explore and understand the HSR's involvement and capabilities in 'getting things done' in their role as mine workers' representatives. The findings include not only experiences in relation to the above, but also that of reporting practices, of procedures for recording and investigating incidents and follow-up actions; talking with constituents/other representatives; as well as of raising issues with managers and supervisors and their follow-up, including their experiences in relation to meetings with managers/joint safety committees and fellow mine workers. All of which are included among the powers and functions of HSRs found in the relevant regulatory provisions made under the WHS Act 2020 and the Mining Regulations 2022 — as outlined in the following sections. Based on discussions

[309] The Work Health & Safety (Mines) (WHS) Regulations include the following as Principal Hazards in metalliferous mining: geotechnical structure instability; inrush of any substance; mine shafts and winding systems; roads or other areas where mobile plant operates; and fire or uncontrolled explosion.

with participants covering these procedures, this section addresses issues they indicated affected the role, actions, and effectiveness of HSRs, as well as their confidence to raise safety and health concerns. After analysing their relationships with managers and management arrangements for health and safety, this section outlines the HSRs' relationships with regulatory inspectors. In the subsections covering these issues, the participants' experiences of the support for their role as HSRs are explored. Several forms of support covered by the statutory provisions are examined, including preliminary and ongoing training for HSRs, and access to information on health and safety issues and their sources. The chapter also explores support from the inspectorate, professional health and safety advisers, and the companies employing them, as well as trade unions, including the role and usefulness of the right of entry to mines for full-time union officials.

A strong sense of the limitations of the role of HSRs, as variously experienced by participants, runs through the following analysis. With this in mind, the final section of the chapter discusses what participants thought might help improve their effectiveness as change agents on health and safety. Given the overall aims of the research, this discussion focuses especially on exploring the potential felt by participants to be found in the adoption of arrangements analogous to those found in other states and forms of mining in which workplace HSRs are supported in their role by both mine-level site safety and health representatives and full-time trade union regional health and safety representatives.

Interviewee profile and methods

Nine separate focus groups were undertaken with health and safety representatives and trade union organisers involved in metalliferous mining in the Pilbara region of Western Australia in January 2026. Participants were organised by the Western Mine Workers' Alliance, a partnership between Mining and Energy Union (MEU) and the Australian Workers' Union (AWU). Most took place on premises occupied by the Alliance in the mining towns of the Pilbara and were hybrid events in which some participants took part in person, and others joined via Zoom. Two members of the research team travelled to the Pilbara and were present in person, while the other two joined via Zoom. A final discussion with the union organisers for WA and one MEU HSR for train drivers took place entirely via Zoom.

The primary reason for taking this hybrid approach was the difficulty of gathering interviewees together simultaneously, due to shift systems and fly-in/fly-out employment. However, a second reason was the general unwillingness among potential participants to take part in an activity they felt identified them with trade unions, for fear that this might affect their employment opportunities in mining. Not all interviewees shared this reluctance, but the researchers sought to alleviate it by offering the option to participate remotely and by conducting the discussion groups in person at venues away from the mine sites where participants were employed.

All interviews and focus groups used the same semi-structured interview schedule used in the study generally, adapted for the WA regulatory and employment relations contexts, in which the same 10 principal areas/questions were examined. As elsewhere, all the interviews were digitally recorded with the consent of interviewees (and assurances as to anonymity – see Chapter 2) and automatically transcribed by the PLAUD program. Interviews and focus groups took between 90 minutes and two hours.

Table 6-1: Interview/focus group questions

1. Welcome and icebreaker - introductions

    - What mine do they work at and for how long – how many workers work at the mine and percentage of direct employees versus contractors and labour hire workers?
    - Has anyone worked in coal mines or in NSW or Queensland or a metal mine in Queensland where there were industry and site safety and health representatives?
    - What outcome are you hoping for by participating in this interview/focus group?
    - How many HSRs do you have at your mine? How were the workgroups that HSRs represent identified?
    - How many workgroups were identified at your mine, and how were they identified?
    - Does it provide representation for all workers, i.e., night shift, contractors, surface workers, etc.?

2. Do workers feel confident to ***raise concerns about health and safety***? Do employed workers have the same experience as contractors or labour hire workers?

    - Are worker concerns dealt with fully?
    - Are there any instances where concerns about a hazard or risk were not fully assessed, or concerns ignored that resulted in a serious incident?
    - Do HSRs feel confident raising worker concerns with management, and are their views and this role respected?
    - Do HSRs ever feel intimidated and therefore reluctant to perform some of their functions?

3. What are the main hazards at your mine that could seriously injure or kill someone? How were they identified and assessed? How were control measures decided, and were workers and HSRs involved?

    - Were workers involved in identifying principal mining hazards, and did they have the opportunity to contribute to the risk assessment and selection of control measures?
    - Does the mine's safety management system and principal hazard management plans manage the risks effectively?

        i. How often are they inspected?

        ii. Are HSRs or workers involved in these inspections and any review of control measures?

        iii. Do inspectors provide adequate oversight?

4. How effective are HSRs in raising concerns about the ***control of principal mining hazards***? Let's explore this in the context of a recent incident. We have an example, or you could talk about another incident that you were involved in.

    - Have there been any high-potential incidents in the last year?
    - What happened?
    - Was it reported, and does the mine report all high-potential incidents?
    - Were HSRs involved in the investigation? Do inspectors seek out HSRs and consult them?

- Can you think of an example where an incident may have been prevented due to the intervention of an industry level employee's representative i.e., and independent employee's inspector with experience and supervisory level qualifications?

5. Has the introduction of AI, computer/digital systems including those facilitating automation/remote mining occurred at your mine, was there any discussion/risk assessment in which the HSRs were involved of the WHS effects (prompts here include multitasking, monitoring multiple screens, tracking errors in automated actions, effects of situational awareness, changes with regard to the use of high-pressure hoses, site surveillance, warning signal detection, remote sensing etc).

6. How much interaction do HSRs have with inspectors?

    - Are HSRs contacted by inspectors when they visit the mine, and involved in inspections and investigations?

    - Do inspectors investigate and resolve complaints from workers?

7. Do you think the training given to HSRs is adequate – does it cover mining hazards, inspecting mining hazards, understanding safety management systems, and what should be covered in a principal hazard management plan? How knowledgeable are training providers under the regulator's current policy?

    - Do training providers know the industry? Have they had industry experience?

    - Part 2: Would the inclusion of provisions such as those in the NSW coal/Qld mine legislative framework for representation be a more effective system for WA? (Having an SSHR who can represent the whole workforce rather than just a workgroup and them being supported by an industry-level representative, as well as a stronger role for the union and WHS entry permit holders). Would it be more effective if a health and safety representative could speak on behalf of the whole workforce, not just a particular workgroup?

    - Does the HSR model negatively impact the effective control of principal hazards?

    - Does it limit power and authority, i.e., unequal levels of power or influence HSRs have compared to management? Would a union/industry-wide safety and health representative help site-based representatives elevate concerns and gain management attention?

    - Would this support representatives' capacity to be involved in inspections of major hazard risk status or incident investigations?

8. Role of trade unions in worker representation. The general WHS Act gives a union representative the right to enter a workplace where they have members or potential members and to consult with these workers. They can enter to inquire into a suspected contravention or consult, advise relevant workers, and warn workers if they are exposed to a risk.

    - What percentage of workers are members of a union?

    - Under the model general WHS model, are WHS entry permit holders from relevant unions able to gain access to the mine to enquire into breaches or other concerns raised by workers without being challenged? Do they deal with issues effectively? Are they knowledgeable about mining processes and hazards?

9. Would a full-time industry-based worker safety representative who could visit your mine assist site-based representatives, respond to problems, etc., be of help?

    - Would support of this kind help site representatives carry out their functions – raise issues, cease work, issue provisional improvement notices.

- In Queensland coal mining, ISHRs can make unannounced visits/inspections (i.e., without giving notice). Should this function exist in Western Australia.
- Would it equalise power relations?

10. Should a legislative update establish ISHRs as a function in WA mines?
    - If so, do you have any thoughts about how should they be elected, appointed, and paid?

There were 22 participants in the interviews/focus groups. Five were union organisers. Most of the remainder were current HSRs, while a small number were miners who had previously been HSRs, including one organiser who had, until recently, been an HSR. As noted earlier, all participants belonged to a trade union. Nearly all of the interviewees were members of the WMWA. One organiser and one of the HSRs (for train drivers) identified as MEU members. Four of the HSRs among the participants were women, and the rest were men. Their ages ranged from 30 to 63 years, with a mean age of 50 years and a mean of 13 years of mining experience (only six years of experience in WA). Interviewees covered an array of different occupations/job tasks, including production technicians, drill operator, service and dewatering, maintenance fitter, and trainer assessor/training supervisor. A small number (three) were new to the role, with six months to a year's experience as HSRs. The work groups they represented included both production work and maintenance and support functions in the mines where they were employed, nearly all of which were large iron ore mine sites in three different areas of the Pilbara. Most were FIFO employees, while some others resided in towns near the mine sites. A small number had previous work experience in other states and in other forms of mining.

As indicated in the previous section, participants discussed questions in the same broad areas that have been focused on in other states. These were designed to shed light on their experience of the operation of representative and consultative mechanisms in metalliferous mining, and their relations with mine workers, supervisors and managers, inspectors, trainers and others relevant to their role. It was also developed as a way of exploring their perceptions of the support they received for their role and where they felt improvements might be made that would make representation and consultation on health and safety more effective in metalliferous mining.

Findings

Most of the mine workers among the participants were employed in various capacities on large mine sites in the Pilbara. In addition, one participating HSR represented train drivers, and another worked loading iron ore on ships at a Pilbara port for another large employer. The WMWA (four) and MEU (one) organisers who took part in the discussions were active in the Pilbara in relation to the iron ore mines although one also had wider experience and responsibilities in WA, including in relation to coal mining.

Employment and representation

Many of the participants did not know the exact number of employees in the mines where they worked but most estimated that the number to be around 1000 or greater in some cases. That is, they

were all employed in comparatively large mines. Similarly, they were also often not aware of the extent to which the workforce consisted of directly employed workers or contractor/labour hire workers. Various estimates were offered from the personal experience of participants. They varied from less than 10% to over 50% contractor/labour hire. This personal experience involved working alongside the contractor workforce, and participants generally reported that health and safety issues were more difficult to address when contractors were involved (although a small number said contract workers were treated the same as other workers when they were part of the same workgroup). One gave an example of how contractors were included in the health and safety management system:

> … as for contractors, we do have a few on the crew. Maybe about three on our crew. Mine services have more… there's a rehab crew that are all contractors. There's probably about 10 of those. But they're all included in safety and they're in our safety system. F7/3

But this was somewhat exceptional, and most participants pointed out that including contractors often presented difficulties for HSRs. In some cases, the 'contractors' the participants referred to were workers who aspired to becoming directly hired mine employees. There was a widespread understanding that this was likely only if supervisors and managers saw the mine workers' performance as acceptable. In the wider context of scrutiny and accountability for safety issues, which many participants described as the prominent ethos of employment in the mines where they worked, such workers were regarded by the participants as especially wary of raising safety or health issues for fear of jeopardising their chances of direct employment. At the same time, several participants reported favourably on the health and safety arrangements that specialist contractors had in place for their workers. Participants generally regarded specialist contractors as having special skill sets that were called upon in special circumstances, and they felt the workers involved had the confidence and experience to address health and safety issues in these circumstances themselves.

In general, there was overall consensus among participants that the restriction to representing the interests of the members of the work group to which they belonged (that are discussed in the following sections) also meant there were limits to the extent to which, as HSRs, they were able to represent the interests of contract workers.

Becoming a Health and Safety Representative

Western Australian statutory provisions[310] make clear that the basis for the number of HSRs in a workplace is the 'work group', and the composition of the work group is subject to negotiation between the person conducting a business or undertaking (PCBU) and the workers. However, none of the participants in the group discussions had been involved in negotiating the composition of the work groups of which they were part as mine workers and as HSRs, and it was unclear how such work groups had been defined or who had defined them.

[310] A health and safety representative (HSR) is elected by their work group under the Work Health and Safety Act 2020 (WHS Act) to represent workers in work health and safety (WHS) matters. See https://www.worksafe.wa.gov.au/electing-health-and-safety-representatives

Under the statutory provisions, a worker can ask the PU to conduct an election for one or more health and safety representatives (HSRs). While some participants reported being nominated and elected in this manner, most had been selected unopposed (and sometimes during their absence). They agreed that many other HSRs at their worksites had been selected by mine supervisors or superintendents rather than elected by their fellow mine workers.

> …one got elected maybe six months ago. They were actually nominated by the supervisor and superintendent, and not by the people. F3/1
>
> And
>
> *Interviewer:* 'What you seem to be both saying is people who are health and safety reps are more selected by the management [rather] than elected by the workforce?'
>
> 'Yes, that's exactly it. …. even to be in the selection pool, you have to tick the boxes from the management first before that can even happen. Yeah.' *F5/2*

Some former HSRs among the participants indicated that they would be unlikely to be re-appointed as HSRs because they believed management would oppose their selection after they had 'spoken out' about health and safety issues in the past.

Participants further reported that they believed there were considerable gaps in HSR coverage across work groups at their mines.

> *Interviewer* 'And on your worksite currently are all the work groups represented by HSRs in position?'
>
> *Participant:* 'To say that they all do would be an absolute lie. I know that there are multiple crews that go years and years and years without HSR'.
>
> *Interviewer:* 'Why do you think that's the case?' F7/2
>
> *Participant:* 'Well, primarily it's a damn thankless job. And look, the reality is there is two different types of HSRs. There is the HSRs that are in it for gain. Plus, the yes men that don't get anything done. And, then there's the HSRs who are there, because you know, they're there to try and make the workplace safer. Um…. and they have a habit of being pushed out.' F7/2

Some participants elaborated on this further:

> '[Becoming a HSR] is a pathway to supervisory work. It's an opportunity for you to show your leadership qualities. If you were a safety rep it showed in a small way the same as a step up would — that you're showing your leadership qualities.' F6/4
>
> 'Absolutely. And if you do what you are told you can get somewhere. Yes, it's true.' F6/7

Participants repeatedly mentioned the issue of HSRs being appointed by management, and many volunteering for these positions because they saw them as a means of career progression. They sought to distinguish themselves from these practices but reported them as widespread and a significant limit

on their own capacity to be effective. This was frequently discussed alongside comments about active HSRs being present in insufficient numbers, and of those HSRs that were appointed, many of them, especially among those seen to have been appointed by supervisors and management, kept a low profile and were often unknown to other employees:

> 'So, I don't even know who our rep is… I couldn't tell you who our reps are. I'd have to ask and approach them. They don't actually have a presence; they aren't present in meetings saying that 'I'm the safety rep, this is what we've had, …. these are the things that have come forward…. these are the things that we've fixed'. None of that happens. That doesn't happen. We don't see any of that.' F6/2

A further issue that was discussed quite frequently was that while the large companies that employed many of the participants had documented procedures in place for the election of HSRs, the reality that participants experienced was somewhat different:

> 'Yeah, we need to have safety reps so we have safety reps. What do those safety reps do? No one knows. Even the safety reps don't know what they're meant to do….
>
> There are little fits and starts in the safety department, even with some supervisors who get proactive. They encourage their safety reps to do the same. But yeah, it's not as far as the company or the culture of the company is. In my department specifically, it's just been downhill. As far as we just have safety reps because we have to have safety reps.' F5/2

The impression conveyed by this and many similar participant comments during the discussion was that they regarded the presence of HSRs as covering *the appearance* of meeting the legislative requirements on the companies concerned and thus being seen to be 'taking safety seriously.' Meanwhile, the large and powerful companies pursued their own version of health and safety management. This meant that, in practice, most appointed HSRs were not integral to how the company operated its health and safety arrangements.

Support from the company did not usually go very far beyond appointing and facilitating the initial training of the HSRs. Following this, participants suggested that neither the information nor the wider support they might require to perform their functions as HSRs, including the facilities recommended in guidance to the regulatory provisions,[311] were forthcoming. The procedures in place for inspections and investigations undertaken by HSRs, or for making representations to management were, in practice, either absent or not made clear to the HSRs on a company-wide basis. This meant that in some areas, where the pressures of production allowed, the combination of an active HSR with a sympathetic supervisor might lead to some active engagement in inspections and investigations of immediate local issues:

> 'Yep. Our crew is really happy. Like really, really good. Our supervisor is making sure you've done your 'Take 5'. We'll talk through the job. He's been in the plant a long

[311] See Work Safe Australia Department of Energy, Mines, Industry Regulation and Safety HSR handbook: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://hsrmatters.safetyline.wa.gov.au/wp-content/uploads/Health-and-safety-representative-handbook.pdf

time and knows the things you should be looking out for. And you know, I don't have a problem standing up and saying things.' F6/3:

But for most HSRs, such support and facilitation were not the norm, and they often struggled to undertake even these basic HSR activities.

A further distinction which emerged quite strongly when participants' experiences of support and time to undertake their activities as HSRs were compared was that in the (relatively few) cases where positive experiences of engagement on health and safety matters were reported, they were almost always from the HSRs who worked in maintenance and servicing rather than in more mainstream production activities. In neither case did the HSRs appear to have received much information and advice on the health and safety issues they encountered. In the latter cases, the HSRs indicated that they had simply no time to undertake their inspection and investigative activities properly during their shifts. There were no reports of any of them being able to take time off, with pay, to conduct inquiries such as described in the guidance to the regulatory provisions.[312] Nor did the majority feel able to discuss health and safety matters in scheduled meetings with mine workers in their constituencies, as sometimes reported by HSRs in maintenance and services roles. While for those involved in maintenance and service roles, although they frequently suggested that there were issues of support and follow-up in relation to resolution of health and safety issues that they identified, there was generally a sense of more time and opportunity for them to act as HSRs and more acceptance of their role in this respect by supervisors.

The themes of limited numbers of active HSRs, and their limited capacity and involvement in health and safety matters, also emerged in other areas of our findings, as will become evident in the following section addressing their engagement in the health and safety management procedures in the mine, including those in place to address the principal hazards associated with fatal risks in mining, and those in response to changes in work arrangements as the result of the impact of digital technologies.

Getting things done — engaging with safety management arrangements in metalliferous mining

Documented health and safety management systems are generally how large companies are seen to be putting in place arrangements to fulfil their statutory obligations on work health and safety. The large mining companies where the participants worked were no exception, and they all had such documented systems in place.

According to WorkSafe Western Australia,[313] under the provisions of the *Work Health and Safety Act 2020,* a trained HSR may undertake several functions. These include inspecting the workplace (after giving written notice to the PCBU, or without notice if there has been a WHS risk or incident). They can also attend a meeting between a worker (or group of workers) and the PCBU; request that the PCBU form a health and safety committee; receive WHS information that affects the work group; request the assistance of another person; issue a provisional improvement notice (PIN); and direct

[312] See Work Safe Australia Department of Energy, Mines, Industry Regulation and Safety HSR handbook: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://hsrmatters.safetyline.wa.gov.au/wp-content/uploads/Health-and-safety-representative-handbook.pdf

[313] See HSR handbook *ibid*

workers to stop unsafe work. They are generally limited in using these powers only for the work group they represent. There are limited exceptions to this. First, the HSR's powers can be extended if the HSR for a particular work group is unavailable and there is a serious risk to the safety and health from an immediate or imminent exposure to a hazard. Second, the other exception occurs where a member of another work group asks for assistance. They may be assisted by a suitably experienced escort when performing an inspection in an area foreign to them.

In turn, the organisation for which they work is required to: support the HSRs by making information available relating to hazards at the mine that expose workers to risks; provide reasonable assistance and facilities to allow the HSR to perform their duties of inspection and investigation; have a process in place to inform the HSR of accidents, incidents and dangerous occurrences; and allow them to assist with the incident investigation. In addition, under the Work Health and Safety (Mines) Regulations 2022, the HSR may request a review of a control measure, required under the WHS Regulations, that affects or may affect the health and safety of a member of the work group represented by the health and safety representative, when the duty holder has not adequately reviewed the control measure in response to the circumstance.

It might be anticipated therefore that both acknowledgement of the rights and functions of HSRs and the obligations of employers to support and facilitate their operation would be reflected in the companies' documented health and safety management systems. Indeed, this was the case, insofar as company documentation describing their health and safety management arrangements and the procedures for operationalising them referred to consultation with workers and their representatives.[314] These documented company health and safety procedures, including those on consultation and representation, no doubt complied with the relevant legal standards. However, they often lacked detail on how this 'consultation and representation' would be supported in practice. As noted in the previous subsection on the selection of HSRs, participants' experience was repeatedly at variance with the intent of the regulatory provisions.

This variance was evident in the HSRs' engagement with the work health and safety systems and procedures in which they worked and undertook their representative role.

> 'From a [company name] perspective, the HSRs, they basically do whatever they are asked to take forward to the supervisors to go and try to get things done. And generally, these are legitimate safety concerns. But if something is big, it's generally bypassed completely from the safety rep. So, I don't feel that the safety reps on our site actually get to do a hell of a lot.' F6/4

It was apparent that the collective experience of all the HSRs who participated in the discussion groups, as well as that of the mine workers who were not currently HSRs, fell very far short of the guidance from WorkSafe Western Australia outlined in previous paragraphs. As is already clear from the accounts of their election and the composition of the work groups they represented, while HSRs were present in the iron ore mine of the Pilbara in name, very few had been placed into these positions

[314] In the course of the fieldwork we obtained a number of copies of documented health and safety management systems from the mines where participants were employed. But in order to protect the anonymity of both the participants and the major mining companies employing them, we have not identified the sources of any of these in this account.

in strict accordance with the key points of the guidance or the requirements of the legislation that it seeks to explain. This was also true of the activities they were selected to perform and the support they might have expected, as outlined in the above guidance.

In the following subsections, we explore the extent of this gap between guidance and practice under several sub-headings that reflect the sort of activities HSRs might be expected to engage in under the regulatory provisions.

a) Inspecting, investigating hazards and raising concerns – Many of the HSRs did not appear to have been involved in regular inspections of the work and worksites of the workgroups they represented:

> Interviewer: 'Are there HSRs or a worker from that area involved in the inspection or supervisors?'
>
> Participant: 'Supervisors? We don't do them with them; we don't go around together and do those inspections'… you're not involved in that inspection as HSR, in terms of consulting. No. And if they find any issues, in relation to how they might go about instituting control measures to alleviate any hazard, they may consult me as a [mine worker], but not as a health and safety rep. So, no.' F7/2

Nevertheless, some participants reported positive experiences with their supervisors:

> 'Well I'm the HSR and my crew's really good. They come to me, but they don't need a [formal] meeting to ask something. They know I'll listen. Then I go and talk to the supervisor. Quite often things can be sorted with him. Or the superintendent if I take it to a bigger meeting.' F6/3

Other HSRs were less sanguine about the role of supervisors and frequently pointed to the reluctance of mine workers to raise concerns with the HSR in the presence of their supervisor:

> 'So every fortnight we have a crew safety meeting and our supervisors are there. So like people don't raise issues in that forum. I think, because the supervisors are there. So, they sort of talk to you outside about it if they want to raise an issue.' F7/3:

Comments in the discussions around inspection and investigating hazards typically reflected everyday experiences of 'hazard spotting', as is plain from the following quote:

> 'I find a hazard, I'll call up my supervisor straight away and let them know. I'll report it in my report, and then we would rectify it. And the same as if I was doing that as a health and safety (representative), it would go to the supervisor if he's here in that area. I would let him know.' F7/3

There was considerable overlap in these discussions of investigating hazards and carrying out inspections between what participants were required to do by the company to work safely as mine workers and what they might do as HSRs. Some of the HSRs distinguished the need for everyday health and safety awareness among mine workers from their role in raising issues as HSRs. Others did not. But they all indicated that, in general, supervisors and managers sought to engage them more frequently with minor everyday issues, and were disinclined to encourage their pursuit of what, in the participants' view, were more serious issues that may require resolution at higher levels of

management in the mine. A much-repeated comment in this respect was that this guiding of the HSRs towards investigating more minor issues was a strategy the company adopted to help to ensure that the activities of the HSRs didn't interfere with the operation of production at the mine, by keeping them away from issues that might prove inconvenient or costly for the company to remedy.

A further element of inspection and investigation usually addressed in discussions of the role of health and safety representatives is the extent of their involvement with reported accidents and incidents. However, in the metalliferous mines of the Pilbara this involvement appears to have been quite limited, ad hoc and not part of any systematic application of the regulatory provision for HSRs. The latter is clear. HSRs have rights to inspect the workplace after the occurrence of 'an incident or injury', and in the event of an incident or any situation involving a serious risk to the health or safety of a person from an immediate or imminent exposure to a hazard, and also that the PCBU should provide them with information relating to work-related incidents and disease. [315]

Under the *Work Health and Safety (Mines) Regulations 2022*, an incident in mining operations is reportable to the regulator if it is an unplanned event or situation that results in, or has the potential to result in, injury, ill health, damage, or loss. Initially, an incident should be assessed to determine if it qualifies as a notifiable incident.[316] If it does not meet the criteria for a notifiable incident, it should then be evaluated to see whether it qualifies as a reportable incident, as defined in the legislation. High Potential Incidents (HPIs) in Western Australian (WA) mining are unplanned events that had the potential to cause serious injury, illness, or fatalities, even if no such injury occurred. The WA DMIRS says it maintains a strong focus on these incidents, especially those that could lead to fatalities. They include loss of control over vehicles or mobile plant (e.g., trucks, loaders); unintended movement, or failure of braking systems; significant seismic events, rock falls, extensive ground subsidence, or spontaneous combustion; contact with energised high-voltage sources and accidental ignition/detonation of explosives; major failures of pit walls or underground workings; and failure of winding systems or mine shafts.

All participants in the discussion groups had experience of reportable and notifiable incidents in the mines where they were employed. However, their discussion of these events made it clear that they were rarely routinely involved in investigations by company management; when they were able to engage, it was usually through their own perseverance in the face of limited facilitation and co-operation from management. In many cases, their involvement was actively discouraged by their supervisors and managers. There was also discussion of many occasions when supervisors and managers tried to avoid reporting incidents by classifying them at levels that did not require reporting. One participant gave an example from his personal experience"

> 'Yeah, well, I can relate to this. They didn't want to call it a lost time incident, so they kept me on-site for the whole swing. Kept telling me I had a rolled ankle and I kept telling them I had something more serious. They kept me on-site for about seven days

[315] HSR handbook: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://hsrmatters.safetyline.wa.gov.au/wp-content/uploads/Health-and-safety-representative-handbook.pdf

[316] These are essentially incidents that result in the death or serious injury or a 'dangerous incident', the nature of which is identified in a list included in the legislation

> and then when I got home, actually I had a fractured ankle. And yeah, I did quit. I was a contractor. I waited until my ankle healed and then I left.' F7/6

The MARS Landmark research report discussed in Chapter 5 found that 36% of notifiable incidents went unreported and concluded:

> 'This number of notifiable incidents that are unreported is a concern, as these include serious injuries or illnesses, or dangerous incidents which should be reported to the Regulator without delay. In addition, 36% of all experienced near misses in the past 12 months were unreported, which reflects a high degree of non-reporting.'[317]

Other discussants talked about how they felt that the investigative procedures adopted by the companies for reporting hazards and responding to incidents encouraged mine workers to pursue routes that avoided difficult questions for those responsible:

> '…the process they have. It's one of these things where you go down certain channels, which is a sort of safe track, you get to an end and you can submit it and go about your day. You deviate from that… And the deviation would be because it's a little bit more serious right? And you are going to end up with these drop-down boxes that are rabbit holes and none of us are actually trained on how to fill them out … and then you have this investigation with the supervisor… most people don't want to do this so they just stick to the safe route.

> '…these people know exactly what they are doing and they know that if they create a safe route to a submit button people will take it. And that alleviates 99% of the hard to ask questions — the stuff they don't want to know about really.' F7/4

There was further discussion of how they felt managers and supervisors sometimes downgraded their classification of incidents to avoid the requirement to report them. Referring to the occurrence of a serious incident at his place of work, one HSR said

> '…starting work on live equipment… so it's a catastrophic incident and should be immediately reported to DEMIRS. And was it? I don't think so. Last I heard they had downgraded it somehow to a potential incident of some description'

> '…a potential electrocution. Yeah…. And that was a reportable incident, notifiable to the regulator. So, there's an example of downgrading… the regulator didn't come on site ... Therefore, those hazards, you know, instead of doing an inspection of the wires just get left. And you know, play on until we kill someone.' F7/5

Safety management procedures

Alongside health and safety management systems in mines are safe working practices (SWPs) and safe operating procedures (SOPs) developed to ensure that health and safety risks are managed and

[317] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 29, 144.

effectively controlled during everyday work tasks and in the operation of machinery. Not surprisingly, given the number and complexity of such tasks in mining, this has generated a substantial volume of information. Some discussants indicated that, because of this, they had become ineffective as tools to guide safe working practices and were no longer used as such in the mining operations in which they acted as HSRs. For example, one participant commented:

> 'We don't use SWPs in my department. We have work instructions and procedures but they are out of date. They don't reflect what we do. And [company name] decided that they would be generalised. So they're now very generic.' F5/2

The same discussant also said:

> So we don't actually have SWPs for this site. We have got to use SWPs from other sites. Or a generic set of protocols. F5/2

This was a practice the discussant questioned because it had limited application to the detailed tasks needed in the work group he represented. The question of their accuracy and specific applicability was raised by other discussants too:

> 'Safe Work Procedures are not always accurate, and they can't always be accurate for every piece of equipment. Sometimes it's just difficult to get the wording on a safe working procedure to match what you are actually doing.' F2/2

However, their use varied by company and possibly even by department.

In short, in the metalliferous mines where most participants were employed, SWP/SOPs had been used widely in the past. Most participants were aware of their existence. However, they expressed a variety of concerns about their continued relevance, specificity, availability and how up to date they were. Although some participants were able to articulate how their companies had attempted to digitalise the information in SWP/SOPs and make it available on tablets and the like, there was a frequently aired concern that these and other company systems for storing and making available SWPs resulted in an information overload that was over-complex and counter-productive, with little practical application to the tasks undertaken in the workgroups the HSRs represented.
The overwhelming consensus that emerged from discussions of the existence, role and usefulness of SWPs/SOPs was of how an initially well-intended practice had turned into a system that had become opaque, sclerotic and inaccessible; containing either too much or too little detail so it had limited practical application and use in the current situations in which participants and their work groups found themselves in the mines where they worked.

There was also a mixed experience among the HSRs about the extent to which they felt that, as HSRs, they had any involvement in reviewing these procedures. Mostly, they had not had any direct involvement as HSRs, nor did there appear to be any systems in place to encourage such involvement.

In addition to these documented SOPs/SWPs, working safely in mining in recent decades has been informed by the widespread adoption of a variety of techniques that were, at least initially, designed to encourage greater awareness among mine workers and their supervisors of the presence of new or easy-to-overlook risks in their work environment. They are variously titled — Job-Safety-Analyses (JSA); Job Health Analyses (JHA's); 'Take-5s'; Stop, Look, Assess, Manage (SLAMs) and the like. They

are essentially situation-analysis techniques that equip mine workers and their supervisors with tools to make a rapid but systematic assessment of risk and the appropriate remedial action before starting or during tasks. They are supposed to empower mine workers to pause, evaluate risks, and manage their work safety, ensuring they have the right skills, tools, and environment to work safely in a manner that can be both actioned and recorded for further action before a mine worker undertakes the task of concern.

There were strong indications of widespread use of these techniques in the mines. At the same time, there were instances reported where these newer situational awareness tools had replaced the older, more detailed SWP/SOPs:

> 'And currently we have JHAs that are just about word for word our old procedure. Sometimes there's an overreliance on JHAs, but more often it's just ignorance. We just pretend that the difference between what was intended and what was done doesn't exist. Until something goes wrong.' F2/5

All participants widely and somewhat cynically regarded the use of these tools as a necessary routine intended to comply with the returns required by mine management procedures. They saw little connection between these tools and the purpose for which situation awareness techniques were originally intended. Specifically, participants talked about their use and commented on their frequent occurrence among the arrangements:

> 'Yes, massively so. And you will get dragged over hot coals if you don't have one. The importance of them is again, more probably, just to put the onus back on you.' F5/2

Thus, it indicates both their ubiquity and the strong pressure on mine workers and their supervisors to be seen using them, while also hinting at the equally widespread suspicion mine workers held about their true purpose.

They linked their use to what discussants saw as a prevalent feature of the safety management arrangements in place in the mines in which they worked. They regarded these arrangements as having been imposed upon their work autocratically by the company management, in its efforts to direct them towards safe behaviours for which the mine workers concerned could be held accountable, as the following exchange between two participants indicates:

> 'To make it easier… especially by putting it on to the worker, who's told like, you know you've got to get this job done, and you also got to do a JHA. But if you do the JHA, you find the risk is unacceptable. So they are kind of pushed towards making the risk acceptable.' F7/5

> 'Yeah — you've approached it, and you've answered it. So then if something goes pear-shaped after the JHA, then who's held accountable? Does the company accept any responsibility for not having controlled this in their workplace?' F7/6

> 'In my experience, the company will throw the worker under the bus every time. I have very, very rarely ever seen a situation where the company has turned around and accepted responsibility.' F7/5

There were several elements to this, all of which the discussants found to be questionable. Firstly, they were aware that tools such as the JSAs/JHAs, Take Fives, and the like did not fulfil the same function as, the SWP/SOPs they frequently replaced. The latter were more elaborate and should have been in place for all routine tasks at a mine while more personalised JSAs etc were to be used in non-routine situations where a SOP was not available. The increased use of JSAs etc was seen to shift the burden of risks assessment onto the worker and further in practice they had often become 'tick-box' exercises demanded by company safe behaviour procedures. This degraded their original purpose and, as the above exchange makes clear, turned them into ways in which documented evidence was gathered that implicated workers as bearing responsibility for failures of safety practice that might subsequently occur, without having discharged the employers' duty to provide a safe and healthy work environment that the former SWP/SOP was intended to support. Their widespread routine use also created familiarity, turning the 'tick-box' exercise into a routine of form filling that was widely held to be irrelevant to the actual work process but required by the work regimes imposed by the company.

This latter sentiment appeared repeatedly in participants' commentary on the usefulness of these techniques in practice. Moreover, none of the discussions about these techniques included examples of HSRs being involved in reviewing the procedures in question, further illustrating their marginalisation and distance from the key practices of the mine safety management regimes imposed by the companies.

Consultative structures — Joint health and safety committees

Most of the documented safety management systems examined in the present study referred to joint health and safety committees. The guidance on the regulatory provisions[318] makes it clear that HSRs may request the PCBU to establish a Health and Safety Committee. None of the current HSRs among the participants had done so. However, in several cases, there appeared to be such a committee in existence at their workplaces.

It is an accepted feature of safety management procedures in most workplaces that means should exist whereby workers at all levels of activity have opportunities to raise concerns about the health and safety issues they identify in the course of their work; to document these concerns, and the agreed actions taken to investigate and resolve them, including appropriate feedback loops to monitor the effectiveness of remedies thus instituted. Regulatory provisions envisage HSRs as having a role in operating these procedures at all levels, both as participants and in monitoring and reviewing their effectiveness. Yet there was scant evidence of their systematic engagement, as reflected in participants' discussions of their experiences as HSRs at the mines where they were employed.

Two of the more experienced mine workers among the participants, who had formerly been HSRs, discussed the past existence of joint health and safety committees and their membership of them when they had been HSRs in previous mine employment. Participants' current experience was much more mixed. None had a current role on a mine-level consultative body such as a joint health and safety committee, although several mentioned consultative experiences beyond the work group they represented.

[318] Work Safe Australia Department of Energy, Mines, Industry Regulation and Safety HSR handbook *ibid.*

In this respect, in addition to formally constituted joint health and safety committees, as identified in the statutory provisions, several other forums existed in which health and safety matters might be raised in the mines. As previously noted, these included, for example, crew meetings at the start of shifts where safety issues could be raised. In addition, a number of participants talked about periodic meetings of crews specifically to discuss health and safety issues as well as meetings with other crews in which safety issues might be raised. These usually resulted from sharing workspaces or tasks with other work groups, although it appeared that in some mines there were consultative structures in which HSRs, supervisors, and sometimes more senior managers met occasionally to discuss work health and safety risks and their management. When they discussed such meetings, it was not always clear whether discussants were referring to a site (or work area), a health and safety committee, or a work group/crew meeting with supervisors in which health and safety matters were raised. Nor was it always entirely clear whether the HSRs themselves appreciated the possible difference between these structures and their recommended functions or had experience of both.

In most cases, however, it was clear that they were referring to crew meetings. This was perhaps understandable given the restriction of the remit of HSRs to matters that affected their work group directly. It may have further promoted their sense that their role was confined to mostly addressing the minor everyday issues referred to previously. A small number of the HSRs among the participants spoke favourably of these meetings:

> 'We have a monthly safety meeting on night shifts. We obviously have a supervisor there. I have a bit of a discussion with him if there's anything he'd like me to chat about in the safety meeting. The crew is really good. They have confidence that I will sort things… like they feel very easy to come to me with things. And then once a month we have another meeting with the fixed plant manager and other safety reps. So, if there's something that a supervisor can't fix and I'm not happy and the crew's not happy then I go to the monthly meeting, and they'll give a hand.' F6/3

These HSRs indicated that such meetings—both at workgroup and wider plant levels—were useful for conveying the concerns of mine workers in their work group to their supervisors, either by addressing them directly or by using the HSRs as conduits to raise issues with the supervisor and take matters further if necessary.

However, such experiences were exceptional, and most participants criticised the workgroup meetings as limited to minor issues, not allowing mine workers to raise concerns without being identified by the supervisor, and failing to resolve the health and safety issues raised. One recently accredited HSR commented:

> '…at our safety meetings our supervisors are involved, they kind of jump in before I want to discuss anything. Where I came from [names another mining company] we didn't have our supervisor attend our safety meeting. So, it was *our* safety meeting. But here we have a crew safety meeting every fortnight and our supervisors are there. So, people don't raise issues in that forum. I think, because the supervisors are there.' F7/3

Occasionally participants gave examples of how issues were progressed from this level to higher levels in the mine, including involving a joint health and safety committee at a higher level. However, there

was little awareness of using systematic procedures to escalate resolution of a problem to a higher level. Consistent with this, there was also little awareness record-keeping in relation to the processing of issues or to provide feedback on outcomes. The overall impression was that the structures and processes for consultation on work health and safety were rather arbitrary. While there seemed to be a loose structure to these arrangements in some mines, the procedures adopted to make them operational were, at best, dependent on the determination of HSRs to pursue issues towards a resolution, despite the challenges of delay, prevarication and general obfuscation that in their experience were built into the systems for consultation and which, in their view, were largely employed by managers to avoid addressing the issues with which they were concerned.

Often, in the view of the participants, this was either because these issues were regarded as being costly to resolve, or because their resolution may have interfered with the production priorities of the mines. Or it was simply because it was the nature of the consultative system overall that it acted to minimise the effective engagement of the HSRs in the pursuit of the resolution of a health or safety concern. In one or two cases, HSRs (or participants who had previously been HSRs) pointed to the importance of systematic reporting and recording procedures to ensure remedial actions took place or to provide a record of the progress of the resolution (or otherwise) of a particular issue. As one of them put it:

> '…as a HSR your role is to take it to the meeting so that it's minuted, so they can't turn around and deny it later. It has to be actioned, and it has to be actioned in a timely fashion. There has to be a time on it. There has to be a person in charge, and there has to be a solution. Ninety nine percent of your role is to ensure that you are the person that can bring all of that together in a meeting.' F6/4

But it was clear that he was making this point to make plain the contrast between what he believed should have occurred and what was actually the norm in practice. The WMWA organisers in the region were well aware of this issue too. They indicated that the problem for the HSRs was not really about raising issues but about getting something done to address them. As one organiser put it when referring to likely responses from the mine management:

> They provide verbal responses. So, what we've got to do is educate our people saying, you know, everything's got to be in writing. You've got to ask for written responses. And when you don't get them, because generally you don't, they give you a verbal response saying, oh, yeah, we're looking at it. We'll get back to you. That's where it stops. And people go off over it — I'm not chasing it up again.' F9/3

As pointed out elsewhere, it was widely accepted that awareness of this response to HSRs' efforts to carry out what they saw as their responsibilities quickly led to disillusionment and a desire to withdraw from the position. A further disincentive raised by the organisers concerned the possible financial penalties that might be incurred by an individual for drawing attention to health and safety matters:

> 'People who would say about something in the workplace that was unsafe…. Those people, if they speak up — and it's still like it today — can be chastised through their bonus. So, they get less bonus if they speak up. So that's one of the impediments we have.' F9/7

Using HSR rights – issuing Provisional Improvement Notices

Two of the most significant powers available to HSRs under the regulatory provisions are those to a) issue Provisional Improvement Notices requiring a person to address a health and safety concern in the workplace; and b) to direct workers in the work group to cease work if the HSR has reasonable concern that the work would expose workers or others to a serious WHS risk, arising from an immediate or imminent exposure to a hazard. In both cases, an HSR may undertake these actions provided they have completed approved HSR training. Most of the HSRs in the discussion groups had undertaken such approved training, yet none of those currently holding the position of HSR appeared to have experienced involvement in either of these actions. One participant, when discussing the most effective ways of implementing controls on health and safety, indicated that his training had informed him of the role of PINs and how to use them:

> '…so [the initial training] did go into detail on putting PINs in…' *F7/5*

But he did not indicate that he'd used this knowledge in practice. Another said that he would seek guidance from the regulator before actually using a PIN, but again, had so far not found the need to use one:

> '…. in terms of PINs specifically, I'd probably refer to the Department and get help from them with that. But I haven't had the need to write or issue a PIN at this point.' F2/2

Others were more reflective; in one group, the discussion linked the possible use of PINs with the HSRs' efforts to address serious risks, in the face of management efforts to ensure they were restricted in practice to relatively trivial matters. One HSR said:

> *'*...while the government has given us a certain amount of power, we just don't have the teeth that we really need to be able to have. Putting in a PIN is a fairly big thing … You can shut down a whole plant if you really want to. Not that I am saying you would deliberately do it. But with these smaller things don't require such a drastic action...' *F7/5*

Thus, by restricting the activities of the HSRs to relatively minor issues, whether intentionally or otherwise, supervisors and managers effectively prevented them from exercising powers that the HSRs themselves believed were appropriate only in relation to more serious matters.

Additionally, there was clearly an issue of confidence involved in issuing a PIN or ordering the cessation of work when a serious WHS was identified. The comparative isolation and vulnerability of HSRs to potentially punitive company reactions made this unlikely. Collectively, these factors militated against the likelihood of HSRs using either of these powers in practice. As one of the WMWA organisers saw it when explaining why the use of PINS was rare:

> *'*One of the things that we also deal with is the use of PIN notices. But health and safety reps just don't have the support [to use them] or they just feel they don't have… The way to do it is … empower the health and safety reps … get them trained better, provide them with more tools. And the PIN notice that we have available under the Work Health and Safety Act is a really good tool, but as I say, it doesn't get utilised. So, it's two things: one is about the power, and the other one is about what we do with the current model and how we can improve it.' F9/7

Engagement with principal mining hazards

Not surprisingly, mine health and safety foregrounds systems to manage risks arising from those hazards most likely to cause serious and fatal injuries and ill health. Mining regulation identifies such hazards both specifically and generically and requires duty-holders to make provision for the identification, assessment, and management of risks arising from them. Documented company health and safety systems provide details of systems that mining companies have in place for managing these risks, and they also refer to further documented procedures concerning safe operations in relation to them. Additionally, routines are in place to engage mine workers, supervisors, and managers in working safely and vigilantly identifying risks and taking appropriate actions to ensure safety and health at all times while at work.

Arrangements for the consultation and representation of mine workers' health and safety interests in accordance with statutory requirements are, in theory, integral to all these arrangements; however, research often finds some variance in practice.[319] This was also seen in the experiences discussed by participants in the present study. The documented health and safety management systems in place in the mines where they were employed all addressed arrangements to manage the risks of mining hazards. As specified in mining legislation in Western Australia, these included arrangements to manage risks in the case of Principal Mining Hazards (i.e. activities that might result in multiple fatalities), as defined under the *Work Health and Safety (Mines) (WHS) Regulations for Western Australia 2022*.[320]

Such hazards were frequently among the examples of issues on which HSRs made representations in the course of their activities at their workplaces. Participants all understood principal hazards as:

> 'The things that are mostly going to kill us are getting crushed or run over or caught up in machinery.' F2/2

And:

> 'The biggest one would be crushing and entanglement and uncontrolled release of energy. And another one where people have to work on live equipment.' F7/5

Issues of ground and structural stability in the mines were frequently represented as major hazards. More specifically, they frequently discussed issues associated with the inadequate maintenance of roadways and other areas where mobile plant operated:

> 'I guess ground stability can be certainly! In a wet period over the summer, we actually had a couple of sinkholes open up. An old culvert under the ground been deteriorating over the years, and it just gave way one day. The records of it had been lost over time or just forgotten about completely. So, yeah, that's definitely a hazard that we're mindful of.' F2 /1

[319] See for example Walters, D. and Nichols T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan.

[320] The Work Health & Safety (Mines) (WHS) Regulations include the following as Principal Hazards in metalliferous mining: geotechnical structure instability; inrush of any substance; mine shafts and winding systems; roads or other areas where mobile plant operate; and fire or uncontrolled explosion.

Other frequently mentioned hazards in the iron ore mines associated with mechanical operations were the risks of fire, such as arising from overheated machinery:

> '… a component failure, for example, like you know, you get bearing goes or whatever, and you're just gonna get excessive heat. And, that's gonna start up quite easily. So a leak like a fine mist. Leak is enough from the coolant or hydraulic is enough to get anything going. Or again, something as simple as a tumble pipe going… Yeah, I mean, they do have controls in for fire suppression, etc. But yeah, I mean, I've been in our company the same company for eight years. I've definitely seen a lot of fires… lack of staff and doing correct inspections, etc. might be contributing to that...' F5/2

Similarly, concerns about lightning strikes and safe work procedures, especially regarding the use of heavy machinery during poor weather conditions, were raised frequently and associated with major hazards.

Dust was another major concern for all participants, even though it is not included among the major hazards specified in the legislation. It appears to have been an ongoing issue in the mines and other workplaces (such as docks) where the participants were employed. They all reported widespread limitations experienced in relation to the control of dust exposure at the mines where they were employed:

> 'Dust is a massive issue, it's one I raise every swing … I'm just pushing where we are… because what happens doesn't get addressed…' F3/6

Generally, participants agreed that limitations extended to the adequacy and effectiveness of engineering controls, dust suppression, environmental monitoring, and health surveillance.

> 'At the moment, we've got dust collectors, most of them aren't working. So, we've got like a really big dust hazard at the moment. I think that's probably our major hazard at the moment, actually. ' F6/1

> 'Dust. That's something they should really look into because I have been exposed to a ridiculous amount of dust over the years. Yeah.' F7/7

The extent of experience dealing with these principal hazards varied according to how long participants had been employed as mine workers and the variety of positions they had held in the mines where they worked, currently and in the past. However, the extent of their involvement varied considerably:

> 'Interviewer: Have you been involved in any reviews of the control measures for these types of hazard?'

> 'No. Not me personally. They don't happen at ground level. It involves a whole team of people right up through the chain that are specifically involved in this sort of stuff.' F2/2

In their experiences of the management of risks arising from principal hazards involving structural instability; roadway stability and conditions; fire and explosion and of mobile plant and machinery, participants indicated an extensively shared experience of difficulty in persuading both supervisory

and more senior management of the need for remedial actions, a tendency to shift the responsibility for problems onto the actions of mine workers, and inadequate measures being taken when the need for action was fully established. As was evident in the example of a fire hazard quoted above (see F2.1 above), another frequently mentioned issue was the unavailability of records documenting specific health and safety issues and the actions taken to address them.

Substantial delays in remedial actions were also frequently reported in relation to identified risks. The overriding impression from these accounts was that HSRs had little room to engage in either the investigation or resolution of the incidents involved. Most of the experiences recounted were those participants had observed as mine workers rather than shared as HSRs. That is, HSRs did not seem to have a role in the procedures companies had in place for addressing these issues. There were of course some exceptions, as mentioned in the previous section, and several examples were provided in which individual HSRs had struggled to ensure they were consulted over the health or safety interests of the mine workers they represented and had followed through with the procedures, leading to the resolution of the issues they had raised. This had clearly been a formidable task, often at odds with the arrangements and practices adopted by supervisors and managers for addressing the issue in question. The HSR's perseverance in these examples seems to have been rewarded with some appropriate remedial action by the company, but these were hardly good examples of consensual joint action.

In the examples they cited of efforts to manage the risks of principal hazards, participants were often critical of what they perceived as a managerial failure to tackle risks at source with effective engineering controls; its reluctance to invest significantly in the costs of control; and a tendency either marginalise the role of HSRs in the resolution of major problems involving principal hazards, or to distract them from a focus on major hazards by engaging them in more minor issues (as is evident in the previous quotes). This lack of consultation on significant health and safety risks has occurred despite the Department announcing that PCBUs consulting with workers via HSRs or committees remains a priority for WorkSafe's Mine inspectorate.[321]

As we will explore further in the subsection on safety management procedures below, they also provided many examples of ways in which both supervisory and senior managers sought to shift accountability for incidents in which safety measures had either failed, or were not in place to begin with, onto individual mine workers rather than treating these incidents as indications of systemic failure.

Representation and consultation on change — digital technology and autonomous machinery

Related to concerns with major hazards, many participants were concerned about relatively recent trends in mining practices driven by the extensive adoption of digital technologies and artificial intelligence, alongside the use of autonomous machinery in the mines where they worked. While the consequences of these changes are not described as creating 'major hazards' in the legislation, many of them — such as the hazards of autonomously operating plant that is under external control, for

[321] WorkSafe Western Australia, 2025, Safety performance in the Western Australian mineral industry – incident and injury statistics 2023–24. Department of Local Government, Industry Regulation and Safety, Western Australia, 1.

example — were clearly regarded as important (and indeed, are acknowledged as such in some company WHS management systems).

Participants also recognised potential safety and health benefits of autonomous and externally controlled mining plant, especially its role in reducing human risk exposure by removing workers from plant activity sites. However, during discussions, it emerged that in many of the metalliferous mines where participants worked, autonomous vehicles and machinery were perceived as posing serious risks, largely because they still shared space with work activities involving workers. This, coupled with the substantial surveillance of mine workers' safety behaviours, was seen as a serious challenge for the health and wellbeing of mine workers involved, both psychologically and physically:

> 'I think the biggest problem that the autonomous machines pose is that you can find yourself in a situation where you're forced into a small space and you're surrounded by autonomous vehicles. And you end up doing something stupid to get away from these things. You end up breaching boundaries which is a recordable offence. And all of a sudden your job's on the line.' F6/4

Participants with responsibility for maintaining plant and machinery also pointed out that while autonomous machinery may remove workers from some of the risks associated with production, the machinery itself still posed risks to mine workers that were involved with its maintenance.

Generally, the introduction of the changes in mining practice resulting from the application of new technologies in the mines where the participants were employed had taken place without prior consultation with HSRs. The MARS Landmark research found that while participants thought new technology was helpful, only 20% reported that change was managed and handled well in their companies.[322]

> 'There's not a lot of consultation. No local consultation. No, no, I'm sorry.' F4/4

Yet the regulatory provisions make clear that HSR's functions extend to 'inspections before and following substantial change to the workplace (for example, to plant or work processes)'. Also, they provide rights for HSRs to 'request a review of a control measure', including where a 'workplace change occurs, which is likely to result in a new or different WHS risk that the control measure may not control.' Decisions about introducing autonomous mining operations therefore might be anticipated to prompt engagement with HSRs. However, none of the participants could provide examples of how they were consulted in advance of the introduction of autonomous mining plant and machinery, or the systems for their operation, or how they were involved in reviewing the suitability of control measures in place before their introduction.

> 'So, we've recently had a change, a huge change to how we do mining here, which is we now have autonomous haulage. And all we had, like on the ground level, was 'thank you very much'. Change from the normal procedures that we have to the autonomous procedures that we have from other mine sites. F5/2

[322] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 29, 148.

Thus, the respondent indicates that they were informed of the introduction of such machinery and systems after the decision to introduce them had been taken. This was a repeated experience among all participants who had experienced the introduction of autonomous machines. Another asked the rhetorical question:

> 'So, did the management actually come to the workers about the introduction of autonomous vehicles and, you know, get involvement about the risks that might be introduced?' F6/7

He went on, answering himself:

> 'No. Not from what was our experience. This is what's happening. And it's happening on this date.' F6/7

And another agreed:

> 'Yes, that's exactly how it happened for us. We just got told a date that it was going to happen and it happened on that date.' F6/4

And:

> 'From my experience, we're not involved in the controls. We've then had some pretty major incidents … like trucks blowing up with lightning and all sorts of stuff…. The senior management and supervisors have just implemented the controls.' F6/4

This suggests that, following the introduction of autonomous machines, participants sometimes became involved in addressing the health and safety problems their operation had created, but largely as a result of incidents brought to their attention. These related both to the machinery and plant involved in autonomous mining and haulage systems and to the physical conditions of the ground and other aspects of the physical structure of areas in which autonomous systems and machinery operated. Hazards were identified in relation to operating the systems themselves, but also in relation to other human activities that took place in their vicinity. But in none of these cases were there examples of consultation in advance of change such as indicated in the regulatory provisions outlining the HSRs' rights and functions.

Among the more experienced representatives, this was perceived as a significant challenge for HSRs. They acknowledged that their managers may have gone through the motions of consultation:

> 'I am sure, no doubt without looking into it further, that my company checks off the legal requirements as far as consultation goes. So, it might have a safety rep somewhere in a box that they consult before any changes and put [the box] back in the cupboard. Okay. Uh, but in reality, not yeah, like I said, no one from any department ever came to me and said, "How is it to be controlled?".' F4/2

But here again, the participant raises not only the routine absence of true consultation over the introduction of change (in this case, that of the introduction of autonomous machinery), but also the mine management's pretence of consultation, through its deliberate selection as a consultee a HSR who is unlikely to raise any issues about the change in question. This use of 'compliant' mine workers or HSRs was a recurring theme in the discussion.

Another aspect of the role of information technology and autonomous machinery that participants focused on was its use in monitoring and surveillance of the work mine workers were involved in. As with autonomous systems more generally, there were both positive and negative elements. On the one hand, it was acknowledged that such uses may have their benefits in alerting mine workers to risks, as well as in supporting them when they may be charged with not following required behavioural safety practices:

> 'But it's also saved some of our members' jobs as well. Where there has been an issue like with inside the cab seatbelt might not be connecting, or there is been something observed incorrectly and you are pretty much guilty until proven innocent. And sometimes that recording is great to go back to, and we can request that through an investigation. F2/5

Equally, however, concerns were frequently expressed about how such surveillance might be distracting or even punitive. Given the overwhelming focus on individual accountability for health and safety failures evident in the workplace regimes imposed by large mining company management on metalliferous mining sites, combined with the absence of meaningful consultation with HSR on the introduction of any of these various forms of digitalised monitoring of mine workers' behaviour, these concerns are not surprising. A further factor that some HSRs noted in discussions about the hazards of mining was their potential contribution to increased psychosocial risks of work in these mines.

Representation and consultation and psychosocial risks

The prevalence of psychosocial risks of work, now widely seen as major causes of time off for work-related ill-health across most sectors of employment in advanced economies, was not identified prominently as such by participants in the group discussions. Their focus was more frequently on the more 'traditional' physical hazards to health and safety associated with mining, and especially on those major hazards leading to serious or fatal injury or ill-health. However, this does not mean they saw psychosocial risks of work as absent or insignificant in metalliferous mining. Rather, it implied that they knew of their presence and significance, but regarded them as being of a different quality, cause, and significance than the more obvious physical risks. As such, they were far more difficult for them to address.

There were two main elements to the discussion of psychosocial risk. Both arose somewhat tangentially from wider discussions of risk more generally in the mines. Firstly, discussants reflectively acknowledged extensive psychosocial risks arising from the organisation of work in the mine. The demands of the work regimes imposed on mine workers to secure their employment were seen as substantial and significant causes of these risks. And indeed, they would be very likely to produce raised levels of mental and emotional ill-health — as recent studies of mine workers in Australia and elsewhere attest. Current research on the prevalence of mental ill-health amongst miners demonstrates work stress to be a common experience, with high rates of mental health-related symptoms among mining workers.[323] Impaired psychological wellbeing is known to be associated with

[323] See for example McTernan, W.P., Dollard, M.F., Tuckey, M.R., Vandenberg, R.J. (2016). Beneath the Surface: An Exploration of Remoteness and Work Stress in the Mines. In: Shimazu, A., Bin Nordin, R., Dollard, M., Oakman, J. (eds) *Psychosocial Factors at Work in the Asia Pacific*. Springer, Cham. https://doi.org/10.1007/978-3-319-44400-0_19;

work regimes in mining, including remote working.[324] Psychological distress has been demonstrated to be prevalent among metalliferous mining industry employees in Australia, with moderate to very high psychological distress significantly higher in among metalliferous miners (44.4%) compared to the general population (27.2%), and a range of workplace factors (concern about losing their job; lower satisfaction with work; working shifts of over 12 hours duration; working in mining for financial reasons FIFO and social factors and so on) contributing to causation,[325] which is shown to further lead to leading to help-seeking behaviour among Australian miners.[326]

While discussants recognised these work-related causative factors and their effects on mine workers, their own possible roles as HSRs in preventing mental ill-health arising from them were regarded as problematic, since they felt they had little influence over the factors that caused them, which they saw as issues that lay somewhere beyond the safety and health arrangements with which they were constrained to engage as HSRs. That said, they presented a few examples – such as fatigue – that they had been able to take up, albeit with limited effect. One HSR said they had raised the issue of work breaks and fatigue:

> 'I raise this as a fatigue issue with the superintendent. I went into the work health safety fatigue management system to see what I could do about breaks. I raised it as an extreme fatigue management risk and put forward an argument for change. But didn't hear anything back from that. I've had to fight; I've since raised it with my supervisor that we're still not getting our breaks and we have a fatigue issue. F7/5

Similarly, other HSRs spoke about the feelings of work overload created by the widespread introduction of tablets on site and the bewildering amount of information they presented, but the seeming remoteness of the levels at which decisions were taken to operationalise this introduction. More broadly, none of the participants had significant involvement in decision-making about how work and employment were organised in the mines where they worked, although they were not infrequently faced with the consequences for the health of the mine workers they sought to represent. But, as is not uncommon in other sectors of employment in which the psychosocial consequences of how work and employment are organised are also experienced, health and safety representatives, in common with health and safety advisers and the like, felt they lacked both the tools and the access necessary to address the organisational causes of these effects, and therefore also their prevention.

Secondly, there were those stresses and strains to mental and emotional health that arose for the HSRs themselves in undertaking a role that was seemingly in conflict with the prevailing ethos of 'the way things were done' by the management of the mine and the obvious priority that was given to maintaining production in mine operations. Many of the HSRs among the discussants mentioned how

[324] Dignard, C., Larivière, M., Nowrouzi-Kia, B. *et al.* Prevalence and Predictors of Stress, Anxiety, and Depression-Related Symptoms among Mining Workers in Ontario, Canada. *Mining, Metallurgy & Exploration* **42**, 2045–2068 (2025). https://doi.org/10.1007/s42461-025-01285-2

[325] James C, Tynan R, Roach D, Leigh L, Oldmeadow C, Rahman M, Kelly B (2018) Correlates of psychological distress among workers in the mining industry in remote Australia: evidence from a multi-site cross-sectional survey. PLoS One 13.

[326] Tynan, R.J., Considine, R., Rich, J.L. *et al.* Help-seeking for mental health problems by employees in the Australian Mining Industry. *BMC Health Serv Res* **16**, 498 (2016). https://doi.org/10.1186/s12913-016-1755-1

they experienced the feeling of having 'a target on their back' once they had spoken out about a health and safety issue.

> 'So the only way to really get a change is to put a big target on your back and go out and just push, and push, and push, until something gets done. That's why so many of them burn out.' F7/5

They frequently indicated the substantial psychological battles they fought, even over relatively minor health and safety issues, finding barriers or obfuscation placed in the way of their effort to seek remedy to any issue that had come to their attention. They expressed their frustration, and that of their fellow HSR activists, over constant marginalisation by mine management systems that tolerated their existence while actively seeking to divert them from any attempts to address what they saw as 'serious issues'.

In all of this, they also lacked obvious support to sustain their efforts to improve health and safety practices and outcomes in the mines where they worked, and received little thanks from managers and supervisors for their efforts. Discussants reflected that such a position clearly placed considerable mental and emotional strain on the individuals concerned, leading many to become disaffected and less active, or to resign from the role, while for others who tried to remain involved, the strain they experienced impacted their mental health.

Of course, none of this should be surprising. Research on 'what works' to make autonomous representation on health and safety effective and sustainable at workplace levels has repeatedly pointed to the importance of the integration of health and safety activists within the institutions of collective representation within workplaces and work communities.[327] Yet these institutions were almost entirely absent from the mines of the Pilbara. The absence of support that worker representatives receive from them, and from feeling part of a collective human effort to improve the work environment that is found in previous research studies, to be important in sustaining their activism and making it effective, both in mining and elsewhere, would have been likely to have a profound effect on the resilience of the role of HSRs in the Pilbara and to impact on their mental and emotional wellbeing seriously.

Strong evidence of these effects emerged in the testimonies of several past and present HSRs in the group discussions. Among them were also some moving and emotionally charged accounts of colleagues who had been damaged by the strains of the role. It was abundantly clear that the persons recounting these experiences had felt them very deeply themselves.

Information and support for HSRs

It is noted elsewhere in this account that HSRs' access to health and safety information affecting the work group was limited. The companies generally had relevant health and safety information in documents available online, but HSRs were given little encouragement or help in finding and using it. It was further clear that if they did so, it was something they were obliged to do in their own time,

[327] See for example Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; Also: Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016) Safeguarding Workers: A Study of Health and Safety Representatives in the Queensland Coal Mining Industry, 1990-2013 *Revue Relations Industrielles/Industrial Relations,* .and Walters, D. and Nichols T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan.

which many found challenging given the shift systems they worked and the FIFO nature of their employment. Several participants cited this as a reason many HSRs rapidly became discouraged in their role, became increasingly inactive, and often sought early opportunities to relinquish their role as an HSR. As one organiser put it:

> '…the issue we have with HSRs is they get the shits because nothing happens… to get things fixed. So, they just resign. They generally go, "No I've had enough of this I'm getting out". And so, we have this constant churn of people going in there…' F9/2

As far as the regulatory right to 'request the assistance of another person' was concerned, there was little evidence of participants ever availing themselves of this. Exceptionally, as previously noted, one or two participants shared their experiences of liaising with helpful supervisors on particular issues. But for the most part, participants expressed a strong sense that convenient or easy-to-access sources of information on the issues they pursued were lacking. A few had experienced positive dealings with company health and safety officers and their departments in the past, but very few examples of current practice in this respect were reported. Indeed, some participants suggested the companies had cut back on the employment of specialists in such services in recent years. Discussing his own experience over the substantial period in which he had been employed in mining in the Pilbara, one participant commented:

> 'I started out as an occupational health and safety officer. That went down the toilet and became a supervisor's responsibility. I switched over to training and assessing. And then that went down the toilet too. Nobody needed trainers and assessors anymore… all these things have been taken away from being specific jobs. And now ... the training is some animation online. There's very little that's actually done face to face. It's not good progress. But the companies are very good at making sure their arses are covered for the processes that they need to have them covered for.' F6/4

Somewhat paradoxically, drawing on their knowledge of company practices over time, the more experienced participants conveyed a sense that, as company materials on work health and safety had proliferated and company health and safety management systems evolved and became more sophisticated, information had somehow become less accessible. Collectively, they described safety management practices that required mine workers to follow detailed rules for safe behaviour but left little room for meaningful consultation or investigation of hazards and risks they might be concerned about. Although 'worker engagement' was a supposed aim of this management practice, its everyday manifestation did not encourage autonomous investigation or inquiry from HSRs.

Another possible source of information support that some of the participants were aware of was that which might be available through the mines regulator (The Department of Energy, Mines, Industry Regulation and Safety – DMIRS):

> 'I'd probably refer to the Department [the mines regulator] and get help like that. That would be where I would go if it were a technical thing that I don't quite understand, but somebody's brought me a safety issue, and I need some technical knowledge' F2/2

A small number of the participants had some experience of accessing information in this way. But for most of them, DMIRS was a remote source, and as discussed in a later section, they generally felt they occupied positions at some distance from it.

There was little sign that HSRs actively sought information from other sources or were aware that such sources existed. The regulatory provisions explicitly provide HSRs with rights to 'request the assistance of any person'. Guidance to the Regulations indicates they might do so, for example, for help with how to perform inspections at the workplace; to obtain technical advice to deal with a particular hazard or WHS matter; or to negotiate agreed WHS procedures. It further suggests that such assistance might come from 'a person with additional knowledge of work health and safety, either within the workplace, for example another HSR, or someone who does not work at the business or undertaking, for example a health and safety consultant or a union official.' There were some examples of HSRs turning to other, more knowledgeable HSRs and occasionally to health and safety advisors employed by the company. But there were very few instances of them seeking advice or support from the trade union outside the workplace.

Yet, the regulations provide for a right of entry to the workplace 'if it is necessary for the person providing assistance to the HSR to access the workplace.' To comply with this provision, 'the HSR must give at least 24 hours' but not more than 14 days' notice of the proposed access to the PCBU and the person with management or control of the workplace.' Thus, the representatives had access to the WMWA organisers in the Pilbara if they required support. The organisers were aware of this and were willing to assist HSRs when asked and to use their right of entry where necessary. However, although the HSRs in the discussion groups were all trade union members, and the WMWA had an active presence in the region, the participants seem to have made little use of the trade union as a source of work health and safety information relevant to their needs. Given the overt hostility to unions as a prominent and longstanding feature of company ethos in the iron ore mines of the Pilbara, it seems most probable that the HSRs would have been reluctant to draw attention to themselves as trade union members by calling on such support. The organisers themselves were also treading a very careful line with the companies in their efforts to build trade union awareness among mine workers in the Pilbara.

Relations with regulatory inspectors

Generally, research findings point to the benefits of support from regulatory inspectors in helping health and safety representatives to be more effective in representing their colleagues in consultations with their employers on health and safety. This support can take various forms, including providing information and advice on technical and regulatory aspects of health and safety; seeking out HSRs and involving them during inspection visits; and supporting them with advice and review of PINs, and so on. However, some research findings indicate that such support is not always forthcoming from regulatory inspectors, and not all health and safety representatives regard them as providing it.[328]

[328] See for example: Walters, D. (2021) The role of the state in achieving compliance with occupational safety and health requirements: Some lessons from the British regulatory response in the time of Covid-19 *Diritto della Sicurezza sul Lavoro* 1-2021; Also: Walters, D., Johnstone, R., Quinlan, M., Wadsworth, E. (2016) Representing miners in arrangements for health and safety in coalmines: A study of current practice, *Economic and Industrial Democracy*, Volume: 40 issue: 4, page(s): 976-996

Previous studies of relations between health and safety representatives and regulatory inspectors in mining also suggest that experiences are mixed. Still, generally in coal mining in Queensland, where most such studies have been conducted, mine health and safety representatives reported at least some contact with inspectors during their visits. In contrast, the industry-level health and safety representatives had considerable engagement with inspectors.[329] Studies in other parts of the world have also shown higher levels of enforcement action in mines where trade union representatives are present, compared with those where they are not.[330]

The experiences of discussants in the metalliferous mines of the Pilbara with DMIR regulatory inspectors were patchy, to say the least. Firstly, it was evident that many of the HSRs had had very little contact with the inspectors. As one experienced discussant said:

> 'Yeah, I've been on mine sites. I've been through four fatalities, and I've never seen one!' F6/4

Another experienced participant indicated:

> 'In my 20 years of mining and 14 mine sites I've never been informed, or known at any time that they've even been on-site.' F6/7

These remarks were typical of the participants' responses as a whole. They were all aware of the existence of regulatory inspectors, and they knew they visited mines to undertake inspections of health and safety matters. As reported elsewhere in this chapter, one or two of them had even sought advice from the Department on technical health and safety matters. But very few had experienced direct contact with inspectors during their visits to the mines where they worked. Another participant said:

> 'The first you know of an inspector's inspections is afterwards once they've left and they leave their improvement notices on the board.' F5/2

Generally, participants attributed this to not being told about the visit by mine management. Typically they said:

> 'All of my time I never seem to line up with when they are on-site. So, no I've never been on an inspection with DEMIRs inspectors as much as I would like to.' F5/2

Another frequent comment was that even when they had found out that an inspection visit was due, HSRs indicated that, for one reason or another, the inspector had failed to come into contact with them:

> 'We were advised when they were coming to the site. I was hoping they would come and have a chat with me. Unfortunately, they went everywhere away from you. Everywhere away from areas where there were problems.' F7/6

Generally, they argued that this was a deliberate ploy by the management to avoid bringing the discussants into contact with inspectors:

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[329] See Walters D, Quinlan M, Johnstone R, Wadsworth E. Cooperation or resistance? Representing workers' health and safety in a hazardous industry. *Industrial Relations Journal*, July 2016.
[330] Morantz, A. D. (2013). Coal Mine Safety: Do Unions Make a Difference? *ILR Review*, *66*(1), 88-116.

> ‘Yes I know for a fact that in the past when inspectors have come to the site, they [the management] have deliberately tried to obfuscate and lead them away from places where the inspectors would find issues.’ F7/4

They argued that while keeping them away from inspectors during their visits may have been a deliberate strategy on the part of their managers, this did not necessarily mean that the inspectors were kept away from all of the HSRs on the site, but rather, that the management was selective as to which HSRs they introduced to the inspectors during their visits. Again, the very strong impression conveyed by their remarks was not that the regulatory inspectors were uninterested in talking with the participants, but that mine management deliberately marginalised these particular representatives from the mainstream of health and safety arrangements in the mines. This was because their approach to representation and consultation on health and safety did not fit the company's conceptualisation of worker engagement on health and safety matters.

Training

It is a regulatory requirement that newly elected HSRs should receive appropriate training within three months of requesting it. Participants who were or had been HSRs reported that the companies they worked for generally acceded to these requests and sent them on a five-day training course delivered by a recognised training provider. Most participants found this initial training useful:

> ‘There is a five-day course you have to do. We have access to trainers that do it in Perth. And that was good.’ F2/2

> ‘Yeah. The training is great. I’ve done it. It’s a good course.’ F5/2

They described the course they had attended as one that dealt with the rights and functions of HSRs. It was attended by newly elected HSRs from a variety of employment sectors, not restricted to mining, which generally meant the amount of mining-specific material in the training was relatively limited.

> ‘It’s less about specific hazards, more about the legislation … and what are the rules and responsibilities around what a HSR does and what are management’s responsibilities in terms of safety.’ F2/2

Some participants regarded this as a limitation in the quality of the provision:

> ‘The trainer I had when I did the training didn’t go into a huge amount … the bloke wouldn’t have known which end of the hammer he was holding.’ F7/5

But for the most part, the participants’ discussion of the initial training they had experienced reflected that, while more details of issues specific to mining would have been useful, learning about the nature of the role of an HSR and its regulatory context was useful and had helped to build their confidence. The opportunity to meet and share knowledge with a variety of HSRs from different sectors was also seen as a useful learning experience for HSRs who were new to the role and provided an additional dimension to their understanding of the requirements of their role. They all agreed that the real problems they confronted occurred when they tried to put what they had learned on the course into practice at their workplaces:

> ‘It’s not the fault of the course. No. It’s trying to utilise what you learn on the course when you get back on site and what the site will allow you to do.’ F5/2:

As another HSR put it:

> ‘The difficult part is obviously [the company] has its own ideas on how it wants to run and manage things. Trying to get what the legislation says and how [the company] sort of tries to run things sometimes comes into conflict … they sort of don’t line up properly.’ F2/3

In this respect, there was widespread consensus that the initial training they had received did not really prepare them for the obfuscation, resistance and general lack of progress that many of them experienced when they attempted to put into practice what they had learned in their training, by trying to take up health and safety issues on the mine sites where they worked. Nor did it equip them to avoid the marginalisation they felt when faced with managers and supervisors who ignored their efforts to put into practice what they had learned in their training, within a health and safety management system in which there was little sign of structures or procedures to support their engagement with representing the health and safety interests of mine workers. As one HSR phrased the issue:

> ‘They do not intimidate us not to raise things. They let us raise as much as we want. And they know we will eventually give up and stay quiet because they just ignore everybody until no one can be bothered raising it anymore.’ F5/2

Despite these challenges, many HSRs felt further training would be helpful. There was some agreement that more training specific to mining hazards would be useful:

> ‘To go through a lot of things… So what do you call it? Critical risks? About the life-endangering risks and that kind of stuff – which methods of controlling are the best? Which are the least effective? To be able to find information. So, I know I’m if marking up the right trigger, or I’m going in the wrong direction. The issues that the [basic training] can’t cover because of the site specifics.’ F7/5

But there was also widespread agreement that new HSRs, even after they had received their initial training, were still ill-equipped to deal effectively with the kind of push-back they might experience in their role, and they needed more specific training and support to help them to find ways to deal with this:

> ‘This is who you need to talk to, to raise these issues. Because most HSRs get into the role and have no idea how to go about doing what they need to do. And unless you get a HSR whose a complete mother bulldog, who is willing to dig until they get to where they want. There’s a lot of roadblocks put in by the company. Either deliberately or just the neglect of the HSR system.’ F7/5

The most favoured approach then was training that provided support to help HSRs with the challenges of carrying out their role. Reflecting on these challenges, another participant said:

> … suddenly you realise the importance of the role and continuing on with it. Being quite energised about doing it and being competent at it. The reinvigoration, you

> know? It doesn't have to be a full course. Just a few days. Just the importance of the role. Sharing experience. Continuing to feel confident to follow your role. Do it, like every year. That might just be enough.' F5/2

As this quote suggests, the emphasis that was widely agreed to be necessary in further training was one which would support building confidence through sharing experiences with other HSRs or union delegates, in ways that enabled them to have renewed confidence in their competence in finding and using information; and in 'getting things done' in making representations on work health and safety.

> 'It's that practical experience sharing that's particularly important in terms of the follow-up training.
>
> Having someone you can talk to … and then you can go into a meeting with answers rather than just hoping someone will come up with something… You are better off coming in with some answers and saying "Look legislative requirements are this, this and this. This is a couple of solutions – have we considered this? You know. Can we do this?"' F6.1

Participants further agreed that such follow-on training would be best provided by sources independent of their employers. There was a strong feeling that employer-driven training did not equip HSRs with the relevant, autonomous knowledge and skills they needed to make representations on behalf of their co-workers. Rather, it was orientated towards ensuring that they were compliant with company procedures.

As we discuss further in the following section, there was considerable interest in the potential future role of trade union support in providing training. Participants also pointed out HSRs were expected to do a lot of things in their own time. Further training – while important – required additional time. There was a strong feeling that employers should make more allowance for this and provide paid time off for follow-on training, but the collective experience was that this was generally not forthcoming. As one participant commented on paid time for further training:

> 'Yeah. Definitely useful. Yeah without a doubt. But no, it doesn't happen. Yeah, it's not happening.' F6/7

A slightly different point about further training was made by another experienced HSR:

> 'You know, they're happy to send you on training. Refresher courses and all that sort of thing, but my impression is they're just ticking a box. They don't want, you know, members of the workforce being involved in any way, shape or form in their internal processes when it comes to investigating incidents for instance. They just don't want representatives from the workers' group.' F9/5

This participant points out that even when follow-on training might be encouraged by the company and available to HSRs, it was not necessarily indicative of a more supportive ethos for the *activities* of autonomous representation and consultation *within* the company. Nevertheless, the training might still be useful to HSRs, perhaps because it could better equip them with the tools and confidence to deal with the company's negative attitude towards their role.

Conclusions — the state of play and moving things forward in the Pilbara

The profile of mine worker representation and consultation on health and safety that emerges from this qualitative study of the experiences of present and former HSRs in the metalliferous mines of the Pilbara falls a long way short of what might be regarded as best practice either in mining or in any other sector of employment in which health and safety representation and consultation is mandated by regulation in Australia – or indeed anywhere else in the world.

The state of play

The key findings demonstrate that while, in line with the WA regulatory provisions, HSRs exist in the mines of large global mining companies that operate iron ore mines in the Pilbara, the extent to which these representatives can fulfil the functions described for them by the legislation, or receive the necessary support to do so, are heavily constrained by the company management arrangements for health and safety which serve to marginalise their role. They are further constrained by the wider despotic management practices of the companies operating these mines and by their anti-trade union cultures. The very strong sense conveyed by the testimonies of the present and former HSRs who took part in the discussions reported in this chapter is one of a group of individuals who are doing their very best to operationalise the standards and practices of a set of regulatory provisions within a management culture that is entirely unsupportive, if not overtly hostile to their efforts.

They had managed to become HSRs in circumstances heavily influenced by the autocratic efforts of mine management, which suggested that, for the most part, their fellow HSRs had been selected by supervisors and approved by managers as individuals unlikely to question the prevailing managerial controls. Under such circumstances, the discussants felt isolated, vulnerable and under great pressure.

They were unable to simply step into established practices of representation and consultation, such as inspecting workplace health and safety, taking part in joint consultative bodies for health and safety, addressing health and safety issues raised by fellow workers, or making representation to management. Rather, in each case, they were obliged to pursue these matters through a struggle to perform a set of functions and rights that appeared to be entirely out of step with the prevailing management culture of their employers. Whether it was intentional, or simply a consequence of the management arrangements for health and safety in the mines and the restriction of their representation to particular work groups, they saw themselves largely as being directed towards dealing with small and relatively inconsequential health and safety matters and away from issues of a more serious (and possibly more costly nature). Here again, the impression was conveyed of an unsympathetic management that did not welcome interference with its prerogatives to manage production at the mines. While it tolerated the existence of legally mandated HSRs, it marginalised their roles and obstructed their efforts. Under such circumstances, it seems very unlikely that the HSRs were able to make a significant contribution to preventive health and safety at the mines where they worked, nor improve health and safety outcomes and culture that decades of research has shown to

be associated with the presence and operation of such legally mandated arrangements for representation and consultation on health and safety.[331]

None of this should be surprising if the research literature on 'what works' and what supports the effectiveness of health and safety representatives in their efforts to represent the interests of their fellow-workers and contribute to improvement in health and safety outcomes is considered. In outline, many studies on representation and consultation, and on the operation of statutory provisions governing it, point to a similar set of preconditions for their effective operation. These include:

- a legislative steer, along with support for its operation from the regulatory inspectorate charged with its enforcement;
- company prioritisation of participative approaches to the management of health and safety that acknowledges both the importance of preventive health and safety *and* the validity of a pluralist approach to its operation;
- a supportive industrial relations culture;
- support for the activities of health and safety representatives from their constituents and the institutions and structures of organised labour within and outside the workplace;
- and trained and competent health and safety representatives.

Very few such preconditions were in evidence in the mines of the Pilbara, and most were entirely absent.

The legislative steer was in place. It had some weaknesses, such as restricting HSRs to representing the interests of work groups, and lacked measures comparable to those in coal mining in other states, but overall it contained a similar set of provisions to those that apply in other sectors. However, there was no sign of its enforcement by the mines regulator, or indeed, of a strong presence of the mines inspectorate in the mines or in its communication with the HSRs. Such an absence of enforcement is not uncommon in relation to provisions for representation and consultation elsewhere too, but where this is the case, research shows that effective representation relies on other agencies for the enforcement of the regulatory provisions – such as the presence of strong trade unions and the capacity to use the powers in the regulations such as PINs and orders for the cessation of dangerous work. These were absent in the case of the Pilbara.

As noted above, company management was entirely unsupportive of HSRs as autonomous representatives of labour interests. Instead, at best, its autocratic and despotic management style may have sought to incorporate HSRs into its top-down systems for behaviour-based safety management wherever it could, and to use them, along with other mine workers, as the 'eyes and ears' of these systems. But this approach rejected a pluralist framing of the regulatory provisions and marginalised or opposed any efforts by HSRs to act autonomously on behalf of labour in representing

[331] There are many studies that make up this body of research, in different sectors, establishment sizes and countries – for detailed reviews of the literature, see: Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; Walters, D. and Nichols, T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan.

their fellow mine workers' health and safety interests. Additionally, and unsurprisingly under these circumstances, there was no sign that the companies had made any of the facilities recommended in guidance to the regulations to support the HSRs available to them.

It is well documented that the industrial relations culture in the Pilbara mines operated by these large global companies is hostile to the presence and activities of trade unions. HSRs who were trade union members therefore faced a further level of hostility to their role. Their often-repeated feeling of 'having a target on my back' was a direct consequence of this culture.

There were signs that the active HSRs who took part in the discussion groups had received some support from among the constituents of their work groups, but this itself was unstructured, ad hoc, informal and ephemeral. It may have helped to sustain a sense of purpose for the HSRs in pursuing health and safety matters. But it was not in the same league as the support that effective health and safety representatives have been shown to receive from the structures of organised labour in other sectors where their effectiveness has been demonstrated in research studies.[332] There were no workplace trade union structures in evidence in the mines where the discussants were employed, which is of course also another reflection of the company's hostility towards them.

The experience of the discussants was in sharp contrast to the level of support available to site health and safety representatives in coal mining in other Australian states such as Queensland and New South Wales, where active health and safety representatives are able to rely not only on the support of their fellow mine workers but on that of other mine delegates, their workplace structures and the lodge to which they all belong. As we have detailed elsewhere in this report, research studies show this support contributes to their effectiveness in establishing forms of organised resistance to despotic mine management and in improving health and safety despite an unsupportive industrial relations culture.[333]

Achieving effective representation in other sectors, and especially in coal mining in NSW and Queensland, also relies on substantial support from the trade union outside the workplace.[334] As we discuss further in the following section, this is something that the participants in the present study felt would be a positive development were it to be made possible in WA. But for the time being, they have

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[332] As described in Chapter 4, there is an extensive literature on the role of organised labour in supporting the effectiveness of health and safety representatives. Key studies include: — see, for example, Walters D and Nichols T (2007) Worker Representation and Workplace Health and Safety. Basingstoke: Palgrave Macmillan; Walters, D. and Nichols T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan.
Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; Hall, A., Oudyk, J., King, A., Naqvi, S. and Lewchuk, W. (2016). Identifying knowledge activism in worker health and safety representation: a cluster analysis. *American Journal of Industrial Medicine*, 59(1), pp. 42-56; Ollé-Espluga, L., Vergara-Duarte, M., Menéndez-Fuster, M., Benach, J., & Vázquez, M.-L. (2019). Workers' Knowledge and Views on Interaction with Health and Safety Representatives: An Exploratory Qualitative Study. *Relations Industrielles / Industrial Relations*, *74*(4), 719–741. https://www.jstor.org/stable/26872958

[333] See Chapter 4 and Walters, D., Wadsworth, E., Johnstone, R., Quinlan, M. 2014. *A Study of the Role of Workers' Representatives in Health and Safety Arrangements in Coal-Mines in Queensland*. Available at: http://meu.com.au/the-role-of-worker-representatives-inhealth-and-safety-in-qld-coal-mines-new-study; Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries,* IOSH Leicester.

[334] See also Chapter 4 and the above studies.

very little support of this kind. The WMA organisers for the Pilbara are available and will provide support if requested, including using their rights of entry to the workplace, but there was little sign of its uptake among the participants. Further, the WMA organisers are acutely aware of their need to proceed carefully with a strategic approach to rebuilding union organisation.

One area on which the discussants had received some support was with their initial training as HSRs. The mining companies appeared prepared to provide the required time off for them to attend the initial training required for HSRs to exercise all their rights and functions. Generally, they found this training useful. Many of them, however, contrasted it with their subsequent experience of trying to put into practice at the mine site what they had learned from their training. Again, the absence of appropriate structures and procedures at the mines to enable them to progress issues effectively was evident.

Turning to the examples they all gave of the challenges they had faced in addressing specific health and safety issues at the mine sites where they were (or had been) HSRs, the absence of the above preconditions for their effectiveness had clearly rendered 'getting things done' a difficult, frustrating and often time consuming business, for which they received little appreciation and often a sense that their efforts were probably going to be held against them when it came to matters of advancement in their mining careers with the companies in which they were currently employed.

That said, the issues with which they dealt as HSRs were not that different from those already identified in the limited literature on relations of employment in the iron ore mines of the Pilbara. Despite the claim to prioritise workers' safety made by the global companies involved, prioritising production over safety, as raised by many discussants, is also well documented in previous studies of iron ore mines in the Pilbara.[335] As is the culture of fear and intimidation to which the discussants also frequently referred.[336] The behavioural safety systems that dominate the health and safety regimes in these companies, and which severely limited the capacity of the HSRs to engage effectively with resolving health and safety issues, focus procedures on establishing worker accountability. The research literature on these mines confirms this.[337] Similarly, the practice of downgrading incidents to avoid reporting them, something participants noted occurred frequently in relation to incidents in which they had managed to go some way towards investigating, is another common practice that has been widely observed.[338] Finally, it is clear that the discussants were far from alone in finding the long hours, contract work, and stresses and strains of FIFO employment to be psychologically damaging. These patterns are also well documented in the literature on this form of work and employment,

[335] See, for example: Ellem B. (2017) The Pilbara: From the Deserts Profits Come, UWA Publishing, Crawley, WA; Vassily A. (2025) Striking Ore: The Rise and Fall of Union Power in the Pilbara, Monash University Publishing, Clayton, Victoria. Trade union concerns have appeared often in Western Australian media sources – see, for example, Young E: https://www.watoday.com.au/national/western-australia/concerns-about-rio-safety-were-raised-before-workers-death-union-20160630-gpvleq.html

[336] See, for example, a quote from a union organiser following a fatality at a mine in the Pilbara, that appeared in the West Australian in 2018: "The culture at Paraburdoo is that if a worker raises concerns about safety, they fear intimidation and victimisation for doing so," https://thewest.com.au/business/mining/paraburdoo-mine-deaths-fuel-union-fury-at-rio-tinto-over-safety-ng-b88957273z

[337] See Vassily A. (2025) *Striking Ore: The Rise and Fall of Union Power in the Pilbara,* Monash University Publishing, Clayton, Victoria.

[338] Vassily (page 181) quotes a report by the WMA that augured several findings of the present study, including the downgrading of serious reportable incidents; relatively few workers knowing who their HSR was; and the sidelining and marginalisation of HSRs.

where patterns in the Pilbara mines are described as extreme.[339] The literature also frequently identifies the significant challenges these posed for HSRs to address because they were consequences of work and employment over which they were not consulted.

Moving forward for better representation and consultation on health and safety in metalliferous mining in WA

Each discussion group concluded with questions to participants about what they thought might improve representation and consultation in the mines where they worked and were or had been HSRs. Given the project's aims, these questions focused on differences between experiences in WA metalliferous mines and those in coal mining in NSW and Queensland, where legislation provides for an older and more enhanced form of representation, as discussed in previous chapters. The discussions were not limited to this comparison; they also included other matters the participants thought were important in making their role more effective.

These discussions showed that HSRs would value additional support for their role from a source independent of the company and its management. One HSR commented:

> 'The company puts "yes men" into positions of power because they can get away with doing things. Until they are held accountable by people who can say "no, you are not doing that, it's not safe", I think this issue is going to keep going. So, if we could get independent safety advisors, that would be one of the best things we could possibly do.' F7/5

There was consensus that qualified, experienced trade union health and safety specialists like the ISHRs in Queensland and New South Wales could provide that independence from company influence. Also, that they would be a valuable source of support through mentoring and training (as indeed they are in the states in which they exist). As one HSR said about follow-on training delivered by industry-level health and safety representatives:

> '… people can get together with other HSRs from other sites and learn from each other and share experiences.' F6/8

Another HSR in the same discussion added:

> 'A relationship with that person… build a trust relationship with that person… So then if they do have to escalate things I already know that person. I've trained with that person. Yeah, I see nothing but positive coming out of that.' F6/7

These comments reflected widespread agreement across the discussion groups that HSRs in the mines of the Pilbara were in considerable need of the kind of support that was available in other states

[339] See for example: Langdon, R. R., Biggs, H. C., & Rowland, B. (2016). Australian fly-in, fly-out operations: Impacts on communities, safety, workers and their families. *WORK: A Journal of Prevention, Assessment & Rehabilitation*, *55*(2), 413-427; Bowers, J., Lo, J., Miller, P., Mawren, D. and Jones, B., 2018. Psychological distress in remote mining and construction workers in Australia. *Medical journal of Australia*, *208*(9), pp.391-397; Fruhen, L. S., Gilbert, J., & Parker, S. K. (2023). Fly-in-fly-out work: A review of the impact of an extreme form of work-related travel on mental health. *Organizational Psychology Review*, *13*(2), 177-204; Gardner, B., Alfrey, K.L., Vandelanotte, C. and Rebar, A.L., 2018. Mental health and well-being concerns of fly-in fly-out workers and their partners in Australia: A qualitative study. *BMJ open*, *8*(3), p.e019516.

through the legislative requirements for Industry Health and Safety Representatives to help them address many of the issues they confronted in their everyday experience of representation and consultation on health and safety. However, discussants were aware of the challenges inherent in the difference in unionisation between metalliferous mining in WA and the position in coal mining in Queensland and NSW. They were realistic about implications of this and the degree of change that would be necessary in order to achieve a similar position in the Pilbara. As one HSR put it:

> 'The [mining company] being the size it is, it's an uphill battle just to get small things changed. They're certainly not a two-tiered system like in the coal industry. I don't think there has ever been a system like that in hard rock mining in Western Australia in general. I couldn't, I can't see that coming in. The fact that the majority of the mining industry actually isn't unionised over in Western Australia. I couldn't see a two-tier system coming in. In my opinion, it's hard enough just getting day-to-day issues resolved as a HSR with [the mining company] anyway.' F9/5

Of course, while the HSR was no doubt reflecting reality when he spoke of the struggle HSRs faced even to get 'small things changed ', and that low unionisation would present an enormous barrier to both the introduction and effective operation of a two-tiered system of health and safety representation, he was not entirely correct in his view of history. As is outlined in Chapter 3, until 2014, when it was removed, there was, in fact, a two-tier system in place in WA. Reflecting on that experience, the trade union organisers who could remember it felt that it had been a useful support for workplace representatives that had been lost largely as the result of the significant decline of the trade union presence in metalliferous mining which, as the literature also makes plain, was a consequence of the determined campaign waged by the large mining companies to remove the presence and influence of organised labour from the mines they operated in the Pilbara. The result, according to the comments of the organisers, was that the role of the Worker's Inspectors became increasingly less conspicuous in parallel with the declining presence and influence of unions:

> '…we lost the inspectors, the elected workers' inspectors, once the union lost its grip in there … because no one wanted to put their head up because you'd get it chopped off. So the Liberal Government at the time said, well, no one's using this, so there's no need for it so they took it out of the legislation.' F9/4

Since that time, there has been some effort made to reintroduce this model into the legislation, but without success. As the same organiser put it:

> 'So we put in a submission, the Western Mine workers' Alliance … we put in a submission to the government back in around 2021 around the reintroduction of full check inspectors like on the East Coast… then a new inspector for mines came in and they seen the proposal as a threat to the inspectors. They thought the HSRs would take over their jobs…' F9/4

Whatever the reasons for the lack of progress with such submissions, the value of such a voice on behalf of mine workers was abundantly clear to the organisers. At the same time, they recognised that without greater trade union presence and organisation in the metalliferous mines than currently exists in WA, the full extent of its potential effectiveness was unlikely to be achieved.

In short, therefore, this study's findings suggest that support for improvements in the operation of pluralist approaches to representation and consultation on health and safety in metalliferous mines in WA would be enhanced by the re-introduction of measures to effect the election and practice of industry-level health and safety representatives, akin to those in coal mining in Queensland and NSW. However, as both the testimony of HSRs and union organisers in WA and the research evidence on the operation of this legislation make abundantly clear, regulatory reform alone will be insufficient to ensure effective practice. As we discussed at length in Chapter 4, previous research evidence of 'what works' in representation and consultation on health and safety mining in both Queensland and NSW shows very clearly that while a legislative steer is an important stimulus and framework for the activities of both mine and industry level representation, it is not the only factor that is necessary to support and sustain effectiveness. A strong presence of the collective institutions of organised labour, both within and around mines, that prioritises the interests of mine workers in ensuring their safety, health and wellbeing and has carefully thought-through strategies for achieving desired improvements, is also an essential prerequisite for the effective operation of the standards and practices defined in regulation, especially in the hostile climate of labour relations typical of mining.

Because this strong presence is currently missing – not only in representation and consultation on work health and safety, but also in the wider labour relations context of metalliferous mining in WA – a primary function of revised regulatory standards would be to stimulate and support its development. Achieving this improved presence and power is unlikely to be straightforward, but as this chapter has shown, HSRs and trade union organisers are well aware of the need for it in metalliferous mining in WA.

In this report, the chapters on current practices in NSW and Queensland vividly illustrate the centrality of work health and safety issues in collective representation. These serve to confirm the earlier findings described in Chapter 4. Chapter 3, meanwhile, shows that strong and autonomous representation on health and safety has, historically, been central to the mobilisation and organising practices of mine workers. For the unions involved, therefore, a key factor in determining future action and its outcomes in WA will be the extent to which the lessons of both history and current practice are able to inform the embedding of effective representation on health and safety in their organising strategies in metalliferous mining in WA, alongside a campaign for regulatory reform. This report demonstrates that both union organisers and workplace health and safety activists recognise this need. It is to be hoped that this awareness will be put to good use in building more effective representation of mine workers' health and safety interests in metalliferous mining in WA in the future.

Chapter 7 Operating the gold standard: Coal and metalliferous mine worker representation and safety and health in Queensland

Introduction

Mining dominates Queensland's industrial economy. The state is a major producer of coal but also has extensive metalliferous mining activities.

This chapter analyses the current experience of representing mine workers' interests in their health and safety. It is based on group discussions conducted in February 2026 with site and industry health and safety representatives who are active in coal mining. It also includes analysis of interviews with an equivalent representative, a trainer, and a union official in metalliferous mining in the state, also undertaken during February and March 2026.

Coal miners are mostly organised by the MEU, and all the participants from coal mines were MEU members. However, their role as representatives covered the health and safety interests of all mine workers, including non-union members, in the mines, where they held office as an SSHR or, at industry level, as ISHRs. The MEU has a comparatively high membership density in Queensland coal mines, whereas mine workers in metalliferous mines in Queensland are mostly organised by the AWU, and membership density in these mines is considerably less than that of the MEU in coal mines. The two unions also organise trade union workplace and local institutions somewhat differently. While the MEU is a miners' union and strongest in coal mining, the AWU has membership across a wide range of employment, with only a small proportion of its membership overall employed in metalliferous mines.

But on paper at least, as detailed in Chapter 3, longstanding legislative provisions have supported the selection of mine-level representatives and those at industry level too, in both coal and metalliferous mines. As documented at length in that chapter, the functions and rights of mine- and industry-level representatives are similar in both types of mining. As elsewhere in mining, and especially in coal mining, current legislation has a long and separate history from worker representation on health and safety in other sectors in Australia. It allows for the appointment and operation of both mine and industry representation through the election, organised by trade unions, of Site Safety and Health Representatives and Industry Safety and Health Representatives (called District Worker Advisors in metalliferous mining). This means that, in Queensland (unlike in New South Wales), the integration of provisions for HSRs, as found more widely in other sectors of employment and based on the requirements of the Model Health and Safety at Work Act, alongside SSHRs and ISHRs, has not occurred to date. SSHRs and ISHRs remain the sole form of representation for mine workers on health and safety. However, a key difference between industry-level representatives in metalliferous mines and those in coal mines is that the former are paid for by the state, while those in coal mines are funded by the MEU. Later in this chapter we explore the extent to which these differences are also

reflected in how representation on health and safety operates. A further difference between the two kinds of mines and the unions concerned is seen in the industrial relations and union organisational contexts in which representation on health and safety operates. As we have discussed elsewhere in this report, research on 'what works' in representation and consultation on health and safety in mining and, more broadly, in other sectors highlights the preconditions for effective representation and consultation. Alongside legislative requirements, these preconditions include the industrial relations cultures and union organising strategies that support worker representation and consultation on health and safety. The possible effects of differences in the two industrial relations and organisational contexts for representation and consultation in Queensland are therefore a further focus for discussion in this chapter.

As noted above, the primary aim of the following chapter is to explore how representation on health and safety currently operates in both coal and metalliferous mining. To this extent, it is based on the analysis of recent discussions with mine- and industry-level representatives. However, it also draws heavily on previous research undertaken in coal mining in Queensland, especially the findings of the two large studies published in 2014 and 2016. This is because, for coal mining at least, and unlike the evidence of representation and consultation found on health and safety in other Australian states covered in this report, these studies represent some of the most extensive and definitive research undertaken on health and safety representation in mining anywhere. But the fieldwork on which they were based is now more than 10 years old; therefore, the present study offers an opportunity to reconsider elements of their findings in light of changes in mining over the intervening decade. They are also useful yardsticks for comparing worker representation experiences in metalliferous mines on health and safety, which was *not* part of the remit of the previous studies and is explored in Queensland for the first time in the present study.

Following this introduction, the study briefly describes the methods used before setting out its key findings. As in other chapters, the findings section is structured around the same areas of questioning identified in the schedule used for the focus group discussions and interviews in other states. That is, it begins with describing something of the mines in which participants acted as representatives on health and safety, the size of the workforce, and the organisation of employment (extent of contractorisation etc.), before addressing their experiences of selection as health and safety representatives and moving on from there to their involvement in representing the interests of mine workers in the health and safety management processes and procedures in the mines where they were active as well as the ways in which they sought to exercise their statutory rights, including those involved with ordering the cessation of dangerous work. As noted above, the findings section is dominated by the accounts of MEU representatives in coal mines, since they were by far the largest group among the discussants.

The findings section is followed by a discussion and conclusions section in which key findings from past and present research on mine worker representation and consultation on health and safety are discussed. Where possible, these experiences are compared and corroborated by those from the more limited accounts the researchers were able to obtain from MWU representatives in metalliferous mines in Queensland.

Interviewee profile and methods

The field data on which this chapter is based was largely gathered during a conference organised by the Queensland MEU, which took place over several days in February 2026. It was part of the MEU's longstanding campaign on dust in coal mines. It was attended by, among others, a substantial number of current SSHRs and ISHRs from coal mining in Queensland. With support from national and Queensland District MEU officials, the researchers conducted five separate focus groups with the SSHRs and ISHRs attending the conference. In addition, one AWU district official involved in metalliferous mining in Queensland, who also attended the conference, agreed to be interviewed.

The focus groups with the SSHRs and ISHRs and the interview with the AWU official all took place in a room set aside for this purpose on the premises where the conference was being held. At least three, and sometimes four, members of the research team were present, and participants from among the SSHRs/ISHRs ranged from three to six in each discussion, depending on their availability.

All discussions and interviews used the same semi-structured interview schedule used in the study generally, adapted for the Queensland regulatory and employment relations contexts, in which the same 10 principal areas/questions were examined. They are reproduced once again in Table 7-1. As elsewhere, all the interviews were digitally recorded with the consent of interviewees (and with assurances as to anonymity – see Chapter 2) and automatically transcribed by the PLAUD program. Discussions and interviews took between 90 minutes and two hours.

Table 7-0-1: Focus group questions for Queensland

1. Welcome and icebreaker - introductions
    - What mine do they work at and for how long – how many workers work at the mine and percentage of direct employees versus contractors and labour hire workers?
    - What outcome are you hoping for by participating in this interview/focus group?
    - How many SSHRs do you have at your mine? How were they identified?
    - Do they provide representation for all workers, i.e., night shift, contractors, surface workers, etc.?
2. Do workers feel confident to ***raise concerns about health and safety***? Do employed workers have the same experience as contractors or labour hire workers?
    - Are worker concerns dealt with fully?
    - Are there any instances where concerns about a hazard or risk were not fully assessed, or concerns ignored that resulted in a serious incident?
    - Do SSHRs feel confident raising worker concerns with management, and are their views and this role respected?
    - Do SSHRs ever feel intimidated and therefore reluctant to perform some of their functions?
3. What are the main hazards at your mine that could seriously injure or kill someone? How were they identified and assessed? How were control measures decided, and were workers and SSHRs involved?
    - Were workers involved in identifying principal mining hazards, and did they have the opportunity to contribute to the risk assessment and selection of control measures?
    - Does the mine's safety management system and principal hazard management plans manage the risks effectively?
        i. How often are they inspected?
        ii. Are SSHRs or workers involved in these inspections and any review of control measures?
        iii. Do inspectors provide adequate oversight?
4. How effective are SSHRs in raising concerns about the ***control of principal mining hazards***? Let's explore this in the context of a recent incident. We have an example, or you could talk about another incident that you were involved in.
    - Have there been any high-potential incidents in the last year?
    - What happened?
    - Was it reported, and does the mine report all high-potential incidents?
    - Were HSRs involved in the investigation? Do inspectors seek out SSHRs and consult them?

- Can you think of an example where an incident has been prevented due to the intervention of an industry-level employee's representative, i.e., an independent employee's inspector with experience and supervisory-level qualifications?

5. Has the introduction of AI, computer/digital systems including those facilitating automation/remote mining occurred at your mine, was there any discussion/risk assessment in which the SSHRs were involved of the WHS effects (prompts here include multitasking, monitoring multiple screens, tracking errors in automated actions, effects of situational awareness, changes with regard to the use of high-pressure hoses, site surveillance, warning signal detection, remote sensing etc).
6. How much interaction do SSHRs have with inspectors?
    - Are SSHRs contacted by inspectors when they visit the mine, and involved in inspections and investigations?
    - Do inspectors investigate and resolve complaints from workers?
7. Do you think the training given to SSHRs is adequate – does it cover mining hazards, inspecting mining hazards, understanding safety management systems, and what should be covered in a principal hazard management plan? How knowledgeable are training providers under the regulator's current policy?
    - Do training providers know the industry? Have they had industry experience?
    - Would this support representatives' capacity to be involved in inspections of major hazard risk status or incident investigations?
8. Role of trade unions in worker representation.
    - What percentage of workers are members of a union?
    - How does the union support health and safety representatives
9. Is there a full-time industry-based worker safety representative who can visit your mine, assist site-based representatives, respond to problems, etc., or help?
    - Does support of this kind help site representatives carry out their functions – raise issues, cease work, issue provisional improvement notices.
    - Does it equalise power relations?
    - Are there enough of them?
    - Do you have views on how they should be appointed, paid and resourced

Of the 23 participants in discussion groups, the majority were SHSRs, and one was an ISHR. With one exception, the participants were male. Altogether, 20 MEU representatives and one AWU official from the metalliferous sector participated in the discussions/interviews at the conference. A District Workers Representative (DWR) and a representative from a Registered Training Organisation were interviewed via Zoom at a later date.

Table 7-0-2: Breakdown of those interviewed

Sector	*Operator/ mine worker*	*SSHR/ISHR/DWR*	*Union official*	*Other (RTO)*	*Total*
Metal	*0*	*1*	*1*	*1*	*3*
Coal	*0**	*19*	*1*	*0*	*20*
Total	*0*	*20*	*2*	*1*	*23*

*17 19 SSHR/DWR were also operators, coal mine workers, or tradespeople and two held supervisory positions.

As summarised in Table 7-2, 20 coal miners and three metalliferous representatives were interviewed, with ages ranging from 38 to 63 years, a mean age of 49 years, and a mean of 24 years of mining experience. Interviewees covered a range of occupations/job tasks, including operators, drill operators, maintenance fitters and electricians, shotfirers, and deputy/open cut examiners. The youngest interviewee had seventeen years of mining experience. They represented a range of experience working in mines and as health and safety representatives, although the majority had more than a decade of mining experience and several years as SSHRs. The only female participant was an SSHR. They were residents in Queensland and mostly resided in towns within driving distance of the

mine sites where they were employed. A small number had previous work experience in other states and in other forms of mining.

As indicated in the previous section, participants discussed questions in the same broad areas that have been focused on in other states. These were designed to shed light on their experience of representative and consultative mechanisms operating in coal mining, and their relations with mine workers, supervisors and managers, inspectors, trainers, and others relevant to their role. The questions explored their perceptions of the support they received for their role and where they felt improvements could be made to make representation and consultation on health and safety more effective.

Discussion with the union official from the AWU allowed some comparison with the operation of representation on health and safety in metalliferous mines, which was further supported by additional interviews subsequent to the conference, when a further online discussion was organised between the researchers and two persons with experience of trade union representation on health and safety in metalliferous mines in Queensland. One was an AWU Worker Advisor (the ISHR equivalents in metalliferous mining), the other was a trainer who was currently responsible for the development of a training package for SSHRs in metalliferous mining, who was well acquainted with a number of AWU SSHRs and their activities in representing mine workers' health and safety interests.

Findings

The coal mining experience

As indicated above, this section presents, based on discussions with SSHRs and ISHRs in coal mining, experiences of employment and work organisational contexts of representation and consultation on health and safety in Queensland mines. This is followed by an account of the selection of representatives and their engagement with the operation of health and safety management procedures and the exercise of their statutory rights, their relations with regulatory inspectors, along with the support they receive through training. These findings are then compared and contrasted with information obtained on the same issues in Queensland metalliferous mines before some conclusions are presented.

Employment and representation

Queensland coal mines vary considerably in size, and the representatives who participated in the discussions on which the findings reported in this chapter are based worked in both underground and surface mines across this range, with some from quite large mines with one to two thousand employees, which might have both open cut and underground operations. Others were from much smaller mines with fewer than a few hundred workers, and one or two were from even smaller concerns, which were sometimes smaller mining sites that were offshoots/extensions of larger mines but functioned separately from them. The majority worked in mines operated by the same large global mining companies found in other states.

All the participants reported the presence of contractor employees as well as those employed directly by the companies that operated the mines. There was considerable variation in the extent of contractorisation present in the mines. For some participants, the contractor workforce in the mines where they worked ranged between 10% to 30% of the workforce. While there was no clear trend,

several participants reported a relatively low proportion of contractor workforce in the mines where they were employed and suggested that, in some cases, the use of contract labour had declined. One SSHR said:

> 'Yep at that point everyone else was either labour hire or contract, which equated to about 10% permanent and 90% contract/labour hire. Over the years, especially when it looked like 'same pay, same job' was going to come in, the company pre-empted it and started taking more people on itself… We've got a bit over 200 permanents now, with about a hundred labour hire still…. the wash plant was all contracted but [name of employer] has taken that over now ... the guys that were there converted from labour hire to sort of permanent. Maintenance is all contracted.' F3/1

Overall trends were difficult to discern. For some, this relatively low proportion of contractors was the norm, while for others the proportion exceeded 50% and was increasing. In one or two cases, participants reported that the operating company of the mine in which they worked was attempting to introduce largely contractor-based models of employment organisation that appeared to be based on its practice in other states. In one case it was reported that the principal mining company operating a large mining complex had created from itself a subsidiary company for one of its mines in order to enable the introduction of different forms of employment and work organisation:

> '… they decided to make another company… So, it's actually listed separately even though it comes under the [cites company name] classification and that's how they got a different employment agreement, different ways, different conditions… An owner-operator and the other one just like a contract operator.' F2/5



Moura Miners Memorial

The representative affected by this change viewed this approach as an organisational strategy the principal mining company was attempting to import from its operations in Western Australia, where it had developed it to its advantage. Another of the participants in the same discussion pointed out that:

> '…lesser conditions... started in WA and then they pushed it across to the east coast… to coal. Different conditions there in WA. There's not as much union representation. And that's what they officially called it [company name] East Coast Operations.' F2/3

The discussion showed a strong awareness among participants of how mining companies sought to free management from strictures imposed by both statutory employment standards and Enterprise Bargaining Agreements negotiated with trade unions in Queensland. This was matched by an equally strong awareness of the potential impact of these strategies on work health and safety conditions and on the capacity of SSHRs to represent mine workers' health and safety interests if they were allowed to take place. Participants also expressed a strong sense of the need to resist them.

Other participants suggested that, in their mines, being a contract worker was a step towards getting direct employment. An SSHR from a mine with around 450 employees said:

> 'We don't have a great deal of contractors; normally six months and then we'll give them a shirt. A probation system and on you go.' F2/2

There were mixed views about whether trends in the proportion of contractors reflected the introduction requirements for equal pay between directly employed and contract workers, with some participants suggesting that the trends they observed were already happening before these requirements were in place. They further suggested that other factors in the wider business model and the company's approach to organising its human resources were likely to be more influential in determining the use of contract/labour hire employment arrangements. These latter sentiments, to an extent, reflected the participants' sense of a conflict between the global management strategies of the large mining concerns involved and the local needs of the mine workers the participants represented.

Others reported that the contractor workforce varied according to the tasks undertaken in the mines, with some commenting that the contractors were mainly used for specialist activities, especially in relation to mine maintenance and that they were themselves experienced and skilled mine workers.

When asked whether contractor/labour hire workers felt confident raising health and safety issues, the consensus was that they did not. One participant said:

> 'My experience is absolutely not. They're scared of losing their jobs even though they have protection under the law to support their employment.' F2/6

This illustrates the general agreement among participants that most contract workers were less likely to raise health and safety issues because their employment status made them feel more insecure in their jobs than directly employed mine workers. In another discussion, an SSHR said:

> 'Well, I find contractors definitely don't raise issues with management, they'll come to me casually… they'll generally try to talk to me…' F4/2

Thus, in this case, the SSHR indicates that these workers sought to raise concerns, but did so clandestinely, deliberately avoiding any confrontation with supervisors and managers by going directly to the SSHR. This was despite the advice that SSHRs gave to mine workers to raise issues first with their supervisors and then to alert the SSHR if a satisfactory solution was not found. In the same discussion, a senior SSHR from another mine, talking about the pressures on contract and labour hire workers resulting from the organisation of their employment, said:

> '… the model in my view is about having people scared to speak up. As an SSHR, you've got to make yourself available 24/7 because these people have issues. Of the amount of phone calls I get from workers… about 60 or 70% would be from the labour hire contract workforce.' F4/3

That said, the point was also made that, even among directly hired mine workers in some mines, there was often reluctance to draw management's attention to issues. Speaking about this general problem, one SSHR said:

> 'A massive issue with that. … the majority of people will not raise anything. For whatever reason (they) are afraid. Even the guys who have come across…. And I'm not saying all of them, but people raising issues, you know, anywhere we are… people if they speak up …, you can always feel you know… have that fear' F3/1

In a different discussion group, while talking about the previous occurrence of a serious incident, another SSHR added:

> ‘At that time the guys were really reluctant to speak up because they didn’t want a target on their back.’ F4/4

While another SSHR in the same discussion said:

> ‘We get phone calls, you know. There are people who feel intimidated. They feel intimidated by management. Even full-time employees feel intimidated by management because they feel they’re going to take them off the rig and put them on that piece of shit digger, you know, or whatever it might be.’ F4/5

As in other states, participants talked about mine workers feeling they might have poorer employment prospects as a result of being identified by their supervisors as workers who raised issues, or that they would be given more unpleasant or unpopular work tasks as a consequence of being identified this way. A difference noticeable throughout the discussion groups in Queensland, however, was that the discussants themselves conveyed a strong sense of confidence in their own role, which they attributed in part to the support that they felt they, and their activities on health and safety, received from their Lodge, and in part from their knowledge of the legislation, the boundaries of which they strove to remain within. Reflecting on this support and the confidence it instilled, one SSHR said:

> ‘I guess that’s what drives us to do this role. And our legislation is really, really good, you know, because it protects us as well. So, you know, our legislation is incredible.’ F4/3

That said, the same discussant also attributed the effectiveness of SSHRs to their personal qualities. Talking about the need to be prepared for confrontations, he said:

> ‘I am not doing this role to collect Christmas cards. Like, you go into this knowing that…err… you are going to make people on the case angry. Well yeah! But you just want to make things better… for everybody in the mine.’ F4/3

And participants generally felt that support for this came from the Lodge and its members, while the tools needed to be effective could usually be found in the legislation:

> ‘…we probably have a good position within our workforce. A fairly strong Lodge down the line. Most of them will speak up if there’s something… and say something about it.’ F1/5

> ‘I have been doing this role for sixteen years or something now, but I am still learning stuff like how to apply those sections of the legislation that give the best outcomes.’ F4/3

As will be explored later in this section, participants agreed that the trade union, at both Lodge and industry level, played the most significant role in supporting them in learning to do this more effectively.

Becoming a Health and Safety Representative

Arrangements for selecting SSHRs in coal mining in Queensland are longstanding and well established. Statutory provisions under Part 7 *Coal Mining Safety and Health Act 1999*, require the election of up to two SSHRs for each mine. None of the participants reported encountering any serious difficulties in

becoming SSHRs. Several reported having more than two SSHRs in place when the size and complexity of the mine and the shift patterns involved required them. Others in the larger mines argued that there should be a change in the legislation to allow this to occur more widely and more SSHRs to be elected for larger sites and covering different shifts, as illustrated by this comment from an SSHR:

> 'In a massive organisation there should be changes to the legislation to allow more SSHRs. Like do it per capita... Cover the workload. The industry has changed.' F2/2

Others pointed out that the legislative provisions could be enhanced by the union negotiating for additional SSHRs through the enterprise bargaining agreement.

Unlike in NSW, the SSHRs are not subdivided into general electrical or mechanical specialists. There was some discussion of the potential benefits that more specifically designated SSHRs, such as in NSW, might bring, but no strong feelings were expressed about them. In practice, participants reported that SSHRs with these trade competencies might tend to focus more on areas of health and safety where their competencies would be most useful. To function as an SSHR, there is a requirement to hold several mining competencies recognised by the Coal Mining Safety and Health Advisory Council, including in applied risk management (RIIRIS301B), conducting safety and health investigations (RIIOHS301A) and communication (RIICOM301B). Participants indicated that experienced mine workers were likely to already hold these before becoming a representative

A further difference with NSW is that Queensland provisions place no regulatory emphasis on the establishment of joint health and safety committees. In the experience of the participants in the discussion groups, such committees rarely functioned in the mines where they were employed, although committees addressed particular issues, such as the Dust Committees mentioned by several participants. Occasionally, participants mentioned that they had sought to establish a joint health and safety committee:

> 'I've asked for a safety committee. We don't have a worker health and safety committee. There is no legal obligation for them to have it unless we ask for it. They haven't set it up yet.' F2/3



Kianga Portion of Moura Miners Memorial

Of course, this did not mean there were no regular meetings between management and the SSHRs; many participants mentioned regular meetings with management, usually monthly, in addition to reactive meetings arising from SSHR investigations, etc. But these meetings were not regarded as 'health and safety committee' meetings.

The *Coal Mining Safety and Health Act 1999* also provides for the selection, functions and rights of ISHRs in Part 8, which specifies that up to three ISHRs may be appointed by the trade unions. Among their activities, the ISHRs also organise and deliver regular training for the SSHRs, which was highly valued by the SSHRs and to which we return later in a following section. Again, no concerns were expressed about the appointment and role of the ISHRs, which all the SSHRs participating in the discussions highly appreciated. The only issue they raised repeatedly during the discussions was the inadequate number of ISHRs provided for in the legislation. All discussion groups agreed that three ISHRs for coal mining in Queensland were too few. It was argued that this number was set at a time when the industry was considerably smaller than it has since become, and that it was heavily biased towards experience in underground mining, which did not reflect the current composition of Queensland coal mining, in which open cut mines were increasingly important. At the same time participants agreed that the activities of the ISHRs were essential to the effective operation of the present system for representation and consultation on health and safety and had contributed significantly to shaping it. As one SSHR put it:

> 'The biggest issue I'd like to move forward on, is more ISHRs and more for the ISHRs. Safety is core union business. Industrial stuff is also core business, but safety to me is

> the main thing, and to have them better resourced would make our job much easier.' F1/6

This centrality of health and safety in the MEU's activism was a motif repeated throughout the discussion-group exchanges and seemed deeply ingrained in the ethos of union representation shared by the participants. It was a collective way of thinking, clearly influenced by the longstanding structures and procedures for representing mine workers by the MEU in Queensland, in which the ISHRs had played an important formative role over a long period. At the same time, there was a collective concern that this role was currently woefully under-resourced. On their inadequate numbers, participants typically commented:

> 'Then with the ISHRs, there's only three of them and they're in a worse situation. We're not getting the support we need... What we need to do is probably have three in the underground as a minimum with maybe one or two more for the open cut.' F5/6

There was widespread agreement that the three ISHRs, while highly valued, were being stretched far beyond their capacity to cover the range of mines and health and safety scenarios on which their intervention was necessary, as well as playing an important and key role in the design and delivery of training and in generally mentoring the SSHRs. Participants also pointed out that in coal mining in NSW there were four ISHRs in place covering considerably fewer and less diversely located mines than in Queensland. They also noted that, in Queensland, legislation for metalliferous mines allowed the appointment of four worker advisors (the equivalent of ISHRs for metalliferous mines).

There was further discussion about the appropriateness of the continuing requirement for an underground deputy's ticket as a requirement for eligibility for appointment as ISHRs. While none of the participants questioned the need for ISHRs to be qualified and experienced, they pointed out that much of their practice involved work health and safety issues in open cut mines, where underground deputies were not employed. A near equivalent in open cut mines would be the role of an 'examiner ', and some participants thought this should be reflected in the qualifications for eligibility. This, as the previous quote suggests, would allow for additional ISHRs to be appointed specifically for open cut mines. However, others felt that the roles of deputy and examiner were not comparable, and that underground experience equipped ISHRs with a depth of knowledge and understanding about coal mining that was relevant to their role regardless of whether they were investigating health and safety in open cut or underground mines, but that the same did not apply to the experience of being an examiner in open cut mines. Either way, participants strongly agreed that, however it was achieved, a greater presence of ISHR was sorely needed in coal mining in Queensland.

Getting things done — engaging with safety management arrangements

The legislative provisions confer a number of functions and rights on SSHRs and ISHRs. These are operationalised in various ways, addressed under the following subheadings, which also reflect the areas covered in the guide the researchers used to facilitate the discussion groups.

a) Raising concerns, inspecting and investigating hazards

All participants were active in representing the health and safety interests of the mine workers in the mines where they worked. They encouraged mine workers to follow procedures when they had a health and safety concern. One of the SSHRs explained that in his mine there was:

> 'The usual management through the management structure to their direct supervisor, and then they can escalate it through another manager. At the start of a work meeting they can raise it with their supervisor or even throughout shift if they have that same issue. And then it can be escalated to the under manager, which is probably the overlooking supervisor for their own shift. And then if they're not happy with that, it can go through to coordinators and superintendents. And then basically ends up in my lap if it's going to be a showstopper. But usually there's compromise or they can sort it out. They're all grown men, so they sort of figure out a safe way of doing something.' F3/1

Participants indicated that more or less similar procedures for mine workers to raise issues were present in their mines too, and they encouraged mine workers to follow them:

> 'At our union meetings, we'll talk to them and tell them. Well, this is the process. So, if you've got an issue, you need to go speak to your supervisor or your other manager. Don't just come straight to me. You need to follow that chain of command … And generally, they're pretty good about it.' F3/1

It was clear from the discussion that the SSHRs preferred to encourage mine workers to adopt this approach, at least in part because it enabled the representatives to manage their time more effectively, but also because it encouraged their fellow mine workers not to feel intimidated in raising health and safety concerns. And they sought to inculcate this confidence during their exchanges with the mine workers:

> '…because you are trying to coach them into feeling safe to be able to raise a concern before they come to you. Otherwise, they'll just come to you all the time. You have only got that time that you actually got.' F3/1

Their idea was that this would further encourage mine workers to become more vocal about the hazards they were aware of, which would ultimately contribute to improving work health and safety arrangements at the mine.

At the same time, in pursuit of their statutory functions, and with a clear awareness that under Section 99 of the *Coal Mining Safety and Health Act 1999* they were entitled to do so, they conducted their own inspections and investigations. They were also aware that under the same Section of the Act, the Site Senior Executive (SSE) or their representative may accompany them during an inspection, and this seemed to be a practice that was usually followed. Some participants suggested it hampered their opportunities to talk freely with the mine workers about their health and safety because the latter were often unwilling to raise health and safety issues in front of senior managers for the reasons discussed previously. Others felt that senior managers would sometimes try to steer inspections away from areas where there may be issues they were unwilling to confront, and that SSHRs needed some determination to resist this. However, for the most part, they accepted the practice of joint inspection and found it a useful opportunity to have a dialogue with senior management on health and safety issues, while also finding other opportunities to talk in private with fellow mine workers.

They said of these inspections:

> 'So, it's not just like looking at dust or gas or roadway conditions even, but it's the whole range.' F2/5

As is clear from the accounts of their actions detailed in this chapter, all participants had some experience conducting their own investigations. These varied substantially in detail and depth. But Nonetheless, all investigations were characteristic of the actions of competent and well-organised worker 'knowledge activists' identified in the wider research literature on worker representation on health and safety.[340]

b) Safety and health management procedures

Part 7 of the *Coal Mining Safety and Health Act 1999* includes provision under Section 99.1.b for SHSRs to review procedures in place at the coal mine to control risk to coal mine workers to an acceptable level. Section 99.5 states that if a site safety and health representative believes that a safety and health management system is inadequate or ineffective, they must inform the site senior executive. Section 99.6 states that if they are not satisfied the site senior executive is taking the action necessary to make the safety and health management system adequate and effective, they must advise an inspector, and Section 99.7 requires the inspector to investigate and report the results of the investigation in the mine record.

Engagement with the safety and health management system and its procedures is therefore among the key roles the legislation intends for worker representatives. Many of the examples that were raised in the discussion groups concerned this role. They suggest that if there has been any change in the practice of representation since the 2014 study, it may be that the focus of the SSHRs' interests has become more engaged with reviewing the health and safety management systems behind the incidents they seek to investigate and on which they make representations than was the case in 2014. There was a sense from the findings of the research conducted at that time that SSHRs were primarily concerned with a more hands-on approach to practical matters, and while they recognised the importance of keeping the overall system for managing health and safety under review, it was something for which they would be likely to seek intervention from the IHSRs.

For illustrative purposes, the present sub-section is primarily concerned with the role of representation in relation to safe working practices (SWPs) and safe operating procedures (SOPs) developed to ensure that risks to health and safety are managed and effectively controlled during

[340] The term 'knowledge activist' was coined by the Canadian work sociologist Alan Hall, who has written extensively on worker representation in health and safety in Canada. See, for example: Hall A, Forest A, Sears A, et al. (2006) Making a difference: Knowledge, activism and worker representation in joint OHS committees. Relations Industrielles 61(3): 408–435; Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; In line with the findings of research in many other countries, his studies point to a set of key features of special expertise held by worker activists which, combined with the support they receive from workplace and wider union organisation, enable them to be effective agents of change on health and safety matters in the workplaces where they hold these representational roles. See, for example: Walters D and Nichols T (2007) *Worker representation and workplace health and safety*. Basingstoke: Palgrave Macmillan; Walters, D. and Nichols T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan; Walters, D and Wadsworth, E (2019) Participation in safety and health in European workplaces: Framing the capture of representation, *European Journal of Industrial Relations.* DOI:10.1177/0959680119835670

everyday work tasks and in the operation of machinery in the mines — which are among the operational elements of safety management in most workplaces.

However, it is the intention of process-based legislative requirements in health and safety, like the *Coal Mining Safety and Health Act 1999*, that they cover all of the elements of the arrangements made for identifying, assessing and controlling risks to health and safety to workers. In this respect, therefore, and given the centrality of joint consultation between the representatives of workers and their managers that is required by the legislation, elements of health and safety management procedures are also reflected across the range of the activities of SSHRs and ISHRs in representing mine workers on health and safety. This is evident from many of the examples reported under other subheadings in this section.

In one group, there was a lengthy and wide-ranging discussion of SSHRs' engagement in producing standard operating procedures (SOPs). It centred on events arising from an incident at the mine where one participant was employed. The discussion illustrated how participants understood their role in health and safety management, the pushback they experienced from management, and the strategies they used to exercise influence despite managers' efforts to deflect it. This particular example concerned a follow-up investigation of an HPI involving the refuelling of mine vehicles. The SSHR explained how he had become aware of the incident, which should have been covered by an SOP in which he had previously helped draft. But during the investigation it was revealed that the current SOP was different from the one he and another SSHR had been involved in. He explained that progress on that one had reached an impasse because of a disagreement between the SSHRs and the management over the need for refuelling bays to ensure safe operation. While pursuing his inquiry through various levels of paperwork, he found that a new SOP had subsequently been drafted by a group from which the SSHRs had been excluded and replaced by mine workers selected by management. In his view, the result was an SOP that failed to address safe operations and was therefore partly responsible for the incident they were investigating.

Discussants strongly agreed on the elements this case illustrated: competing priorities between safety and production, and the lengths to which managers were prepared to go to retain their prerogatives and marginalise SSHR involvement, while seemingly consulting the workforce. They agreed these were issues that occurred routinely in their experience of representation on health and safety in the mines where they worked. What was particularly significant for an observer, however, was how the discussion illustrated the confidence and persistence of SSHRs in pursuing their investigation back to the root cause of the incidents, which exposed clear failures in the safety management systems at their workplaces. This confidence and persistence would not have been possible without strong support for the SSHRs from the workplace and industry-level trade union organisation, acting in tandem with their statutory protections.



Moura No.4 Disaster (1986) Portion of Moura Miners Memorial

In another discussion group, participants talked about the sort of issues SSHRs might investigate and raise themselves (as opposed to those arising from workers' complaints or inspections) and the safety management system featured prominently:

> 'Usually, when they don't follow their own safety management system, that's sort of what we're there to do. To keep them in check, make sure they follow their own safety management system when they implement a new piece of equipment. Make sure the risk assessments are done…Another set of eyes to keep them compliant. …. And if they drift too far away from it, you know, we've got the tools to use to bring them back in line.' F3/1

> 'It's not that they always try and push the boundaries. It's a big mine and a big place. The left hand and right hand don't talk sometimes.' F3/1

Another issue that this, and several other examples, discussed by the participants illustrated, was the extent to which the role of SSHR required them to be adept at finding and interpreting appropriate information on health and safety. Company information on health and safety management was extensive and often far from straightforward to access, or to find material relevant to the issue the SSHR was trying to investigate. For example, when talking about reviewing the health and safety management system, one of the participants pointed out:

> ‘Yes we have access to most of it and the risk assessments. We’ve got another platform for those. It’s a little bit more difficult to get at those but they haven’t said we can’t. It’s just the ability to get in there. Sometimes it’s pretty convoluted and annoying.’ F5/6

In the same discussion another SSHR said:

> I get a list every day of what documents have changed within our SHMS. To try to understand what is happening. Our SHMS has sixteen hundred documents. Yeah it’s a huge job.’ F5/5

Generally, finding their way around the health and safety information systems used by mining companies to document and inform health and safety management practice in coal mines was acknowledged as a major challenge. However, during the discussions, experienced SSHRs repeatedly demonstrated how they had largely managed to master navigating these systems, access the information they needed, and trace the progress of issues they had raised.

> ‘…we’ve got a pile of SOPs this thick. And you need to know them for inspections. Oh…[for example] compliance means it’s got to be three meters tall or seven meters wide for example. Then if you go back with another document you’ve got to change it.’ F2.6

> ‘That’s right and you’ve got to keep it updated. That’s why we review support. So, then you’ve got a longer review. There’s a lot of what the focus of your inspections.’ F2/4

They did, however, also point out that, for newly appointed SSHRs, this was a daunting prospect and that they received very little guidance or training from the company. They also highlighted the support they received, with additional information provided by the ISHRs.

The participants were aware that, alongside the use of SWP/SOPs to set operational practices for the work that the arrangements for health and safety management were intended to manage systematically, the mine management also adopted and used situational awareness techniques intended to promote safety behaviour among mine workers. As noted elsewhere in this report, these techniques are variously titled—Job-Safety-Analyses (JSAs); Job Health Analyses (JHAs); ‘Take-5s’; Stop, Look, Assess, Manage (SLAMs), and so on. In the discussion groups, participants expressed reservations about the purpose and value of these techniques in practice. The following quote was typical:

> ‘Take-5s and SLAMs are just like you know ... number counting exercises. Box -ticking. That's it, And I'll tell you this for a particular reason, is that there'll be times when I will fill out two take fives for the same cars and have absolute ridiculous controls on one and get a proper Take-5 on the just to see who is reading them and what feedback you get from them. So, to be a realist, they have just become an absolute tick and flick thing.’ F4/3

This report has noted in other chapters that, in practice, mining companies often adopt these approaches as part of wider safety management systems that emphasise behavioural safety and accountability for unsafe actions by mine workers. Their use as part of routines that comply with feedback arrangements required by mine management procedures is also seen. There was concern in NSW, for example, that these techniques were frequently adopted instead of referring to procedures

defined by SWP/SOPs. Participants in Queensland, as in other states, regarded these arrangements as having been imposed on mine workers by their employers in efforts to direct them toward safe behaviours for which they could be held accountable.

The dismissal in the above quote of how such situation awareness techniques were used in practice also reflected a wider concern about the degradation of risk assessment techniques, including how they operated in situations where production was being prioritised. As the same speaker put it later in this discussion group:

> 'My view around risk assessments in mining now, is we do a risk assessment to get the job done. We don't do a risk assessment to identify the hazards and put controls in place.' F4/3

The group discussions reported in the present chapter therefore indicated an awareness of degradation in the use in practice of situational awareness techniques for safety in the coal mines in which participants were employed, along with the role of these approaches in the behavioural safety strategies adopted by mine management. Of additional concern, they further called into question the subservience of risk assessment techniques more generally in the face of production pressures.

c) Using representative's rights – stopping dangerous work

SSHRs in Queensland have several specific rights under the *Coal Mining Safety and Health Act 1999.* In brief, it gives SSHRs the authority to order the suspension of all mining operations, stop specific operations, or require supervisors to stop them if they reasonably believe there is an immediate danger (Section 101). ISHRs have similar powers through a directive under section 167.

In addition, representatives have statutory powers to order mine management to undertake certain actions, for example, under Section 99.1.4, a site safety and health representative who makes an inspection of the coal mine must, if the inspection indicates the existence or possible existence of danger, immediately—

i) notify the site senior executive or the responsible supervisor; and
ii) send a copy of the report to an inspector.

Under Section 99.1.5, if a site safety and health representative believes a safety and health management system is inadequate or ineffective, the representative must inform the site senior executive. If the site safety and health representative is not satisfied that the site senior executive is taking the action necessary to make the safety and health management system adequate and effective, the representative must advise an inspector (Section 99.1.6). The Mines Inspector is obliged to investigate and report this in the Mines Record. Similar rights are accorded to the ISHRs under Part 8 of the 1999 Act.

The group discussions confirmed that the SSHRs were well aware of these rights but also that they were careful to use them appropriately:

> 'So, we'll go and do we might go and do a nine one four inspection, which is what it's under the Coal Mining Act. And we might find something, ask them to fix it, Or and then we might escalate it to a nine one five, which means the safety management system. To try to get you an answer on what they're going to do. If you don't like the

answer, then you can go to a nine one six. If you do the nine one six straight away gets the ISHR and the Inspector involved. So, we've had to do that [a] few times over the last couple of years since I've been here.' F2/4

The report of the 2014 study summarised in Chapter 4 shows that when ISHRs and SHSRs used these powers, it was always to address significant OSH risks and to identify the links between the risks posed by these failings and the health and safety management system in place. Evidence supported the conclusion that representatives used their powers responsibly and in relation to serious OSH management system failings. There was no evidence in the documentation that referral of these matters to the mines inspectorate resulted in any substantial change in the actions taken. Representatives also indicated they used these powers when there was no other recourse – often in situations where they had previously engaged with management concerning specific risks but found the response had failed to remedy the situation. On other occasions, they were used when representatives believed there was an immediate risk of serious harm if the process or operation continued. In other words, they were used by SSHRs and ISHRs in the same situations to which discussants in the present study referred:

'ISHRs can give directives as well. Obviously. Shutting down an operation or shutting down certain things if they believe there are ineffective health and safety management systems. That's the phrase. But they use that carefully too.' F2/6

The discussions further showed how the representatives' actions were tempered by their pragmatic realisation that, ultimately, to get things done, managers, however grudgingly, needed to recognise the benefits of their advice.

'Whereas the reason we do this role is because we want to make a difference and make things better and try and allow the workforce to come home every day. But we've never been worried about asking the big questions and challenging decisions and direction. It's not that we're here to try and stop work. You know, I was always taught many years ago, before I started this role… that it's all good to throw your hand up and say no, but you've got to have a solution. So, we try to find solutions to the problems they've created.' F1.6

But the discussants' confidence paralleled the knowledge they displayed of how they would go about getting things done. As the following exchange between the same speaker and the interviewer makes clear, this was rooted in the collective support they felt existed for them in their role as an SSHR.:

Interviewer: 'So what kind of support have you got that makes you so confident to be able to say this?'

'We've got each other as SSHRs. We've got a network of brother and sisterhood there. We've also got our ISHRs. And then we're even able to reach out to some inspectors, some of the regulators for advice. So, I find that helps us. Not only does [names the ISHR] and I talk regularly about side issues and what's going on and what we're doing. It's nothing for me to reach out to someone else, another SSHR, and say, hey, I've got this going on. What do you reckon I should do? They may or may not have had experience. I know [names the ISHR] gets calls from other SSHRs too.' F1/ 6

As already made clear in Chapter 4, the previous studies in Queensland provide a strong, research-based demonstration that both SSHRs and the ISHRs who supported them used their statutory powers to stop work sparingly and selectively but to good effect. The discussions in the current study suggest this pattern remains the case. Both the SSHRs and the ISHRs stressed their awareness of these powers and their potential, but at the same time spoke about the care with which they used them to maximise their effect, as the following exchange shows:

> 'Obviously, I put the target on my back and I was going to wear it. And that was my first six months, and it was an absolute uphill battle. But guess who's sitting on top of the hill? … And they're actually starting to see what the role is meant to be … where it's not so much – you've done this, you've done this, you've done this – It's more that we've found the problem, can we fix it? And then we will identify the hazard, and we can work on things. That's a culture problem that I've been fighting for the last 12 months is from past management ... I do think it has changed.' F2/3;
>
> 'You've got to have a set of a working relationship as well with the company. You know, because if you don't, it's going to be very hard. So, on some things you sort of got to be reasonable.' F2/4
>
> 'It's very draining on the head sometimes. Yeah... trust me. I know, I've been good a long time.' F2/6:
>
> 'Yeah... because part of the role is we want to encourage people to come into the union… And it comes back the other way, when you are taking forward these issues and then management does not resolve them. Then you're with the membership.' F2/8:

These exchanges show that although the representatives were well aware of the extent of their powers, they also understood the need to be strategic in their approach to issues. There were a variety of ways of 'getting things done' on health and safety, and being seen to offer solutions to problems in their approaches to mine management, rather than being confrontational, was often helpful. It was equally helpful to build support for their actions from the union membership, so they could be confident in their backing when confrontation arose.



Moura No.2 Disaster (1994) portion of Moura Miners Memorial

Another strategy that emerged strongly in the previous studies was still apparent in the representatives' discussions of their actions. As already noted, both the SSHRs and the ISHRs consciously strove to ensure these actions remained within the boundaries of what could be defined as health and safety and did not stray into the area of 'industrial issues'. They did so to ensure they could not be accused by managers of acting beyond their health and safety remit and in breach of the statutory provisions by unnecessarily impeding production. This was the case when they used powers such as those enabling them to order the cessation of work when they felt it posed significant risks, but it also applied to all the activities they pursued in the interests of preventive health and safety. As one SSHR put it:

> '…that's what we try to do. We look after the health and safety. The industrial boys look after the industrial. We try to make a clear-cut line... But, it is a fine line that they dance and we have to sometimes, because otherwise every time you bring an issue up, you won't get any time and any movement from the SSE because they'll go, ''You're only about industrial stuff and that's out of your wheelhouse''. You know, we get people approaching us all the time, "Oh can you do this, that", it's like "No, that's not my area, you need to go and see this person," or whatever, you know, but we try and stay clear of it so that we can't be accused.' F1/6

The above quote also suggests that the SSHRs were aware that the boundaries of what constituted 'health and safety' were not always clear-cut. It was evident in other discussions that the SSHRs recognised that prevention of many of the current health concerns that were the consequences of

company employment and organisational practices – such as those, for example, involving mental health – lay beyond the reach of actions that were taken within conventional definitions of health and safety. But these wider discussions made it clear that, rather than ignoring these issues because they were not strictly 'health and safety ', the SSHRs liaised with their industrial colleagues in their Lodge to develop joint strategies to address them. This reflected findings reported in the earlier studies concerning these issues. It suggests, without minimising the challenges involved, that these approaches, developed some 10 years ago, were being put to some use.

Engagement with principal mining hazards

The 1999 Act defines a principal hazard in a coal mine as a hazard with the potential to cause multiple fatalities. The Act requires a principal hazard management plan and its review, in consultation with affected workers, when conditions change. As Chapter 4 notes in more detail, the previous (2014) study reviewed documentation on the role of ISHRs and SSHRs in inspections and concluded that their activities made strong, positive contributions to effective approaches to safety and health in Queensland coal mines. Most site inspection reports (94%) referred to inspection of at least one fatal risk. Machinery, fire or explosion and rock fall were most commonly reported. Reviews of safety and health management systems featured prominently in industry representatives' site visits, with similar patterns of documentary inspection to those of the mines inspectorate. Almost all mine inspection reports (96%) referred to the inspection of something physical (work areas, equipment, etc.), but reference only to physical inspection was most common among the SSHR reports, reflecting their preference, clearly demonstrated in the interviews, for a 'hands-on' health and safety role. Interviews also indicated representatives were aware of the potentially serious nature of the hazards they were there to prevent.

The group discussions in the present study indicated that this was still the case. In the many detailed examples of their inspection investigations and representations to managers that were discussed by the SSHRs and the ISHR, the vast majority concerned principal hazards. As in the other chapters of this report detailing current experiences of health and safety representatives in mining, efforts have been made to protect participants' anonymity. For reasons of confidentiality, much of the rich detail of these experiences has therefore been excluded from this chapter. Nevertheless, the description leaves little doubt that principal hazards, such as those arising from the interaction between workers and machinery, especially moving vehicles, along with falls of rock and ground, poor roadways, water inrushes, electrical hazards, dust, fire and lightning strikes were all still very much in evidence in the representatives' experiences, and often some of these elements appeared in combination in the issues that they were trying to address.

Participants described many illustrative examples involving these principal hazards, focusing on the reasons for the failures of health and safety management they had tried to address. Prominent among the common features of these reasons were failures of communication between workers and managers, especially cases in which workers and their representatives had, in one way or another, expressed awareness of issues involving principal hazards without receiving an adequate response. They further included poor compliance with legally mandated notification procedures. Many of these issues also involved failures in regulatory oversight, and were combined with strong indications of pressures that prioritised managerial concerns for production over health and safety, despite the company's rhetoric to the contrary.

Related to the principal mining hazards, a further issue that affected a number of participants was the effect they felt that recent changes to the legislative requirements concerning the reporting of high potential incidents (HPIs) may have had on reporting practices in the mines, which often relate to the principal hazards. They explained that while formerly the incidents that constitute an HPI were detailed and listed in the requirements, the current provisions were more generic, which they felt encouraged mine management to downgrade incidents to avoid having to report them as HPIs. Several examples were given of this practice and how the SSHRs had tried to resist it. The following exchange between three of the participants in one of the discussion groups illustrates the issues of concern:

> 'The changes in legislation didn't help. So, they [HPIs] used to be prescribed. It was either a HPI or it wasn't a HPI. The legislation changed and they took that out. So now it's up to the discretion of the SSE whether he describes it as a HPI or not a HPI. There's still some prescribed HPIs, but there was a bigger list which has now been removed. So that's why a lot of things get reported through. … We have to go in there and argue that it is a HPI and this is the reasons behind why we believe it is a HPI.' F1/1

> 'Yeah, there's actually what they class a significant event. Essentially, it's a HPI without being a HPI, it goes through different channels…' F1/5

> 'It should be reported as an HPI and then the regulator can decide if that's an HPI or a significant event. That doesn't happen [name of participant removed]'s 100% right. They get reported as significant events first and then we go into battle and try and get it upgraded… That's why Schedule 1C used to have a list. But they [the regulator] went "Oh we don't want to be prescriptive." We just want it to go back to the definition… The investigation process is different. There's two different levels of investigation.' F1/1

> 'And that's why we push it. It's not about getting them notified. It's about to increase the level. They brush it under. They don't get the same level [of investigation].' F1/4:

The *Queensland Coalmining Safety and Health Act 1999*, Section 106 states that a site senior executive for a coal mine must tell a site safety and health representative at the mine several things, including, (a) injury or illness to a person from coal mining operations that causes an absence from work of the person; and (b) *a high potential incident happening at the coal mine*. When considered alongside the SSHRs' powers under Sections 99 and 100 to undertake inspections and investigations and to review procedures, reported HPIs are an important source of intelligence likely to inform their activities, which is why continued HPI reporting is important to them. In light of this, the above exchange makes it clear why SSHRs see downgrading incidents from HPIs to simply being seen as 'significant' as a regressive step.

The downgrading of HPIs was a common theme in other discussions too. One SSHR gave an example:

> '… we're running autonomous trucks, we've had trucks run away fifty, sixty meters because they've lost brakes or something, but no one's in the area. So, we didn't have an HPI… I argue about it, I go, "But there's a good chance. There could have been a lot of vehicles in the area." So, I think it does have potential, and then they'll argue… they just say there was no one in the area. So, it's not reported as an HPI. It's another problem by definition…' F2/4

> '…It has caused massive confusion …. because it's not prescriptive. And you talk about "has the potential".' F2/4

In short, the current study indicates that principal mining hazards remain the central interests of both SSHRs and ISHRs in Queensland coal mines. In the many examples of their efforts to address them they gave in the discussion groups, failures of communication between mine workers and managers, and between the representatives acting on the mine workers' behalf and their managers, were central to their explanations of what had gone wrong in dealing with such a hazard. It was also often the reason behind their frustrated efforts to find a solution. Similarly, they were further frustrated by what they perceived as unfortunate consequences of changes to the requirements on the reporting of HPIs (themselves an indication of the manifestation of principal hazards), which they felt not only weakened the effect of these requirements on managerial reporting practices, but also undermined former requirements to ensure that worker representatives were appraised of such incidents.

Representation and consultation on change — digital technology and autonomous machinery

In the discussions of major hazards, some participants identified risks associated with working with autonomous machinery as adding a further dimension to principal mining hazards associated with worker/machine interactions. Several mentioned that autonomous machinery contributes to major hazards arising from poor ground conditions and rock falls. Others talked about the increased use of tablets and other hand-held devices and related concerns about information overload. The presence of multiple screens in vehicle cabs and other areas was also seen as contributing significantly to job stress and strain. More positively, it was acknowledged that monitoring could also have beneficial effects. One representative spoke knowledgably about the new technologies used in coal mine dust monitoring, in which he had been involved at his workplace with specialists from the regulatory inspectorate and university researchers.

Participants had varied experience with autonomous mining machinery. For example, one reported:

> 'I think we're one of the biggest mines in Queensland. And it's quite complex. We've got autonomous trucks, remote control dozers. To a point now where myself and the other SSHR just do the role full time because our SHMS system has got about 1300 documents, you know, so you're forever reviewing a SOP or a work instruction or something like that. And they need to be there to represent the workforce. And then we've got [name of another mine site] the contractors out there and us both run autonomous circuits. So you can actually go into a completely different operation, which makes it real complex. So, knowing the rules when you are in that area, knowing the rules when you are in the other area. There is constantly stuff going on inside the autonomous world.' F2/4

It may be recalled that the same speaker was the source of the last quote in the previous section in which he describes the consequences of an incident involving brake failure in an autonomous vehicle.

He, like others, also spoke about the problems involved with maintenance of autonomous vehicles:

> 'I've been getting reports of maintenance of certain trucks, you know, handrails, aren't there or the stairs aren't working on and so on and so on. Lights, indicators, things like this because they're autonomous. Yeah. They don't need it, but the trouble

> is when they need to go in for maintenance. Someone has to get into them. So, they still need to be, um, what's the word? Compliant to be able to run into the plant again, so an operator can get in there.' F2/4

While there were substantial concerns such as these, here again, some positive elements were also mentioned. Although autonomous vehicle operation doesn't necessarily take the same account of road conditions as a driver of a manual vehicle, and this may have safety-related consequences for the vehicle and the roadways, it was also acknowledged that the correct operation of autonomous machinery helped to separate mine workers from some hazards:

> 'I've got autonomous drills and autonomous dozers. I think they've been out like for at least eight years… Segregated areas, no ways of going there without contacting that control room. Um, I think the procedures are actually pretty good on them.' F2/3

And:

> 'Yeah, there is definitely a lot of safety. You know, we've got remote dozers now. There's fatalities in the roads through dozers, going over a hole into mud and stuff like that. But with the remote they can get remote dozers in to do that sort of work. And you remove them, you know, the persons from it.' F2/4

But the same speaker also commented:

> 'There's a bit of to and fro … It's been operational for a while now. To some extent you feel safer in that area, yep, that you're not going to get run over. So the zoning really works. Yeah, but you probably get, look I'd hate to say it, but you probably get a bit too complacent.
>
> You go to the other end of the mine where it's all manual mine work, and here comes a truck or whatever there when you're in there.' F2/4



Moura No.2 Disaster (1994) Memorial

Commenting on experiences of automation and digital technologies underground, another discussant said:

> ‘We're probably at the other end of it where we've got a fully automated operating model. So, they operate it from the surface, 90%, probably more 98% of the time they've run from the surface. There are positives with this.

> You're training people to sit in front of a computer screen and not actually operate the machine. You know, and that thing has the potential to affect the rest of the mine, not just that area. High-pressure hoses? Installation of remote equipment? Long wall, so yeah, you probably remove people… so you reduce that risk, really. You know, have autonomous vehicles actually have checks too. Oh yeah, we've got checks and all that sort of stuff on the network. Yeah, people standing on the face, you know, you remove a lot of that.' F3.1

That said, there was also scepticism about the benefits of the IT applications in monitoring safety:

> '…that's in all of our equipment…. an automated system that just collects data. It's like an IVMS on a motor vehicle these days. You know, it'll literally tell you, if you've passed wind in the vehicle… Look, I don't believe there's any [preventive] safety benefits to it because it's all post-data. Something will happen, that's when we use that data. However, A fair bit of that data is captured and put up each day around ramp speeds, corner speeds. My issue with it is, it shouldn't be a name-and-shame thing. The data's there, but there's no coaching around what are we doing?' F4.3

The point this discussant was making was about the appropriateness of the use of monitoring. This was further developed during the group discussion and included several elements stressing that while technology made more extensive monitoring possible, its results needed to be used appropriately to benefit future preventive practices. Generally, however, the group concluded that such monitoring was used to record rule-breaking following an incident rather than to explore the underlying causes of failures.

A further feature of the discussions around the rapidly increasing use of automation and digital technologies in coal mining was the extent to which the worker representatives were involved in consultation over its use. While there was no doubt that the SSHRs dealt extensively with the consequences of its introduction, there was much less evidence of their involvement before it was introduced. In most cases, they said they had been 'consulted' about its introduction at the same time as it was introduced, rather than being involved in planning its introduction and before the changes in question had been decided.

Overall, as in other states, there was considerable variation between mine sites in the degree to which digital technology and autonomous machinery were used, but participants were also widely aware of its growing presence in mining. The pace of change was one of the more significant themes that emerged from the discussions. Indeed, the rapid adoption of technologies, which in turn led to equally rapid changes in work practices, was clearly difficult for discussants to keep on top of in terms of their implications for work health and safety. This, combined with widespread failure by companies to consult with SSHRs before introducing these developments, posed considerable challenges.

Representation and consultation and psychosocial risks

Psychosocial risks and their consequences for mental health are among the more significant features of the current profile of work and health in most sectors of employment. While there is little doubt that these risks have been a feature of work for a very long time, awareness of them is much greater now than it seems to have been in the past. Better reporting of the extent of their presence and their

health consequences has revealed them to be a major and increasing source of work-related ill-health, and of considerable concern across the economy as a whole.

There are also a number of features of modern work and employment practice that are acknowledged to contribute significantly to the raised profile of job stress and strain and consequent mental and other forms of ill health. As a result, it seems most likely that their raised profile is not only due to better reporting and greater awareness, but also reflects an objective increase in their occurrence, which can be explained by these features of work and employment. Current employment in coal mining, as in mining generally in Australia, is far from free of such characteristics. Several are especially prominent in the organisation of work and employment in the sector. Long shifts and swings, precarious contractual arrangements and job insecurity, FIFO employment, autocratic management practices, work intensification, the monitoring of workers' behaviour and so on have all been associated with mental health risks in the recent research literature on mining in Australia.[341]

In addition to the stresses and strains of these work and employment organisational practices adopted by mining companies, further strains arise from the prevalent workplace culture driven by mining company work regime management practices.[342] ISHRs, and especially SSHRs within mines, therefore have to address the consequences for mine workers of both the stresses and strains associated with work practices and their organisation, as well as those arising from the overall culture and ethos of work in the mines. This is a complex and difficult task, for which they acknowledge that they have only limited preparation and support.

When asked to reflect on what the psychosocial conditions at their mines were like, a participant in one of the discussion groups said:

> ‘I'd say “Not good”. I'd say a lot of people on our site, they do feel picked on more than they speak up… So that's just the culture of don't poke your head up...’ F2/2
>
> Interviewer: That must be a strain as well.
>
> ‘It does have a strain and people get frustrated, they hold stuff in. Then they're more worried about, “Oh, this shouldn't have started. This shouldn't have gone on.” They're not thinking about what they actually should be thinking about. There's a lot of distraction added by it.

[341] See for example: Langdon, R. R., Biggs, H. C., & Rowland, B. (2016). Australian fly-in, fly-out operations: Impacts on communities, safety, workers and their families. *WORK: A Journal of Prevention, Assessment & Rehabilitation*, *55*(2), 413-427; Bowers, J., Lo, J., Miller, P., Mawren, D. and Jones, B., 2018. Psychological distress in remote mining and construction workers in Australia. *Medical journal of Australia*, *208*(9), pp.391 397; Fruhen, L. S., Gilbert, J., & Parker, S. K. (2023). Fly-in-fly-out work: A review of the impact of an extreme form of work-related travel on mental health. *Organizational Psychology Review*, *13*(2), 177-204; Gardner, B., Alfrey, K.L., Vandelanotte, C. and Rebar, A.L., 2018. Mental health and well-being concerns of fly-in fly-out workers and their partners in Australia: A qualitative study. *BMJ open*, *8*(3), p.e019516.

[342] Conceoção, A. and Palma-Moreira, A., 2025. The Relationship Between Occupational Stress, Burnout, and Perceived Performance: The Moderating Role of Work Regime. *Administrative Sciences*, *15*(10), p.377; Quinlan, M.G., 2025. Psychosocial hazards: An overview and industrial relations perspective. *Journal of Industrial Relations*, *67*(2), pp.202-223; Vassily A. (2025) *Striking Ore: The Rise and Fall of Union Power in the Pilbara,* Monash University Publishing Clayton Victoria.

> Yeah, I've got major issues, where more and more mental health issues are being raised to us.' F2/4

The same speaker then went on to describe some of his own recent experiences with mentally and emotionally distressed mine workers. Talking about a fellow mine worker he said:

> 'I think he was nearly at the stage of doing some sort of harm to himself, and I got there and seen him. And it sounds silly, but I didn't know this guy, and I just went up and said, "You all right?" He reached out to give me a hug, cried on my shoulder. And I sat there for probably two hours with him, rang my other SSHR, because no one else would probably care. That's one thing, you know, your other SSHR generally has your back. And I just told him, "Mate, I am going to be here."
>
> I got him solid. Got him to ring the support service people, which I've never had to ring myself. And I went out and had to do an inspection. By the time I come back, he just said thanks a lot. The world lifted off his shoulders from having made that phone call.
>
> 'The SSHRs know what to do and when to do it in those situations. That same day, that afternoon, I was down on a drill bench and I jumped up with this guy's truck to check that he had all his compliance stuff in order. And I said, "Right, am I going to go?" And he goes, "Hang on before you go."And he's probably a fifty-year-old guy, and his lips started quivering, and he started crying. I thought shit on that! Two in one day. And he was just getting bullied at work.' F2/4

In the discussion that followed, participants observed that, as SSHRs, they were increasingly dealing with these kinds of situations but were not properly equipped to do so. They felt that they did not have sufficient training to know how best to support the distressed mine workers who sought help from them. Sometimes there were services they could refer them to, as in the above case, but not always, and the SSHRs, like many of the mine workers themselves, were often uncertain about how competent or trustworthy that support was. Nor did they always find that mine workers were willing to undertake that action themselves:

> 'The biggest thing that I found with that is the only control measures for actually mental health issues are where you've got to go and pick up the phone and talk to somebody. And most people think, "No, I don't need that." There's nobody actually on site they can go "Right, I'm having a fucking shit day, I want to go sit down and talk to someone." There is no mental health person on site at all.' F2/3

In this, and in other discussions, it was frequently pointed out that the company provided very little in the way of support for mine workers' mental health, either in terms of provision for help with amelioration for those experiencing issues or crises, or for more preventive work in seeking to address work-related factors that either created these conditions or served to exacerbate them. Talking of the company that employed him, one discussant pointed out that its attitude was minimal:

> 'What they'll do, I guess. "Yep, we're doing the minimum requirement by legislation," and that's it. Yeah, yeah, we do that too. I mean.' F4/6

Discussants were aware of the challenges of addressing psychosocial risks created or exacerbated by the organisation of work and employment. In a work environment in which companies adopted production strategies that promoted job stresses and strains such as those reflected in the research literature, and where company strategies for managing its human resources were frequently framed in unitarist terms rather than the pluralist understandings that framed the statutory provisions in which the functions and powers of SSHRs and ISHRs were situated, it is not surprising worker representatives found it difficult to function effectively as preventive agents for mental health.

That they managed so well in doing so in relation to the physical risks of mining work is a testament to their experience and competence as knowledge activists in these areas, as well as the reliably objective nature of the prescriptive legal standards involved and the practical mining experience they shared between themselves and the other experienced mine workers whose interests they sought to represent. However, preventing the health consequences of psychosocial risks by addressing them at source is framed by a set of parameters that are considerably more uncertain. For some issues, such as fatigue associated with long hours, shift work, journey times and the like, there are relatively well-rehearsed preventive and ameliorative strategies and standards that can be applied. Many of the discussants were aware of these strategies and standards, as quotes elsewhere in this chapter attest (see, for example, the comments on inspection practice in the following section). But for other stresses and strains, there is often not a clearly prescribed standard. Nor is there a clear duty placed on their employer to achieve it; nor a clear commitment from them to do so. The nature of both the risk and its consequences in these cases of mental ill-health are far more subjectively determined and variable than in relation to most physical risks. They are also more subject to interpretation than the latter. The boundary between what constitutes a hazardous work-related exposure and what is regarded as the consequence of some other kind of influence is also much less clearly defined and might vary between individuals. Additionally, few clear guidelines distinguish questions of human resilience from those of unhealthy exposures. All of this creates considerable confusion among managers, regulators, and representatives alike about which strategies are preventive or ameliorative in relation to risks to mental as opposed to physical health, and which they are addressing in their efforts to manage the effects of psychosocial risks.

Against this background it seems hardly surprising that the participants felt that they needed more training and better support to be able to address mental health issues effectively, and that their employers had some way to go to demonstrate their commitment to their workers' mental health, provide a clear prevention plan addressing mental ill health and much greater, more conspicuous and more sensitive, confidential support for its amelioration among mine workers who might be affected.

> Interviewer: 'Not everyone trusts it?
>
> Participant: 'No, everyone does not. And there's confidentiality. And also, you are ringing somebody and some people don't want to do that.' F2/3
>
> 'Exactly. Well, I got a lot of people who've come to me because it's all silent on my website. Or more people come to me and bring me out there.' F2.4

Relations with regulatory inspectors

Participants described mixed experiences with regulatory inspectors. On the one hand, several participants were fairly positive about their relations with them. Typical comments were:

> '…if I'm really honest, when I talk about the regulator I think they do a good job… I've seen change over the last 12 or 18 months with some appointments are people off the ground, which is a good thing really.' F4/3

> 'Definitely got better over the last couple of years. I don't have a really low opinion of most of the inspectors to be honest, because they're doing their job. I see that with the inspectors we are dealing with when they come out.' F2/6

Others were more qualified in their assessment, expressing concern about the Inspectorate's limited resources and the resulting limitations in their approach when visiting mines. One SSHR said:

> '…a lot of them are unaware…. They've got to go to a different site and stuff like that. It's just a lot of workload for them to get their heads around.' F2/2

While another participant in the same discussion drew attention to what they saw as an absence of real commitment from the regulatory inspectorate to enforcing the statutory provisions governing the position of the SSHRs:

> 'At the end of the day, the SSHR is elected by the coal mine workers as their representative and they should be covered by the legislation. But it seems to be like there is a gap where the inspectorate isn't actioning.' F2/6

There were mixed views about how well mine management SSHRs were informed about inspector visits to their mines. Most discussants felt they could have some contact with inspectors during their visits, but raised concerns about the arbitrary nature of being told in advance of their presence. Typically, when speaking of the mine management's efforts to inform them, one SSHR said:

> 'Safety officers are pretty good. They'll give us a heads up that they're coming. But a lot of the time we either get told on the day or you find out that they have already been there. It's a big problem with not being notified.' F2/4

Analysis of inspection records between 2009 and 2013 reported in the 2014 study showed that over half made no mention of whether an SSHR had been present during the inspection. That report concluded that the most likely inference was that SSHRs remained excluded from a substantial proportion of visits by mine inspectors. The representatives themselves reported a mixed experience regarding notification of inspector visits. Many were unsure of how systematically they were informed of inspectors' visits, and some felt that their management was less than helpful with such information. When they were informed at all, it was often only to say the inspector was there at times when they were unavailable. The present study suggests that little has changed in these practices.

Another issue raised by some participants was the nature of relations between the inspectorate and mine management. In one discussion group, a participant indicated:

> '… they've got a list of certain people in the regulator — inspectors that they'll ring … and they're old mates and they've worked together you know chit chat away…. They

> pick and choose who they notify. They pick and choose the inspector they report to and we will get visits from others they know… so there's no consistency from the inspectors.' F1/6

It was pointed out that rotational movement between senior management roles in the mines and positions with the regulator was not uncommon in coal mining. This kind of 'revolving door' led participants in this discussion group to question the objectivity and motivations of some inspectors, and to note mine management's efforts to ensure they had a sympathetic ear among regulators. The same finding is noted in the 2014 study, suggesting that here again little has changed in the intervening years.

Somewhat in contrast, in another discussion group a participant drew attention to their experience of managers being wary of some inspectors whose reputation was one of strict enforcement.

> 'Some inspectors. They are not scared. I know which inspectors they fear because they've pissed them off and I'll say. "I'm just going to ring this person, just watch me!" And they're, like, "OK let's talk!". F1/2

Another issue raised in discussions concerned inspectors' competence or interest in dealing with emerging risks. For example, as the previous section showed, in the case of psychosocial risks, fatigue and mental health were among the current concerns of the participants. But, as the following exchange shows, it was felt that in their visits, inspectors often did not explore these issues sufficiently:

> 'There's been a churn in that world for them. I'll use an example. Fatigue. They haven't got a great knowledge of it. So, I put in a nine nine one six.[343] And they come in and make a termination of the investigations. They've got no understanding of it. They don't believe it and are doing that.' F5/6
>
> 'They're not really across those types of risks.' F5.4
>
> 'Correct, but they are the ones that come out to investigate it.' F5/6

As was evident in the previous section, dealing with psychosocial risks was challenging for all concerned, but the discussants' comments about their dealings with inspectors made it clear they did not feel they could rely on leadership and guidance from the regulator on these issues.

Training and support

In the discussion groups, the question of training was raised in three different contexts. Firstly, there were issues about the training of mine workers generally. Participants raised concerns about an increasingly younger and less experienced workforce receiving what seemed to them to be seriously inadequate training, with far less face to face provision and more attention to quick fixes than to providing serious support for what were viewed as quite complex and sometimes dangerous tasks; without the benefit of an older experienced workers on hand, the newer workers were considered to be in danger of making serious and potentially dangerous mistakes. They also saw this as exacerbated

[343] Section 99.1.6 of the Coal Mines Regulation 1999 applies if the SSHR is not satisfied that the SSE has made the safety and health management system adequate and effective, then the representative must advise an inspector, and the inspector is obliged to make a visit.

by production pressures, which prevented the time and attention needed to learn how to do particular tasks safely and without risks to health. In the case of risk assessments, for example:

> ‘I think that's where one of the biggest downfalls is of the industry. Um, Perhaps, not really the industry, but different mines. It’s the training that people receive in regards to hazard perception. And then the methods they use to show how to actually do a proper risk assessment. … because you know, when we get down there, we're used to that sort of stuff. But, but, look all people that don't.’ F4/5

However, another discussant in the same group drew attention to a wider concern about the pressures of production on site that were sufficiently powerful to override the effects of training:

> ‘We all do an induction right? … we all do an induction and we're all given that training right? And then we'll all sign a bit of paper to say that we've read and understood and she's all good. We're going to apply this stuff. Then things change when you are out in the park. And you got supervisors that's getting paid by KPIs. Is that your signature? You've said you've done it. That's the reality of what goes on. It's — we've got the training — we could argue whether the training is adequate or not, but we have the training.’ F4/3

The key messages in this discussion group seemed to be not only that the content and delivery of current training was inadequate, but that part of the current ethos prevalent in the mines was a tacit understanding that the training was simply the bureaucratic means that provided the licence necessary to enable a mine worker to undertake certain tasks, rather than the skill sets they really needed to undertake them.

Company online training provision was argued to be considerably less effective or rigorous than the face-to-face training it replaced:

> ‘Like SAPs that used to be done in a group of four people, And, you'd sort of talk people through it, and you'd ask them the questions, they just don't understand. You get it all out and then give them the question at the end of it. And then actually people learn more like that. That's how I feel that they do though. Yeah… We'd talk through the answers together.’ F4/5

By way of contrast, another participant in the same discussion group pointed to current practice:

> ‘You know, we get people through these in a day. We might be talking thirty SOPs now. You know, I am not the sharpest tool in the shed, but I am not the bluntest either. So, When I do our refresher – because it's all online refreshers these days with your refresher and culture – is that is that you know, I make sure that I read through every SOP that we have, but I can guarantee you what people don't and, If you hit the wrong answer, and there are yes or no answers too, it'll just say "boom boom." Then you keep going through your assessment. It'll come back to that question, and then you just take the other one. So that's the problem.’ F4/3

> ‘That's reality. And in ours, you can just open up, close, set five, and that's done. Oh okay. So that's how automated it is.’ F4/2

The second issue involving training that reoccurred frequently in the discussion groups concerned the preparedness of newly selected SSHRs to take on the role. As previously mentioned, to become an SSHR, possession of several mining competencies recognised by the Coal Mining Safety and Health Advisory Council is required, including applied risk management (RIIRIS301B), conducting safety and health investigations (RIIOHS301A) and communication (RIICOM301B). Participants in all discussion groups generally felt this training was wholly inadequate for the SSHR role and that something much more substantial was required shortly after the appointment began.

The third issue most frequently discussed was the role of the ISHRs in providing both training and support for the SSHRs. Participants agreed the training organised by the ISHRs for the SSHRs was immensely valuable.

> 'The MEU training that we get in a general sense is fantastic. Great. Bit of a problem in that if you're elected as an SSHR, the month after the training takes place, you've got to wait a long time before you get it. There's nothing else other than those supervisor trainings.' F5/3

But as the above quote also makes clear, they were concerned that the limited number and resources available to the ISHRs meant that there would be a problem for newly elected SSHRs in having to wait a long time for this experience, should they take up their position shortly after the annual training week had taken place. This was confirmed by another SSHR, who pointed out that a former ISHR (now retired and not yet replaced) had managed to provide a stopgap measure for this, but even that was currently not available for new SSHRs.

> 'There's nothing coming for the new the SSHRs. So, [names a former ISHR] would organise a day for the newbies at least once a year. I don't know how that is going to roll out now.' F5/2

As indicated in several previous sections, all participants agreed that ISHRs represent a substantial source of support for all aspects of the SSHR role. Despite the acknowledged problem of their scarcity and overwork, all participants felt they could rely on ISHRs for support in their efforts to persuade managers of the need to address health and safety issues identified in the mines and to pursue remedial measures. For example, when talking about their actions, whether in relation to their specific powers under the regulations, or just when they were uncertain about how to approach a problem, they said:

> 'Without having to use a 195 or a 196, I'll just go to the ISHR: "Hey this is the scenario, how do you think I should play it?" F3/1
>
> [And they will say]
>
> "Well, you can do this or you can do that."
>
> And if it doesn't work then we'll move on to some other options. Sometimes they'll give you a really well-worded email to assist.'

The strong feeling expressed across all discussion groups reflected the great value the SSHRs attached to the role of ISHRs in all aspects of their work. This was also a major conclusion that emerged from the two previous studies of worker representation activities on health and safety in coal mining in

Queensland. In both studies, SSHRs were unanimous in their view of the added value provided by ISHRs in enabling them to undertake their functions effectively and use their powers appropriately. The support they provided through training, mentoring, advising, and informing the representatives, as well as engaging more directly with management or other coal workers, was consistently reported by SSHRs in those studies as enormously valuable and was also endorsed by testimony from the Mines Inspectorate. The same remains the case in the present study.

On the role of the ISHRs in training in particular, as in the previous studies, the annual training conference for the SSHRs, which the ISHRs organised and also used as an informal way of getting to know the SSHRs and their issues better, was regarded positively. In particular, and again in common with previous findings, SSHRs repeatedly indicated the conferences provided a continuing source of help, even for the more experienced representatives. In addition to training them to understand better and use the legislation and regulations, and hearing from inspectors and other experts on technical and other matters, SSHRs also valued the conferences as opportunities to learn from each other about experiences in other mines. As noted above, their only concern was that there were insufficient ISHRs and resources to make these events more frequent and to use them to target areas of particular need, such as training for recently selected SSHRs or providing more training on emerging risks.

The situation in metalliferous mines

As detailed in Chapter 3, Queensland is the only state in Australia where legislation currently provides a system of representation in metalliferous mines that is essentially the same as in coal mines. The *Mining and Quarrying Safety and Health Act* 1999 (amended in 2024) is the principal legislation covering non-coal mining and quarries. It provides for site safety and health representatives and district worker representatives as well as site safety and health committees. Part 7, Sections 83 to 106 of the Act, deals with both SSHRs and site safety and health committees. Part 8, Sections 107-121, provides for the Minister to appoint up to four persons as district workers' representatives from nominees for these positions. The only significant differences between these provisions for metalliferous mines, and those that apply under the Q*ueensland Coal Mining Safety and Health Act 1999* in coal mines, is seen in the provisions for site safety committees in the former but not in coal mines, and in how representatives at industry level are funded, with the trade union being responsible for the ISHRs in coal mining and the district worker representatives being funded by the state in metalliferous mining. These latter differences, as discussed further in Chapter 3, reflect the different historical trajectories of the legislation in the two branches of mining.

As outlined in the Introduction to the Chapter, the Australian Workers' Union (AWU) organises both the SSHRs and the DWRs in metalliferous mines. In both Western Australia in 2013 and in NSW in 2024, the AWU joined with the MEU to form a Mine Workers Alliance representing the joint interests of mine workers in metalliferous mines in the Pilbara in WA and in western NSW, although this has not occurred in Queensland, where representation and union activities remain separate.

Interviews with a union official, a District Worker Representative (DWR) and a training provider conducted in the present inquiry provide something of the profile of trade union supported activities in representing the interests of mine workers in their health and safety in the metalliferous mines of Queensland and a flavour of how they operate in one region of Queensland. It allows some comparisons with the more detailed account of the current situation in coal mining, which has been

the main subject of this chapter. However, it is important to stress that this is a 'snapshot' reflected through the experiences and subjective opinions of two trade union activists and a trainer. It is not a qualitative analysis of the same breadth or depth as the situation in coal mining, which has been the main focus of this chapter.

Employment and representation

As in coal mines, employment in metalliferous mines in Queensland is a mix of directly employed and contract workers. The DWR indicated that, as in coal mines, contract workers were likely to be reluctant to speak out about health and safety issues because they perceived their employment as insecure. Although the representative added that in his experience, while contract workers were unlikely to raise health and safety issues with mine supervisors and managers, the presence of SSHRs at the mine where contract workers were employed encouraged them to speak to these representatives. A possible difference in the employment patterns in the metalliferous sector that interviewees felt was relevant to patterns of representation was the presence of more small workplaces in the sector, largely because quarries were included within its scope. These could be operated by small, and sometimes family-run, enterprises. As in other industries, workplace size affects representation, with fewer representatives in firms as they shrink.

Becoming a Health and Safety Representative

While the legislation allows for two SSHRs in each mine as noted above, more may be appointed by agreement. The District Workers Representative (DWR) interviewed gave examples of where this had occurred, in relation to different processes in the same mine – such as underground and surface work, for example – or for particular plant or hazards on site, or to cover different shifts. He recommended there should be at least one per crew and went on to say:

> 'When something goes pear-shaped, there is generally more than one thing that happens. If they got a good SSHR who gets on well with the supervisor, they can split those things up and work it out and make sure it's right ... if you have something wrong, it's good to discuss with somebody else, get somebody else's opinion. To make sure it's right in case you're skipping something ... People forget where they come from and they're not focused on safety, they're focused on production.' Interviewee 3

But he was also at pains to point out that it was not the DWR's role to decide how many SSHRs there should be; the legislation made clear that if there was agreement between the workers and the SSE that they needed more, then that was up to them. His role was to advise. There was further discussion about the desirability of adopting the system currently favoured in NSW, with specialist electrical and mechanical SSHRs. The interviewees agreed it was important to have sufficiently qualified and experienced people in these roles for high-hazard work, but again the DWR made the point that this could be achieved with additional reps where the workers and the SSE agreed it was necessary. He conveyed a sense that this was 'early days', and it was important to get the basics in place on the ground before proceeding to further levels of need that would be identified once these basics were operational. Indeed, throughout the group interview, this interviewee conveyed a sense of the freshness and relative recentness of the quite extensive activities he described. Whether this was a consequence of the legislative changes in 2024 when the *Mining and Quarrying Safety and Health Act*

1999 was amended and, among other things, its measures on SSHRs and DWRs were clarified and strengthened, or whether it was the consequence of his own activism in the campaign in which he had been involved in his region wasn't entirely clear. However, it was acknowledged by the union official interviewed that this DWR had been successful during the previous 18 months in getting a substantial number of SSHRs elected in the mines in his region and also in succeeding in persuading mine SSEs of their benefits:

> 'Our district worker representative has been on a campaign in the northwest where most of our membership is in metalliferous mines, I mean around Mount Isa and that area. We've got a district worker rep up there who's been very active during the last 12-18 months in getting SSHRs elected. And he's working with the SSEs up there to make sure they're able to raise issues, get committees, and get involved with safety… he's done a whole lot of really good proactive work.' Interviewee 1

At the same time, he went on to explain that, as a union official, he could not exercise his permit of entry and involvement in relation to the matters addressed by the Queensland Mining and Quarrying Safety and Health Act 1999, and this was the domain of the DWRs. He said:

> 'To all intents and purposes, they are undertaking the union role, but they are completely focused on health and safety. There's no other issues they can act on. And from my point of view we like to work with them and co-ordinate things.' Interviewee 1

And he went on to stress:

> 'But we're very careful of what we're doing to ensure that we keep that separation correct, because their reputation is basically just dealing with health and safety issues'. Interviewee 1

The DWR explained that he sought to advise on the election of SSHRs by visiting the site and speaking to workers, the SSE, and the safety committee before the election, and by explaining the role of the SSHR. After they were appointed, he spoke to the SSHRs in greater detail about how to carry out their responsibilities. He was also available to follow this with visits to their worksites to advise them on how to carry out their responsibilities as SSHRs. Again, the DWR emphasised the links he maintained between himself and the SSHRs in the region for which he was responsible. He said there were now nearly 200 of them in total. He also commented on the recent, more successful recruitment of women to this role, noting how difficult this had been in the past but how, in the last couple of years, things had changed and they were now heading towards a 50/50 split between male and female SSHRs in his area.

Turning to the appointment and role of the DWRs, although the legislation allows for the provision of four DWRs, there are currently three, covering metalliferous mines in Queensland, each appointed for renewable periods of three years. Each is responsible for mines in a particular geographical region, reflecting the state-wide distribution of this type of mining. One was in the Brisbane area, one operated from Townsville, and the third was in the north-west. They focused on building their links with the SSHRs in the mines where they were present. They relied on them to contact them when they needed support with issues. They were also able to alert them to information that they distributed

through their network and were confident that this meant that they were able to reach a large number of mines in this way with items like safety alerts:

> ‘So for example if you get a safety notice like we just got one now with the isolation locks, I can send out to all the SSHRs and I am confident that all the mines have got that safety alert. And they’ll bring it out to their meetings, make sure all the workers are aware of it straight away. That's where the importance comes in on them.’ Interviewee 3

The DWRs are appointed by the Minister following their nomination by the trade union. They are therefore employed by the regulator, situated within the Mineral Mines and Quarries Inspectorate, and subject to the oversight of Resources Safety and Health Queensland, which is the regulator for health and safety in the mining, quarrying, explosives, petroleum and gas industries in Queensland. Their functions and powers are laid out in Section 8 of the 1999 Act. The union official acknowledged that administratively, the DWRs still operated from within the regulatory inspectorate. But he said that their relations within the inspectorate had been much closer in the past. He said the current position had not been achieved without some struggle. It had taken ‘some time and some political fights’ to separate the role of the DWR from the regulatory inspectors. He felt that this separation had now moved some way in what he considered to be the right direction and that the Minister’s Office (which oversees the Inspectorate) had a somewhat better understanding of the role of the DWRs than in the past. The union official went on to explain the DWR priority given to worker complaints:

> ‘My focus for our DWRs is very much on that, and it can mean not just now running their own race, but a worker rings them they're onto it. Worker rings them, they're onto it, right?’ Interviewee 1

He saw this as different to the inspectors' focus:

> ‘Inspectors have actually appreciated that because I make the distinction. Because when you look at the functions and the powers of an inspector, it doesn't mention the word "worker" once, right?’ Interviewee 1

Freeing them somewhat from being managed and having to report to the inspectorate had been difficult, and there were still some conflicts, but in his view the DWRs were nowadays in a much better position than previously. They were no longer merely following inspection orders but were proactively pursuing what workers wanted. This was also the impression that the DWR gave when he described his role in some detail during the interview.

The DWR was clearly aware of his position within the regulatory body and its separation from the trade union that had nominated him. However, while he was careful to state the independence of this position from trade union control, he was nevertheless forceful in advocating his role as a representative of mine and quarry workers and his strong commitment to supporting workers’ health and safety interests through his work with the SSHRs.

Getting things done:

Like the ISHRs in coal mining, the DWRs advised SSHRs on matters such as the inspections they were undertaking during the time their employer allocated to them for their functions, and guided them on strategies to bring issues to the attention of SSE or the site safety committee. They cautioned against

indiscriminate use of the powers SSHRs have to stop unsafe work and indicated that their general advice was for SSHRs to contact them before issuing such notices, and, if need be, they were prepared to visit the site concerned after such a request. In this respect, it was clear that the DWR who took part in the interviews was talking about a much younger or recently renewed system of SSHRs that was emerging from his campaigning efforts. He was keenly aware of their inexperience and need for careful guidance to support the credibility of their actions. This contrasted with the much more experienced SSHRs who were the main participants in the discussion groups undertaken in coal mining in the present study. As is evident from the preceding sections on their representational activities on health and safety, this experience underpinned their confidence and effectiveness in both using their powers and engaging with employers, their managers, and their supervisors in pursuit of workers' interests in improved health and safety.

At the same time, it was acknowledged that this was a great deal of work for a DWR to do by themselves. Consequently, interviewees strongly emphasised the importance of training new SSHRs in the specific competencies they needed for the role. These interviewees largely shared the view that, where persons were designated as SSHRs in metalliferous mines, they were not yet fully aware of the extent of their role. In these situations, they regarded the DWRs as being far more experienced and well-informed, and they saw them as playing an important role in support of the SSHRs. One interviewee commented:

> 'There are gaps there in that area around safety reps … mainly around the site-based stuff. I think the district worker reps are great. They're really, really handy and they do really good work. Really experienced people that get in there and provide that support because I definitely think there is a gap on site.' Interviewee 2

He went on to elaborate that in his experience, while the site-based representatives were well-intentioned, they were often quite limited in their understanding of their role, especially in relation to the powers that the legislation conferred upon them and in practice, as a consequence, they confined themselves to a role as the 'eyes and ears of the safety committee':

> 'I guess, people that get put in these positions as safety reps have adopted a culture where they're really just believe that they're the person that has to go up to the safety meeting and relay any issues, their roles, their functions, their powers, under the legislation are a hell of a lot more than that. That's where I think a lot of the gaps lie in Queensland.' Interviewee 2

DWR relations with regulatory inspectors

The union official described above the efforts taken to gain autonomy for DWRs as worker representatives within the inspectorate. The small number of interviews limited our ability to understand how the relationship between SSHRs, DWRs and the inspectorate worked 'on the ground'. The Johnston Review of the Resources Safety and Health Queensland regulatory model, discussed in Chapter 4, touched on the culture of the Mineral Mining and Quarries inspectorate including one

quote that the– [inspectorate] 'routinely show disrespect to District Workers Representatives, and more junior [staff].'[344] However, it seems this relationship has improved in recent years:

> '… inspectors can't override us. We work in with each other. It's still it's very, very hard work where it's sort of the lowest end of the level. They don't understand how important it is with the DWRs. It does now; it was very intimidating when I first started, but we've got over that.' Interviewee 2

DWRs have been empowered to operate proactively and independently, leading to greater worker engagement and integration into site safety processes. This provides a 'line of sight that inspectors don't have' because it's focused on building trust with workers around safety. There are also benefits from the DWR's location within the inspectorate, allowing access to expertise.

Regarding the relationship between SSHRs and the inspectorate, the interviewer asked;

> Do the workers, are they encouraged if you know if they've gone through the whole process on site and they still can't get resolution? Do they contact you, [DWR], or do they contact an inspector?'
>
> 'They generally contact me … They can contact district workers or inspector, but they generally contact me.' (Interviewee 2)

Training and support

The interviewees talked about a new training course for which approval was being sought currently, that would help to address this issue by aiming specifically at the role of the SSHR, rather than addressing the basic competencies that were currently the required qualification for the role of a supervisor and which some SSHRs already possessed as mine workers and which, as in coal mining, the reps themselves felt had very little to do with helping them to address the realities of being an SSHR. Speaking of the new course, the DWR said:

> 'I've seen this is the best way to do it, but what they needed, they needed the training, the function, the legislation was there but they didn't have the tools.'
>
> '…They need the right tools fit for purpose, and that's what this course is for ... as a safety rep, you have these responsibilities, you have these functions, you can go and do …. [the course] goes right through their legislative requirements. From inspecting work areas … the site senior executive has a requirement there that he has to allow you to do your functions and powers and allow you to do your role as a safety rep … and he can't intervene on that even as the senior person for site. What, those functions and powers are: investigate incidents that involve the safety and health of people of workers in the workplace, to carry out inspections, and the ability to do that. To review policies…' Interviewee 3

The trainer described the course content in some detail. It was clear that its content structure and mode of delivery resembled the content of similar courses for workplace representatives on health

[344] Johnston, S. (2025). Independent review of the Queensland resources safety and health regulatory model. Queensland Government, Queensland, Brisbane, 35.

and safety that are the staple of labour education in this field, with the addition of being tailored towards the specific context of conditions and practices in metalliferous mines in Queensland, not just in terms of the legislative provisions, but the skills and competencies necessary for engaging effectively with the site safety and health stakeholders; managing work safety and health compliance processes; dealing with addressing complaints; and reviewing and reporting in the site safety management system.

The DWR was able to provide several examples from his own recent experience of how the presence of SSHRs had contributed positively to improving health and safety in the mines in his area, such as through achieving improved reporting of incidents, gaining quality assurance qualifications, identifying inappropriate safety locking systems, rolling out better communication between mines and between multiple activities within mining companies, and so on. In each case, although they sometimes provoked initial hostility from mine management, they were endorsed when closer scrutiny showed their considerable improvement over the previous safety management situation. He went on to say:

> ‘But yeah, the SSHRs are getting involved in everything that happens at the mine site. I've even got them…on the camp sites … I always make sure that they got an SSHR there because a lot of those companies won't complain to [the mining] company because they'll cancel their contract or whatever. But if they got an SSHR, they can go to the meeting, and they can bring things up because they know the laws.’ Interviewee 3

Thus, the respondent provided an example not only of SSHRs' engagement in health and safety activities in relation to their direct employer, but also of their involvement with the work of contractors. He illustrated his conviction that they were on the right track by giving an example of what happened when an issue was reported to the safety committee in a metalliferous mine in his area. He said:

> ‘I'll just go through one of the ways that they do it. They have the [safety committee] meeting with the SSE, they bring up an issue. The issue is then handed to a manager of that particular area…the manager goes out, finds out what happened. How can they stop it happening again? He goes out with an SSHR, they do that. The next meeting he comes back and reports how they fixed it, how it's not going to happen again and the findings on it, the whole lot of it. Then he leaves the meeting. The next issue will come up. They'll do the same thing, but then those people can go back and tell their workers what happened. How's it not going to happen again? What controls in place, the whole lot of it. So, the workers know exactly what's going on because the biggest issue they'd have when I first started was when there was an incident, nobody knew what happened. Nothing would get back down to the workers and they go, “Well hang on, how are we not going to get caught or injured doing this?” …. Yeah, look it works fantastic. The SSE just said, you know, ‘’Where has this been? Why haven't we had it?" That's brilliant”.’ (Interviewee 3)

The interviewees discussed SSHRs' involvement in monitoring and implementing risk assessments and controls related to principal mining hazards. The examples cited by the interviewees made it clear that principal hazards were prominent among the issues the SSHRs addressed. In a similar vein to the

criticism of current practice in coal mining discussed in previous sections, they pointed out that many of the incidents they observed could be traced back to the inadequate training that the mine workers had received and that, in their view, the quality of training had drastically declined over recent years along with the attention to detail and process in other activities fundamental to ensuring safety such as risk assessments. They encouraged SSHR to be prepared to trace these weaknesses back to their origins within the company organisation and expose them as root causes at these levels. They advocated that SSHRs get involved in undertaking risk assessments to ensure they meet required standards. Also, like the discussants in coal mining, they pointed to the misuse of situation awareness tools as substitutes for safety operating procedures. The DWR commented:

> 'The last SSHR meeting I went to, the SSHRs actually brought it up. [They said] people are trying to get the JCA to suit the job. They're making the JCA suit what they're doing instead of the opposite way around….The jobs here, they're making the JCA be dangerous to suit that job to do it the quick way. And that's something they picked up.' Interviewee 3

The DWR further pointed to similar occurrences in accident investigations in which company investigations had been found to be entirely misleading once the SSHR had been consulted:

> 'But what the SSHRs do is they bring out the truth of what's actually happening. A lot of the accidents we've had, following a report, we have got the companies to go out there and speak to an SSHR. And then they said, "No, that's not what happened. This [is] what it was. This what caused it."' Interviewee 3

Regarding autonomous machinery, the use of digital technologies, and AI in metalliferous mines, the interviewees reported mixed experiences, possibly reflecting the regional basis of their positions. From this perspective, they had witnessed a wide range of scenarios in the recent past, from heavy investment in automation by some global companies operating large mining concerns in the state to small firms that still relied heavily on much older technologies, where manual operation was still the norm. Thus, they were aware of some of the advantages of automated machinery in terms of their role in isolating high-hazard activities from human contact, although they were insistent that workers were still always somewhere involved in the operation and maintenance of even highly automated machinery and therefore health and safety concerns and the role of SSHRs remained relevant. They also raised concerns similar to those aired in coal mining, including information overload from multiple screens and the ways automated alarms could be ignored or overridden. Again, they emphasised the role of SSHRs in consultation before change. However, it appeared from several examples that were discussed that, while SSHRs were involved in issues that had arisen in the use of automated systems, they were in fact involved once the equipment was present on site rather than in the period leading up to this.

Conclusion — lessons from the gold standard?

As detailed in Chapter 4 of this report, previous research showed that the system for representing mine workers' interests in their health and safety in Queensland coal mines was effective. It made a significant contribution to protecting their health, safety, and wellbeing, even in work regimes where company health and safety management policies did not favour pluralist approaches to worker

participation and where labour relations were often hostile. In these scenarios, the consensus-based support for participative approaches to addressing health and safety, usually understood as a precondition for their effectiveness, was limited or even absent. An important finding of the previous research, therefore, was that the strategies adopted by that trade union SSHRs and ISHRs, the union lodges to which they belonged and the union itself at workplace, district and national levels were an effective response to this unfavourable climate for pluralist participation, and succeeded in addressing the challenges evident in the labour relations context in which they operated in coal mining. Indeed, previous research convincingly demonstrated that the system for mine worker representation in Queensland was among the most effective approaches to worker representation and consultation on health and safety anywhere, not only in Australia but in other countries too. This was apparent despite the absence of a supportive, consensus-based culture often associated with such effectiveness in other studies.

More than 10 years have passed since the data on which those conclusions were based was collected and analysed. The intervening years are widely acknowledged to have been a period of rapid change in the mining industry, its technology, organisation and employment practices, as well as in the relations between the parties involved with the governance and regulation of work health and safety. It was therefore timely to revisit how the regime for worker representation and consultation in coal mining in Queensland operates and to explore the possible effects of these changes. At the same time, in line with the wider aims of the current project, it was an opportunity to extend the inquiry to explore something of the operation of the separate, but in many ways comparable, arrangements that apply in metalliferous mining under the Queensland *Mining and Quarrying Safety and Health Act 1999* (as amended 2024).

The key conclusion which emerges from the parts of this chapter that address the situation in coal mining is that, despite the changes of the intervening years, the findings of the earlier studies are still very much in evidence and the system for the representation of coal mine workers' health and safety interests remains robust and effective in supporting health and safety. Representatives at both levels continue to use their powers responsibly and effectively and make a significant contribution to securing better health and safety outcomes in the mines where they are active. Data analysed in Chapter 5 corroborates this conclusion. It was abundantly clear from the discussions with SSHRs in the present study that, collectively, they constitute a mature and experienced group of lay representatives whose confidence, skills and experience strongly identified them as 'knowledge activists' on health and safety, in line with what wider research has shown to be best case examples of operationally effective forms of worker representation in other sectors and countries too.[345] The SSHRs were very aware of the important support they receive from the ISHRs through training and information, as well as the effectiveness of the ISHRs' own actions in inspecting coal mines and investigating incidents in their own right. Again, cross-reference to data analysed in Chapter 5 confirms this. Overall, the present research confirms that the system for worker representation on health and safety in coal mines remains the most effective response to the context in which it operates in Queensland mines and is comparable with best practice on representation and consultation in other sectors and other countries too.

[345] See for example: Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford.

However, this does not mean the system continues to face significant obstacles to its operation, or threats to its very existence. In particular, while the role of the ISHRs was highly valued, major concerns were expressed about their number and the resources available to them, which were deemed inadequate to meet needs. Discussants also clearly felt threatened by the possibility of politically inspired legislative reforms that would undermine their position or even remove the institutions of SSHRs and ISHRs altogether from mining and harmonise provisions for representation and consultation with those in other sectors.[346] However, this has not occurred. As far as the research was able to tell, legislative reforms since the previous report have included amendments that have clarified and somewhat strengthened the enforcement powers of the ISHRs. But this does not mean that industry hostility to the pluralist form of worker participation in health and safety that the system represents, and for which statutory support remains in place, has diminished to any significant extent in the intervening years since the previous study.

Nor does it mean that the present system for representation on health and safety has been entirely effective in addressing the changes that have occurred, and continue to occur, in the ways in which work and employment in coal mining are organised and in the technologies that are used to support its productivity. Company perspectives on health and safety management, and their framing within a unitarist understanding of 'worker participation', continue to place strong emphasis on behavioural approaches to safety arrangements in coal and other mines and remain characterised by rule-following and accountability and dominated by managerial prerogatives determining policies and practices in which production needs appear to take a strong precedent over notions of worker health, wellbeing and dignity.

In this scenario, the SSHRs and ISHR acknowledged limitations in their capacity to address the psychosocial risks for coal mine workers, arising largely from the ways work and employment continue to be organised under the direction of the large mining companies that dominate the sector. The SSHRs expressed their need for more training in this area to enable them to deal more effectively with what they regarded as a growing problem of mental and emotional ill health arising out of work in the sector.

In the case of the new technologies adopted in the sector, autonomous and remote mining practices, AI, and the increased use of digital technologies were far more apparent in the current study than they had been in 2014, when the previous Queensland study was published. It was evident that worker representation and consultation in relation to their introduction had rarely occurred *before* they were a presence on-site and had been confined to addressing the consequences of their presence rather than in the assessment of the risks in their adoption *in good time before* they became operational, as is intended by the legislative provisions.

The present study was, to a limited extent, able to extend its inquiry to systems and practices for mine worker representation in metalliferous mining and, as a result, make some comparisons between

[346] It is perhaps worth noting here that the reason why the CFMEU commissioned the original 2014 study in Queensland was to provide it with evidence of the effectiveness of ISHRs and SSHRs. This was to counter mining industry arguments powers granted to workers' representatives under the regulatory provisions that apply in the state were excessive and unwarranted and threatened productivity, thus creating pressures on the Queensland legislature to consider their removal and the harmonisation of provisions in mining with those for worker representation and consultation in other sectors.

them and those in coal mining. It is evident, for example, that the institutions of representation in the two sectors are strongly similar, and that both have SSHRs at the workplace level. At industry level (and leaving aside the issue of funding and location for a moment), the DWRs in metalliferous mining are largely equivalent to the ISHRs in coal mining. It is also apparent that many of the hazards in the two sectors are similar, and that the procedures and institutional means representing mine workers' health and safety interests in relation to them are also similar in both sectors. However, there are significant institutional differences, including the apparently more central role of safety committees in metalliferous mines.

Overall, it seemed clear that the system for health and safety representation in coal mining is far more robust than in the metalliferous sector. This is due in part to the stronger presence of the coal miners' trade union in the sector and its strong commitment to the system of representation at both workplace and state levels. This commitment had also led to the integration of health and safety issues with work on 'industrial' issues in the MEU Lodges. Both the previous and present studies show that it is through their close co-operation that the respective representatives in these areas are able to keep the focus of their actions separate and avoid the accusation of SSHRs and ISHRs 'interfering with production' by straying into 'industrial' territory. It is further evident that the majority of SSHRs who contributed to the study in coal mining were experienced, skilled and knowledgeable representatives who were confident and effective in both using their powers and engaging with employers, their managers and their supervisors in pursuit of workers' interests in improved health and safety.[347]

While it wasn't possible to explore the experience and effectiveness of the SSHRs in metalliferous mines directly, and more detailed research is required, the accounts provided by the three interviewees convey an impression of a weaker and far less developed system for representing mine workers' health and safety interests in these mines. They suggest a *potential* for its development, with the support of training and the continued engagement of the DWRs, as described in one area. However, these accounts do not make it possible to infer how widespread the successful strategies and practices they described are across the sector. As noted above, this and previous studies show that the strength and focus of the MEU in coal mining are major factors underpinning the system's success. The organic nature of this support is especially evident in the integration of the SSHRs, ISHRs, and health and safety into the trade union's activities at the workplace, lodge, district, and national levels, which has been shown to be important. Significant differences exist in the presence and organisation of trade unions in the two sectors of mining. The weaker and more diffuse presence of AWU in metalliferous mining means this level of organic support for the health and safety activities of its representatives cannot be assumed. Further, more detailed research is required to explore these issues in the sector.

At the same time, it needs to be acknowledged that the model of trade union support for representation on health and safety in the two mining sectors is different. As Chapter 3 describes in detail, this has been the case throughout its historical development. In coal mining, the ISHRs are resourced by the trade union and are union representatives, whereas in metalliferous mining they are nominated by the union but are both resourced and administered by the state as part of the regulatory inspectorate. The interviewees' evidence in this latter sector suggests that these institutional

[347] Indeed, this was even more so that among those who were interviewed in 2014. Whether this was a consequence of selection bias or some evidence of the maturation of the system over the intervening years was not possible to gauge.

differences may not result in major differences in DWR practice. The trade union official interviewed in the metalliferous sector was very clear that, in recent years, the trade union strategy had been to free the DWRs from the oversight of the regulator's administration and management and to integrate their purpose more closely with that of the trade union in representing workers' interests. As the DWRs' testimony also made clear, he saw himself as primarily representing workers' interests rather than delivering a regulatory inspection function on behalf of the state. Notwithstanding, those interviewed had slightly different perspectives and arguments on payment and location; both were clear that, in their view, the DWR's position and resourcing within the regulatory inspectorate still had significant advantages over an entirely trade union function, as in coal mining. Here again, more research is required to explore the consequences of these differences more fully, but it seems clear they need to be taken into account when assessing 'what works' in supporting worker representation and consultation on health and safety in the sector, and in making this support work better.

Chapter 8 Coal mine worker representation and safety and health in Tasmania

Introduction

Like Western Australia, mining activities in Tasmania are dominated by metalliferous mining. The major mining operations are Rosebery Mine (silver, lead, zinc mining), Renison Mine (tin mining), Savage River Mine (magnetite/iron ore with a smelter at Port Lette), Henty Mine (gold mining) and Cornwall Coal (coal mining in northeast Tasmania). Several other mines were in care and maintenance, including Copper Mines of Tasmania (Queenstown) and the Avebury mine (nickel, near Zeehan), while the Beaconsfield gold mine is in the process of reopening. Mining of one of the world's largest tungsten reserves on King Island resumed in 2023 but experienced financial difficulties and received funds from the Tasmanian government, which became a shareholder. Mineral extraction and processing is Tasmania's largest export industry, accounting for 64% of mercantile exports in 2024-25 and employing 6,800 people (2.3% of the Tasmanian workforce). In recent years, mining royalties paid to the government have consistently and considerably exceeded $50m over the past decade or more. Unlike NSW, Queensland and Western Australia, there is no industry levy to fund the inspectorate. This last observation provides context for audits of the mine inspectorate and the funding issues referred to below.

This chapter is based on findings from interviews and focus groups conducted in Tasmania. The interviews/focus groups focused on 10 areas central to understanding how current representative arrangements were operating in Tasmanian mining. Unfortunately, unlike the other jurisdictions examined, it was not possible to obtain interviews/focus groups in the metalliferous sector, only coal mining. Nonetheless, we found that HSRs exist in at least four of the five operating metalliferous mines in Tasmania and that they have been present at Avebury until the mine went into care and maintenance following a sharp fall in the price of nickel. Further, some of the material in this chapter relates to issues that apply in metalliferous mining, and all but one of the serious incidents in Tasmanian mines examined in Chapter 5 occurred in metalliferous mines. This assessment considered general issues relating to mine safety and health, but also identified significant issues worthy of note in their own right. Respondents provided a lot of detail on important issues, which unfortunately, in many instances could not be reproduced without possibly identifying the informant and the mine they worked at. Overall, the findings were consistent with the picture that had emerged in earlier chapters on the evolution of legislative arrangements and the analysis of incidents in Tasmanian mining. The results are presented according to the 10 major themes after a brief description of the interviewee profile and methods used.

Interviewee profile and methods

In February 2026, focus groups were undertaken with Tasmanian mine workers. Interviewees were organised by the unions (MEU and AWU), and most sessions took place at a venue convenient for

participants to access. Interviewees could not be interviewed at mine sites due to fear. The focus groups used a semi-structured interview schedule with 10 principal areas/questions. All interviews were digitally recorded with the consent of interviewees (and assurances as to anonymity – see Chapter 2) and automatically transcribed by the PLAUD program. Individual interviews typically took over an hour, while focus group interviews (with six to seven participants) took two hours or more to ensure all participants had a chance to express their opinions. A total of four coal miners were interviewed, aged 48 to 66 years, with a mean age of 56 years and a mean of 23 years of mining experience. Interviewees covered a range of different occupations/job tasks, including operators, service crew, truck operator, bogger operator, maintenance fitter and electricians. The youngest interviewee had well over 10 years [exact number retained for anonymity reasons] of mining experience. There is only one active coal mine in Tasmania (with a small open-cut operation that has been closed for four months), and to protect their anonymity, the breakdown used in other states cannot be used here. We will only note that those interviewed included one or more HSRs.

As indicated, interviewees were asked questions in 10 broad areas designed to shed light on the operation of representative mechanisms in metalliferous and coal mining, including the issues being confronted, reporting and under-reporting of issues, relations with inspectors, and how effectively (and timely) issues were resolved. The 10 areas of questions are shown in Table 8-1:

Table 8-1: Focus group questions

1. Welcome and icebreaker - introductions
    - What mine do they work at and for how long – how many workers work at the mine and percentage of direct employees versus contractors and labour hire workers?
    - Has anyone worked in coal mines or in NSW or Queensland, or a metal mine in Queensland, where there were industry and site safety and health representatives?
    - What outcome are you hoping for by participating in this interview/focus group?
    - How many HSRs do you have at your mine? How were the workgroups that HSRs represent identified?
    - How many workgroups were identified at your mine, and how were they identified?
    - Does it provide representation for all workers, i.e., night shift, contractors, surface workers, etc.?
2. Do workers feel confident to ***raise concerns about health and safety***? Do employed workers have the same experience as contractors or labour hire workers?
    - Are worker concerns dealt with fully?
    - Are there any instances where concerns about a hazard or risk were not fully assessed, or concerns ignored that resulted in a serious incident?
    - Do HSRs feel confident raising worker concerns with management, and are their views and this role respected?
    - Do HSRs ever feel intimidated and therefore reluctant to perform some of their functions?

3. What are the main hazards at your mine that could seriously injure or kill someone? How were they identified and assessed? How were control measures decided, and were workers and HSRs involved?

    - Were workers involved in identifying principal mining hazards, and did they have the opportunity to contribute to the risk assessment and selection of control measures?
    - Does the mine's safety management system and principal hazard management plans manage the risks effectively?
        i. How often are they inspected?
        ii. Are HSRs or workers involved in these inspections and any review of control measures?
        iii. Do inspectors provide adequate oversight?

4. How effective are HSRs in raising concerns about the ***control of principal mining hazards***? Let's explore this in the context of a recent incident. We have an example, or you could talk about another incident that you were involved in.

    - Have there been any high-potential incidents in the last year?
    - What happened?
    - Was it reported, and does the mine report all high-potential incidents?
    - Were HSRs involved in the investigation? Do inspectors seek out HSRs and consult them?
    - Can you think of an example where an incident may have been prevented due to the intervention of an industry-level employee's representative, i.e., an independent employee's inspector with experience and supervisory-level qualifications?

5. Has the introduction of AI, computer/digital systems including those facilitating automation/remote mining occurred at your mine, was there any discussion/risk assessment in which the HSRs were involved of the WHS effects (prompts here include multitasking, monitoring multiple screens, tracking errors in automated actions, effects of situational awareness, changes with regard to the use of high-pressure hoses, site surveillance, warning signal detection, remote sensing etc).

6. How much interaction do HSRs have with inspectors?

    - Are HSRs contacted by inspectors when they visit the mine, and involved in inspections and investigations?
    - Do inspectors investigate and resolve complaints from workers?

7. Do you think the training given to HSRs is adequate – does it cover mining hazards, inspecting mining hazards, understanding safety management systems, and what should be covered in a principal hazard management plan? How knowledgeable are training providers under the regulator's current policy?

    - Do training providers know the industry? Have they had industry experience?
    - Part 2: Would the inclusion of provisions such as those in the NSW coal/Qld mine legislative framework for representation be a more effective system for Tasmania? (Having an SSHR who can represent the whole workforce rather than just a workgroup and them being supported by an industry-level representative, as well as a stronger role for the union and WHS entry permit holders). Would it be more effective if a health and safety representative could speak on behalf of the whole workforce, not just a particular workgroup?

- Does the HSR model negatively impact the effective control of principal hazards?
- Does it limit power and authority, i.e., unequal levels of power or influence HSRs have compared to management? Would a union/industry-wide safety and health representative help site-based representatives elevate concerns and gain management attention?
- Would this support representatives' capacity to be involved in inspections of major hazard risk status or incident investigations?

8. Role of trade unions in worker representation. The general WHS Act gives a union representative the right to enter a workplace where they have members or potential members and to consult with these workers. They can enter to inquire into a suspected contravention or consult, advise relevant workers, and warn workers if they are exposed to a risk.
    - What percentage of workers are members of a union?
    - Under the model general WHS model, are WHS entry permit holders from relevant unions able to gain access to the mine to enquire into breaches or other concerns raised by workers without being challenged? Do they deal with issues effectively? Are they knowledgeable about mining processes and hazards?
9. Would a full-time industry-based worker safety representative who could visit your mine assist site-based representatives, respond to problems, etc., be of help?
    - Would support of this kind help site representatives carry out their functions – raise issues, cease work, issue provisional improvement notices.
    - In Queensland coal mining, ISHRs can make unannounced visits/inspections (i.e., without giving notice). Should this function exist in Tasmania?
    - Would it equalise power relations?
10. Should a legislative update establish ISHRs as a function in Tasmanian mines?
    - If so, do you have any thoughts about how should they be elected, appointed, and paid?

Interviews/focus groups provided a rich body of informed responses, with clear, consistent, and dominant themes emerging regarding key issues. In addition to transcribing each interview/focus group (which automatically identified different speakers as speaker 1, speaker 2 and so on), the PLAUD program can prepare a summary of key themes and issues using artificial intelligence. We did not use this function for the Tasmanian interviews, both because PLAUD cannot distinguish interviewer and interviewee and because we preferred to interrogate the transcripts alongside our recollection of themes and responses. Several of the research team have used focus groups in prior research and were experienced in distilling key themes and responses. The results below are broadly organised around the 10 areas of questions identified above. Specific quotes illustrate dominant themes and key points. In some instances, specific details have been removed from quotes to protect respondents' anonymity.



Plaque commemorating coal mine fatalities near St Mary's Tasmania: photograph by research team 2026

Findings

Employment and representation

While ages varied, all coal miners interviewed had considerable mining experience, at least 10 years and an average of 23 years. None had worked in metalliferous mines. In sum, interviewees fitted the profile of experienced miners with the capacity to speak knowledgeably of the mine where they were currently employed. The coal mine has around 70 employees, and coal is produced for a cement company which owns it. Options to sell coal to other local users (of which there is at least one, a paper mill) have not been undertaken. While offering more security than mining tied to the volatile export market, this situation was a source of some frustration to at least one interviewee:

> 'So we only deal through all our coal works, rock and roll plant that makes concrete goes to the kiln. We use our own coal. We don't sell it to a paper mill or a dirt, but once they don't want to go there, they just want that for themselves. They don't want to expand outside. It's pretty hard because they're trying to explain to me what we need, but I am not going there.' [H2/a].

The mine is largely unionised with limited use of contractors. Interviewees indicated some newer engagements had been employed as contractors as a form of probationary engagement:

> 'We've had contractors coming now for about the last seven or eight years, which is good. And, we train them up and they do slowly get put on full time. And then we get some others. [H1/a].

According to interviewees, the mine used a remote engineering contractor, which proved problematic (see below for details).

Becoming a health and safety representative – getting things done

Respondents were asked about the number of HSRs on site, how work groups were selected and their ability and effectiveness in raising health and safety issues. It should be noted that before the 2006 Beaconsfield fatality, there were not 'recognised' HSRs at the mine and the mine had resisted unionisation, promoting the use of Australian Workplace Agreements or AWAs (Larry Knight, who was killed in the rockfall, was employed under an AWA). It appears Beaconsfield was by no means the only Tasmanian mine with a limited presence of HSRs or union members. As elsewhere, while HSRs can be found in non-union workplaces, they are more typically found in unionised workplaces if only because unions provide impetus and logistical support for such appointments.[348] Following Beaconsfield, there seems to have been some improvement in this situation. As already noted, the coal mine was unionised, and the appointment/election of HSRs was relatively unproblematic. However, one respondent indicated that a manager had emailed mine workers with suggestions as to who might be HSRs (the timing of this event was not specified).

At the coal mine, there were six HSRs: one for each shift, one for electricians, one for metal tradesmen, and one for the workshop. The trades and electricians were represented by a trade-qualified HSR,

[348] Quinlan, M. & Johnstone, R. (2009), The implications of de-collectivist industrial relations laws and associated developments for worker health and safety in Australia, 1996-2007 *Industrial Relations Journal* 40(5): 426-443.

somewhat analogous to the mechanical and electrical safety representatives in NSW. As a small mine, this might seem like a large number, but interviews indicated coordination of activities was not a problem.

> 'We never used to really hold any actual meetings as such. We used to just see one another and probably have a talk without actually pulling a full HSR meeting. I knew we could do it, but we never really worried about it because it's just. Yeah, yeah, I know. And, you've had enough interaction that any issues are going to come up or whatever where you can communicate them with one another without having to do a formal meeting. You don't go in. Problems with time to be able to do that, I mean, it's a small mine, so basically I guess see each other and see one another all the time. Yeah, enough time to interact.' [H1/a].

Asked about the ease of raising issues, coal mine respondents indicated it was not so much a problem, though it depended on the nature of the issue. One respondent described the process:

> Yeah, well, we don't really have inspection plans. Not that I'm aware of. If they've got a problem, they'll come to us. If there's some safety problems, they'll come to us, and we'll go to the deputy if it has to come from the deputy. Yeah. And if the deputy doesn't understand or send up above my pay grade, we'll go to the manager and then if we don't like his response, go underground. Also, an underground manager then back to mine manager, if we don't like that then coming up through a workplace health and safety.' [H2/a].

At the same time, there was general agreement that getting issues, especially significant ones involving expenditure of funds, actioned could prove problematic. One respondent (H1/a) stated:

> 'But to get anything properly noted… Or that you feel like you're wasting your time? It depends on the issues. Some have been a little bit intimidating, I guess because of the severity of the issue.'

No reference was made to a safety committee at the coal mine, with one respondent indicating he couldn't recollect the current safety manager calling a safety meeting. Respondents did refer to safety-related meetings being held, but these appeared to be largely about operational issues.

Engagement with principal mining hazards - identification, risk assessment and management systems

As in other states, interviewees were asked to nominate the main hazards at their mine that could seriously injure or kill. They were also asked to describe how these hazards were identified and assessed, how control measures were decided, whether workers and HSRs were involved in identification and risk assessment, whether the controls and the mine's safety management system were effective, and the degree to which HSRs were involved in inspections and control-measure review. Interviewees were also asked to comment on the adequacy of inspectoral oversight. HSRs were also asked whether there had been any high potential incidents (HPIs) or dangerous incidents in their mine in the previous year, whether they were reported and actioned, and whether HSRs were involved in the investigation.

As noted in Chapter 5, in Tasmania, mining regulations only require principal hazard management plans in a limited number of areas. With regard to the coal mine, there was a suggestion that plans and procedures were only revised episodically and reactively.

> ‘But like I said, {management} only really reviews things when something happens. You know, like six or five years’ time. “Oh, we better do this today rather than…” but yeah, no, I agree with that. They sort of listen to it, but they don't necessarily act on it. Yeah, just tick the box, you know, I think, but yeah, they do lose some time.’ [H2/a].

In the coal mine, interviewees nominated strata, roof and ribs, dust and machinery as the major issues they saw and became involved in (for example, H1/b and H1a). When asked about digital technologies, including algorithms, automation, and the like, respondents indicated the mine made little use of them. More so than coal miners in other states, there was a concern with machinery brought onto the site:

> ‘And a couple of times … bit perturbed because machinery coming on site that we had to do a lot … It was brought to site. Everything wasn't done on a proper. So then when the boys went to utilise the work, we had to build multiple engineering changes and stuff to make it suitable to work underground.’ (H1/a).

Respondents indicated mine workers were generally involved in risk assessments, including reviews of control measures for principal hazards like strata management, and HSRs kept workers informed of the location of principal hazard management plans. When asked about those involved in risk assessment, the response was positive.

> ‘So if we do a risk assessment or anything, we actually. Electricians and mechanical engineers, HSRs that can sit on them as well, other than just the HSR operators. And also normal people, the rest of the employees as well. You've got to have a mixture. Yeah, we've got a significant risk assessment.’ [H1/a].

One respondent did indicate there had been problems communicating changes. There were also problems with the risk assessment associated with an auditing exercise:

> ‘I had that trouble with the auditing… the independent one coming in every three years. They took that out of the management plan because they thought it was too restrictive and stuff like that. That they shouldn't have to do that, their Geotech… A lot of emails with the mine manager and the inspector. Yeah, do you want to talk a little bit about that? Not about me, about that… Um, yeah, trying to who was reading the management plans? My mind I was reading them the proper way…[names position] was just trying to downsize it …They don't appreciate how much strength the documentation got and the reviewing and how things change over a period of time. We were doing a lot of practices where the management plans weren't actually reflecting this… Practice and not what it said in the management plans. Six months before you drive a loader, and we let them drive them in two months and stuff like that. So, the management plans wasn't adhering to what the new starter packages and stuff like that.’ [H1/a]

In addition to involvement in formal risk assessments, an HSR indicated he accompanied deputies and underground managers when they inspected workings [H1/b].

Concerning dust, coal mine respondents indicated that issues raised had not been addressed, something attributed to cost considerations [H1/a] and that the remote engineering contracting was 'very hard to get hold of' [H1/b]. Encapsulating these concerns, another respondent stated:

> 'Yeah, so we've been talking about new sprays for the morning for two years. You know, There's a massive dust problem down at the cut five hundred million stone every shift. You know, if you wait 10 minutes per car, Better not wait 10 minutes per car, better you know you to get going, or you won't have a job. Got to keep going or got to get going or The managers don't decide like that;. That's how [it] filters down to us.' [H2/a].

Interviewer: 'So, and is there a sort of procedure for recording progress?'

> 'Yeah, it does. Yeah, they are printed out every shift or every time we have a meeting. And but like I said, it just goes around in circles and just comes down to money. Oh how about you try this first? How about you try that? Yeah we've done that but we've done it for two years surely there's something.' [H2/a].

The same respondent also commented on how production pressures impacted work practices with regard to dust:

> We cut nearly four hundred mill of stone every shift. Yeah, it's three to four hundred mill on a good day. And we try to take out the floor because our height's two point two. And we're going down to where we keep going to go down one point six meters. When we got down to a recovery of 38%, we didn't make positive scores; I still made money out of it. So, like I said: every time we cut a car underground, the footbridge has got to go. Wait 10 minutes for that dust to clear. And, not being disrespectful, you can't come here, business going and sit there and wait 10 minutes per cut. You know, explain it to some people not being disrespectful or whatever you like. This is pretty bad stuff. You know, you've got to pay your wage, you've got to pay for your kids to go school. We're not waiting, 10 minutes. We need to cut cars. We need have a job.' [H2/a].

Asked about dust and noise monitoring, respondents indicated that both personal and environmental monitoring was used when hygienists visited the mine:

> 'They've had [and] they've tested both. So, the workers got personal monitors on for dust and noise. And yeah, there's static monitors that have been put in, but they're only when they come and test. There's nothing on site normally.' [H1/b].

When coal mine interviewees were asked about regular lung screening, the last respondent indicated they couldn't recall their last one:

> 'I'm not sure if you'd say regular. I can't remember the last one I did …Yeah, can't remember, the last one would be more than a couple of years or so ago.' [H11/b].

Another respondent stated:

> ‘There … has been mention in the last couple of weeks of upcoming uh medicals, which will be including uh X- rays. But yeah, I couldn't tell you when the last one was and what the frequency that they are supposed to be.’ [H1/a].

Unlike NSW, when asked about the respective use of safe work procedures/safe operating procedures (SWP/SOP) and JSAs/Take-5/Slams, coal mine respondents indicated there had been no drift/trend to using the latter. One respondent expressed concerns about the updating of procedures (something raised by respondents in other jurisdictions).

> ‘To see if they're updated or not, that's a different thing. Like when you go into all sub oh no, haven't been updated. That sort of thing too. So that gets a little bit frustrating, but yeah, something we can get out of it.’ [H2/a].

Another indicated the use of JSAs could become a bit formulaic:

> ‘So the JSAs are used appropriately for just when there isn't a safe work procedure. If you've got something that's bit unusual… I filled out two books to take on no dates and times on them. And I had all the tasks that I could think of in the two books. So if ever I got in trouble, I've got an asking plan in the book because that's all they wanted to see.’ [H1/b]

As noted at some mines in other states, filling out JSA forms beforehand would be impossible because these forms are entered digitally now and automatically date-stamped.

> ‘That when there was a need to do Take-5 or whatever you'd like to call them, the boys would do them to cover their bum, but didn't do them for just the sake of putting 10 on the table a week, because that took out what a Take-5 was all about. It's about if you're going to do a job that's a little bit kooky or may have a little bit of risk with it and you step back and do an assessment of it.’ [H1/a].

Regarding the management of principal mining hazards, interviewees were asked about reporting serious incidents that required regulator notification. It was indicated in the coal mining focus group that reporting of strata incidents had been a problem some years ago (a more precise timeline was indicated) under a previous site senior officer (or SSO similar to a site senior executive or SSE under Queensland mine safety legislation) requiring follow-up with the regulator to ensure these incidents (including falls burying machinery and cables) were reported. Respondents were unaware if the mine kept a register of falls of ground/strata events. It should be noted that Adrian Hayes died in a fall of ground at the Cornwall Colliery in 2000, and the regulator took more stringent actions in the wake of this incident and the 2006 Beaconsfield rockfall fatality and entrapment. It should also be noted that falls of ground were the hazard responsible for more fatalities than any other, indeed half of all 10 fatalities since 2000 (see Chapter 5). As in other jurisdictions, coal mine respondents also referred to safety incidents where the severity had been understated, with one incident specifically involving machinery. Another issue raised was blame-shifting and intimidation affecting workers, where individuals had been blamed for an incident, but the system then changed in recognition that system failure was the problem.

Relations with regulatory inspectors

HSRs were asked about the nature of their interactions with government inspectors, including whether inspectors notified HSRs before or during site visits, and how the latter responded to complaints from HSRs or workers (including labour hire and contractors). In general, coal mining respondents were mildly positive about inspectorate contact. However, one indicated that ensuring they could accompany an inspector on a visit was sometimes difficult, enabling management to 'sugar-coat' issues [H1/a].

A significant problem for coal mine respondents was the lack of an inspector with specific coal mining qualifications/expertise. One respondent made the following observation about this issue and its implications, in particular their inability to recognise or understand issues, arguing the company knew and took advantage of this:

> 'We got inspectors coming, and we've got no experience coming around coal mine at all. You know what I mean? So, they're coming down looking at it and they don't really know what our problems are. They can't, it's not enough. Yeah, they don't understand the problem… The company doesn't even understand our problems, you know. And that's not its problem; it's the system. Sorry, yeah, it's so easy to be happy here. So we have such a … it's just finding the process. It's hard because we don't have the people who know how underground [mines work] down in Tasmania. And, we do get people with problems or they come down and still don't understand what I am suspecting. It's not in a coal mining background, So it's very hard for them to extract solutions or come up with solutions or rip the company when they know they're doing the wrong thing, and they know we know [H2/a].

The lack of coal mining expertise within the inspectorate has been a long-term problem in Tasmania. Given that the state has only one small coal mine, it would be difficult to justify, and in practice make, such an appointment. However, the need for expertise in coal mining-specific hazards was identified in the 2000s, including in audits of the mine inspectorate. The 2010 audit noted in the section 'Are there identifiable gaps or training needs that need to be addressed?':

> One clear gap in the existing resources/skill set of inspectors is in relation to coal mining. Neither Mr Sears nor Mr Tunstall has expertise in coal mines and nor do any of the other current mines inspectors. It appears that WST has lacked expertise in this area since the departure of Inspector John Las in 2002. It is acknowledged that, despite some overlap, coal mining is associated with a distinctive array of hazards (such as toxic and explosive gas and dust). Historically, in a number of Australian jurisdictions coal mining and metalliferous mining were the subject of separate regulatory regimes and it is still generally the case (as far as I am aware) that coal and metalliferous mines are handled by specialised groups of inspectors. Another indication of this separation is a recent audit of coal mine safety in New South Wales (Mine Safety Operations Branch, 2010) – a response to the Wran review into mine safety (2005). While Tasmania has only one operating coal mine (Cornwall Coal) the lack of expertise with regard to coal mining represents a gap – the potential seriousness of which is highlighted by the recent coronial inquest into a fatality that occurred in 2000 - that should be addressed. The most cost efficient means of doing

> this would be to arrange for a short-term (e.g., two week) periodic visit (say every 12 months to two years) by an experienced coal mine inspector to provide training and advice to two local mines inspectors along with an opportunity for these inspectors to visit coal mines in other jurisdictions to better acquaint themselves with hazards and best practice. This is not an uncommon practice amongst OHS inspectorates more generally (for example a senior Victorian forestry inspector visited Tasmania to familiarise himself with a logging method that was already in use in Tasmania and about to be introduced in Victoria, and a Western Australian inspector visited South Australia in order to learn how to develop a code and inspection regime specific to vineyards/wine production).[349]

The audit then recommended:

> While Tasmania has only one operating coal mine (Cornwall Coal) the lack of expertise with regard to coal mining represents a gap that should be addressed. The most cost efficient means of doing this would be to arrange for a short-term (e.g. two week) periodic visit (say every 12 months to two years) by an experienced coal mine inspector to provide training and advice to two local mines inspectors along with an opportunity for these inspectors to visit coal mines in other jurisdictions to better acquaint themselves with hazards and best practice. In addition, the practice of engaging Mr Reece to audit Cornwall Coal mines every six to eight months, in conjunction with local inspectors, should continue.[350]

Two years later, the 2012 audit noted:

> The 2010 audit recommended that this gap could (in part) be addressed by arranging annual visits by an experienced coal mine inspector from NSW/ Queensland or someone else with appropriate expertise. In this regard reference was made to David Reece who had visited Tasmania in the past to provide expert input. Mr Reece is now a consultant but previously a mine manager and worked as an inspector. He is a highly qualified expert in coal mine safety. A clear demonstration of this is that he was engaged as one of five experts by the New Zealand Department of Labour to investigate the causes of the Pike River Coal Mine disaster (a critical foundation for the prosecution subsequently initiated) and has just given evidence to the Pike River Mine Disaster Royal Commission. According to the information available to me Mr Reece has not undertaken an audit of the Cornwall Colliery for some years. This is contrary to my recommendation in 2010 that the mine should receive a regular audit from a coal mining expert such as Mr Reece. This matter needs to be addressed as a matter of urgency. This would not entail major expense as it would not require a prolonged visit (two days would be sufficient) and the person doing this and subsequent visits would soon become familiar with the mine's operations (as Mr Reece already is). The Chief Inspector of Mines estimated it would cost about $25,000-28,000 for a detailed audit by a highly qualified expert.

[349] Quinlan, M. (2010) *Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart, 12.
[350] Quinlan, M. (2010) *Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart, 31.

> In 2011, a NSW District Check Inspector (experienced in coal mining) visited the Cornwall Colliery (paid for by the CFMEU) – something that was favourably commented on when I raised it interviews/discussions. Comments made included references to the value of having another 'set of eyes' examining hazards (something especially pertinent to high hazard work settings). It is my understanding that the CFMEU plans to arrange for further visits on regular basis (a 6-8 month time frame was mentioned) – something I would strongly endorse.
>
> At the same time, there is a need to address the expertise gap of OCIM inspectors. The most cost-effective means of doing this in my view would be to arrange for one of the current engineering trained inspectors (and I would suggest Andrew Tunstall in this regard as he is currently responsible for the Cornwall Colliery) to undertake a 7-14 day trip to NSW to meet with experienced coal mine inspectors and to undertake visits to a number of mines comparable in size etc to the Cornwall Colliery (I suspect NSW has more comparable underground coal mines than Queensland but the jurisdiction offering the more viable option could readily be considered). It was estimated this would cost (travel and accommodation) around $9,000. In addition to enhancing Mr Tunstall's familiarity with coal mines and the hazards specific to them the links with experienced coal mine inspectors thereby developed will be valuable should he wish to explore particular issues. This model has worked well in my experience in terms of improving inspector expertise with regard to particular hazards and is used by OHS inspectors in a number of other jurisdictions. I would recommend that this should not be seen as a one-off exercise but something that is repeated periodically to update knowledge or as circumstances require (for example if the second coal mining operation goes ahead but requires different expertise while still keeping in mind that a significant expansion of coal mining in the medium term would require serious consideration being given to appointing a specialist inspector).
>
> In sum, this audit endorses regular visits by an experience NSW check inspector and recommends Mr Tunstall should be able to upgrade his knowledge of coal mining safety by visiting similar mines in NSW and holding discussions with experienced coal mining inspectors. The audit also recommends that an annual audit of the mine be undertaken by a suitably qualified coal mine safety expert such as Mr Reece. These recommendations are not alternatives but a package to ensure that, short of appointing a specialist inspector (a more expensive option), there is adequate inspection of safety at the Cornwall Colliery.[351]

As noted above, in addition to Mr Reece's visits in 2011, an experienced NSW district check inspector (ISHR) visited the mine and the latter practice continued. The 2014 audit found the then manager of the mine was positive to such annual visits (although it was noted this could change). The then Chief Mines Inspector and others attested to the value of this when the mine inspectorate was audited. Amongst other things noted during these visits were accumulation of coal dust around conveyor belts and the location of the main ventilation adjacent to the mine entrance – both serious issues.[352] In the

[351] Quinlan, M. (2012) *Second Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania*, WorkSafe Tasmania, Hobart, 19-21.

[352] Quinlan, M. (2014) Third Audit of Mine Safety Unit and Office of Chief Mines Inspector, Tasmania, WorkSafe Tasmania, Hobart.

wake of Pike River, the 2014 audit recommended a significant upgrading of both mine safety legislation (including with reference to coal mining hazards), and that a more formalised arrangement should be made concerning visits by a suitably qualified coal mine inspector from another state (along with the appointment of a suitably qualified inspector ultimately) . Interviewees for this project also spoke highly of the value of these visits, including inspection of the washery as well as underground operations. More recently, following some resistance to ISHR visits, Western Australian inspectors visited the mine, whom one of our respondents believed may have had some coal mining knowledge.

Training *and refresher courses*

Interviewees were asked to comment on the adequacy of training given to HSRs, notably whether it covered mining hazards, inspecting mining hazards, understanding safety management systems, and what should be covered in a principal hazard management plan. They were asked whether they could identify the provider and whether the provider knew the industry or had industry experience.

Coal mine respondents described their training as generic rather than mine-specific (including dealing with mining hazards), and this included refresher programs. This was a point of criticism: respondents wanted mine-specific training, and they also criticised the remote delivery of refreshers. Encapsulating this, one respondent stated:

> 'Yeah, yeah, general training for all health and safety. Just recently completed a refresher, but realistically in my eyes it didn't tick the box … It was a Zoom experience. I think it was a half day, just a general discussion with the gentleman in his office on the mainland… It wasn't good enough to be honest. It was a tick of a box to them to say, "Yep, We've run the points through our refresh area, and they're all good for another".' [H1/a].

Coal mine respondents wanted mine-specific training for safety representatives, and one expressed the view that this would be best if done by the union (as occurs in Queensland – see earlier chapter).

Industry-based safety and health representatives

Interviewees were asked whether a full-time industry-based worker safety representative who could visit your mine, assist HSRs, respond to problems, etc., would be of help and whether this support helps site representatives carry out their functions – raise issues, cease work, issue provisional improvement notices and better equalise power relations.

Regarding coal mine respondents, there was strong support for the role of ISHR. Given that there was only a single coal mine in Tasmania, it was believed that the best model in this regard would be for a mainland ISHR to visit the mine and also answer any queries they might have. One observed:

> Think an independent one from New South Wales uh would be the best way to go. Yeah New South Wales or Queensland as well. But New South Wales probably got similar conditions to us a little bit, which [is] more suited to coming down. I'd like to thank Queensland {ISHRs} everybody as well. But New South Wales is more suited … we rely primarily on a lot more New South Wales legislation than Queensland.' [H1/a].

Given what has already been said about ISHR visits to the mine, there seems to be a need to formalise this relationship.

Conclusion

Regarding coal mining, the focus group interviews with Tasmanian coal miners echoed several problems with the HSR regime identified in other states, as well as the state's failure to implement a comprehensive mine safety regulatory framework, which was raised repeatedly from 2006 onwards and referred to in Chapter 5. Unlike metalliferous miners in other states (except Queensland), HSRs felt confident raising OHS issues and bringing worker concerns to management. Taking all issues into consideration, the mine worker representation situation of coal miners in Tasmania seems somewhat better than that of most metalliferous workers (apart from Queensland) but well below that found amongst coal miners in NSW and Queensland. This difference to metalliferous miners probably owes more to the unionised nature of the mine than the regulatory framework (which is arguably inferior to that in Western Australia and NSW, not to mention Queensland). Respondents' key frustrations were their inability to have issues satisfactorily resolved, especially when remedies involved expenditure and the inspectorate/regulator lacked coal mining expertise. This Chapter referred to some measures taken from around 2008 onwards, and especially after 2010 when NSW-based ISHRs made several inspections – something valued by the Tasmanian mines inspectorate and others, including the coal miners at Cornwall Colliery. However, the momentum regarding this measure seems to have weakened following the retirement of Andrew Tunstall as Chief Mines Inspector. Like those in other HSR-based regimes, the respondents supported having the mentoring support of an ISHR who would also inspect the mine regularly. Given that Tasmania has only one coal mine, there is no scope to make a full-time appointment; rather, the arrangement should be formalised with ISHRs in NSW or Queensland (probably the former). There is also an urgent need for the Tasmanian inspectorate to acquire expertise in coal mining by a combination of enabling an engineering-trained inspector to undertake training/inspections in NSW and ensuring a qualified/experience coal mine inspector (perhaps retired) would inspect the colliery at least on an annual basis, and additionally if required by circumstances.

Chapter 9 Overall findings

Introduction

This chapter summarises key findings from this report and the evidence on whether SSHRs and ISHRs provisions should apply to metalliferous and coal mining in Western Australia and Tasmania, similar to those that currently apply to coal mining in NSW and to both coal and metalliferous mining in Queensland. The evidence in favour of this change is both multifaceted and compelling. The chapter also specifically addresses arguments that might be raised against the statutory institution of SSHRs and ISHRs in mining, including both coal and metalliferous.

Overall findings in relation to four bodies of evidence

As noted in Chapter 2 this report is based on mixed-methods research, which generally has strengths over research conducted using a single method or source of evidence. Broadly, seven methods were used in this report, and the evidence for each will be examined in turn here.

The first body of evidence examined relates to history and associated policy debates regarding worker representation in the mining industry. Chapter 3 sought to better understand the context for mine worker representative regimes historically in Australia, their operation and views regarding this, their evolution over time and why mine-specific regimes were removed in several jurisdictions, or partly so in the case of NSW after 1980. This chapter draws on a review of historical and contemporary legislation, parliamentary debates, newspaper reports (including evidence of check inspector activities), some union records, government reports, and prior research on relevant aspects of the issue. In broad terms, legislation was introduced into Australia from 1876 (beginning in NSW and then followed by Western Australia and other colonies/states) broadly modelled on UK mine safety legislation introduced in 1872 that permitted workers at a mine to elect two representatives (soon known as 'check inspectors') to conduct inspections and prepare reports at their own expense. This was not just an adjunct to government inspectors, but a way to give miners direct input into safeguarding their own health, safety and wellbeing in an industry long noted for its heavy toll in disease, injury and death. While early laws were modelled on the UK, they arose not from simple copying but from an often prolonged struggle by unions to secure these provisions; over time, they changed as further campaigning addressed flaws and extended coverage to metalliferous miners. Copious evidence shows check inspectors carrying out their duties diligently and becoming an increasingly valued part of mining communities (perhaps epitomised by Shorty O'Brien in Broken Hill) and the mine safety regulatory apparatus. This included drawing attention to serious issues, in some instances before disastrous events such as the Mount Lyell mine in 1912. One immediate challenge to the system was recurring intimidation of check inspectors, which had a chilling effect on those willing to undertake the role.[353] This led to stronger powers and penalties for interfering with their duties. More critical was the establishment of district check inspectors, who, not being employed by a mine, could not be intimidated and could inspect mines where there were no mine-site check inspectors. This practice began informally in the 1880s in coal and, a decade later, in metalliferous mines, before being formalised in the first half of the 20th century. In NSW, Queensland and Western Australia,

[353] It is worth noting in passing that fear of reporting safety and health issues remains an issue in the Australia mining industry being documented in a series of government reports and research.

district check inspectors, or workmen inspectors (in WA), had a suite of powers close to that of government inspectors. This system continued to operate throughout much of the 20th century and beyond in NSW (coal only) and Queensland (up to the present).

In 1972, precisely a century after the introduction of the check inspector regime in the UK, a report into the regulation of OHS in the UK chaired by Lord Robens made direct reference to the regime operating in both coal and metalliferous mining in the UK. The Robens report was foundational for the reform of OHS legislation not only in the UK but in Australia and many other countries, with key elements of the legislation subsequently adopted, integrating OHS under a single enabling act which included general duty provisions, and requirements for employers and other duty holders (such as designers and manufacturers) to adopt a systematic and risk-driven approach to minimising injury and ill-health amongst workers. Another key element in this legislative reform in the UK, Australia and elsewhere was the introduction of employee health and safety representatives. Robens, though well aware of the mining experience, did not specifically recommend this. However, he did recommend active worker involvement in health and safety (especially through tripartite policy bodies and workplace health and safety committees). HSRs became a key component in the basic ILO convention on OHS (155). These legislative changes proved critical in removing the pre-existing check inspector mining regime in some jurisdictions. The evidence is clear that the reasons for this development were not any demonstrated failing in the check inspector regime, but a desire for rationalisation/uniformity in OHS legislation.

In some jurisdictions, such as Tasmania, standalone mine safety legislation was largely repealed and complete reliance placed on participatory and other provisions in general OHS legislation. We have found no evidence of a considered assessment of this shift, or of the broader change in OHS legislation.[354] Several coronial inquests highlighted the problematic nature of this – the independent investigation into the 2006 Beaconsfield mine fatality (the entrapment was not part of that inquiry) and a series of audits of the mine inspectorate from 2010. The Beaconsfield inquest identified serious failings in the vast majority of the Ten Pathways, including P2, P8, and P9, which are arguably the most directly relevant to worker representation. Experienced mine workers had expressed serious misgivings about the mine's safety for some time before the event, but their concerns were rebuffed. Worker communication, representation and participation were poor. A series of audits in 2010, 2012 and 2014 identified serious failings in the legislation, including representative procedures – the urgency of which grew in the wake of the Pike River Mine Disaster and the major overhaul of mine safety legislation in that country (another small jurisdiction with a mining sector perhaps less important than Tasmania). At the time of writing, these recommendations have not yet been fully implemented, including those pertaining to worker representation. Additional information on this can be found in Chapters 5 and 8.

In NSW and later Western Australia, mine safety-specific legislation/regulation was retained but placed under the broader rubric of OHS legislation. In NSW, the mine site and district check inspector regime (now relabelled site and industry safety and health representatives, respectively) was retained in coal mining but not in metalliferous mining following changes in 2004 and 2013. In Western Australia, site representatives and Workmen Inspectors (labelled Employee Inspectors) were initially

[354] In the early 2000s the records of the regulator were extensively searched by one of the research team for evidence of the rationale or consideration of these changes as part of a project on the shift to process regulation in Australia, but none was found.

retained, but the former were dropped first, and then the latter apparently as part of the national uniformity push in OHS legislation from 2011, even though the position had been broadly endorsed in the Kenner inquiry (2009). Queensland followed a somewhat different path to other states. Rather than integrating mine safety legislation (both coal and metalliferous) into general OHS legislation to a greater or lesser degree, as done in other states, this legislation remained standalone (although it was amended to align more closely with general post-Robens principles). As a result, the mine-specific representative systems were retained in both coal and metalliferous mining. In sum, the reasons mine-specific representative provisions survived or were removed were not the product of careful, evidence-based policy revision but were instead determined by how the post-Robens reforms were implemented between 1980 and 2010 and, in some instances, by further rationalisation as part of the national uniformity agenda. This legislative rationalisation overlooked why these provisions were introduced and why they took a particular form (for example, emphasising the need to carry out regular inspections and focus on hazards known to kill and maim miners, with appropriate training and accreditation).

The second body of evidence examined was previous studies of worker representation in the Australian mining industry. This method provided evidence on the effectiveness of the regime operating in NSW and Queensland coal mining, which could inform this project and serve as a benchmark for assessing its findings. In 2014 and 2018, two studies examined the SSHR and ISHR regime in coal mining. The 2014 study was confined to Queensland, while the 2018 study included both NSW and Queensland; these jurisdictions were benchmarked against representative practices in other jurisdictions, notably India, Indonesia, South Africa, and Canada. Like the current study, both the 2014 and 2018 studies used a mixed-methods approach entailing interviews/focus groups, observation, and documentary analysis, including training materials and, in the case of the 2014 study, a detailed examination of over 1100 inspection reports produced by SSHRs, ISHRs, and government inspectors. The latter revealed that SSHR and ISHR activities focused strongly on hazards known to result in death and serious injury, and constituted a constructive and important complement to the activities of government inspectors. Both studies found that the regime faced several challenges, including de-unionisation strategies and the growing use of contractors/labour hire. However, as the current report emphasises, the structure is better suited to deal with this than the HSR regime because SSHRs, unlike HSRs, can speak to anyone on site (not just those in a designated workgroup), as can ISHRs, who can also inspect non-union mines and have powers superior to those of union organisers.

Despite these challenges, the studies found the regime effective because of the combination of legislative steer and union commitment to OHS. The studies noted the important mentoring role ISHRs played for SSHRs and the robust SSHR training regime operating in both NSW and Queensland. The studies also found that both SSHRs and ISHRs remained focused on OHS issues (leaving industrial relations issues to others) and used their suspension powers sparingly. Nonetheless, the existence of these powers, and ISHRs' capacity to support SSHRs when needed, affected interactions between these representatives and mine management more generally. At the same time, the studies found the regime worked regardless of whether management was supportive. The 2014 comparative study found that the Australian regime (NSW and Queensland) clearly represented the best-practice model of worker representation in mine safety and health among the five countries studied. The research has since been published in peer-reviewed journals and arguably represents some of the best evidence on worker involvement in OHS globally.

Chapter 5 examined four bodies of evidence. The first two bodies of evidence included quantitative and qualitative data published by government departments (particularly state regulators). An analysis of safety performance in NSW, Queensland, Western Australia and Tasmania was undertaken using the national data set (of workers' compensation claims) collected by Safe Work Australia (SWA), and comparing Queensland and Western Australian (WorkSafe Tasmania published insufficient data) FIFRs/SIFRs (SAFRs in Queensland) against NSW coal and metalliferous FIFRs/SIFRs presented in the first NSW report. The former included unpublished breakdowns of data by sector (coal and non-coal) supplied to the team by SWA following requests. This evidence was then considered within the wider context of regulator enforcement strategies and activities, as well as related issues (like the black lung campaign in Queensland), and government mine safety reviews, inquiries, and the like pertinent to understanding mine worker involvement in OHS (the third subgroup). This information was evaluated against the stated objects of WHS legislation: industry-level tripartite consultative arrangements and worker representative participation to achieve healthy and safe workplaces.

Data issues limited the conclusions about representative arrangements based on FIFR/SIFR data obtained from Safe Work Australia and state mining regulators (see Chapter 5 summary of findings). Notwithstanding these limitations, in NSW a clear divergence in performance between coal and metalliferous mining was observed after 2013-14, when coal mining representative arrangements were strengthened, and metalliferous mining arrangements were 'levelled down' to workgroup-based HSR provisions provided under the WHS Act. NSW focus group participants from the coal sector believed this legislation formalised the representative arrangements and strengthened the legitimacy of their role in the eyes of management. In contrast, HSRs who participated in metalliferous mine focus groups described a fragmented representative structure and lack of engagement with the inspectorate. We concluded that an effective representative structure supports effective inspector-led interventions.

Qualitative information reported in regulatory assessments and other business activity reports contributed to a better understanding of worker representation, although reports provided limited information on this. In the Queensland coal sector, legislative provision for worker representation remained largely the same between 2013-14 and 2024-25 (and before 2013, but FIFR/SIFR data was not available). However, health and safety performance as measured by FIFRs/SIFRs deteriorated after 2020-21. This raises questions about why Queensland's coal mining safety and health performance deteriorated while NSW performance improved, even though both states have similar representative frameworks comprising ISHRs and SSHRs. There are several possible explanations. One likely explanation is the effectiveness of NSW's three-tier representative regime, comprising workgroup-elected HSRs, SSHRs, and ISHRs. A second explanation is the interaction between factors in the external socio-economic and regulatory environment. The Queensland Coal Mining Board of Inquiry (BOI) determined that contracting and labour hire undermines the effective function of mining-specific representative mechanisms.[355] The BOI and the Johnston Review of Queensland's regulatory framework and governance under the *Resources Safety and Health Queensland Act 2020* uncovered a deteriorating relationship between worker representatives and the Inspectorate in the Queensland

[355] Queensland Coal Mining Board of Inquiry. (2021). *Queensland Coal Mining Board of Inquiry Report,* Part II. 407.

coal sector.[356] [357] The final explanation is insufficient ISHR coverage in Queensland. Four ISHRs cover 26,000 NSW coal miners and three cover 48,00 Queensland coal miners.

WA has had work group-based HSRs since the early 1990s. The Mines Safety Inspection Act 1994 (MSIA) retained these representative arrangements. In 2009, Commissioner Kenner reviewed the MSIA and acknowledged the commitment of HSRs and the importance of the relationship between HSRs and the Inspectorate, but also noted that HSRs reported they rarely saw an inspector. He recommended that the legislation should retain the provisions for mine-based representatives and mandate training for HSRs.[358] He also recommended that updated legislation should adopt a risk-based management framework, including hazard management plans (or a safety case regime for large mining companies). The harmonisation process delayed implementation of these recommendations, and they were not addressed in legislation until 2020, when the *Work Health and Safety Act WA* came into force.

Despite the number of fatal incidents in WA and Inspectorate concerns about industry's failure to learn from these, the FIFR has trended downward since 2013-14. One explanation may be the adoption of new technologies such as autonomous and remote-controlled mining equipment. The MARS Landmark research commissioned by the WA government, and conducted under the oversight of the health and safety advisory committee, is worth considering in this regard. Notwithstanding that the primary research focus was on mental health and respect, the report examined 'future safety' preparedness and surveyed worker self-reported compliance and participation behaviours and factors positively associated with these. Regarding new technology, a substantial proportion of workers surveyed reported a lack of engagement on job design when implementing new technologies. The research also found empirical evidence of under-reporting (or non-reporting) of incidents and hazards. One limitation we identified in the research design was that it considered only direct participation activities and did not acknowledge the role of participative structures (i.e., HSR representation) in worker compliance and participation. Overall, there is limited evidence in regulatory reports on the function of the HSR model in WA except for some evidence that union entry permit holders raised concerns on behalf of workers about poor standards of safety in WA mines and inadequate risk management practices, primarily associated with maintenance, construction and other activities involving elevated work. Our discussions with HSRs (and some mine workers), reported in Chapter 6, revealed a fragmented system in which HSRs were marginalised, workers feared reprisal for reporting incidents, injuries, and other concerns, and there was a lack of consultation on the introduction of new technology.

The third body of evidence used in Chapter 5 was an examination of available regulatory fatality investigations (or prosecutorial summaries in the case of Western Australia) and coronial inquests in Western Australia, Queensland and Tasmania between 2004 and 2025 (or 2000 onwards in the case of Tasmania). This provided a 20-year span (or more) of investigations/inquests into fatalities and the

[356] State of Queensland. (2025). *Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 41-42 Retrieved from https://www.rshq.qld.gov.au/

[357] Affidavit of Stephen Woods to the Queensland Coal Mining Board of Inquiry, July 2020. Retrieved from https://www.coalminesinquiry.qld.gov.au/__data/assets/pdf_file/0009/1620981/Affidavit-of-Stephen-Woods.pdf

[358] Commissioner Stephen Kenner, *Review of the Mines Safety and Inspection Act 1994* (Final Report, March 2009) Perth. Parliament of Western Australia. 297.

failures that contributed to them, using the Ten Pathways model as the basis for examination. The model is both comprehensive in its coverage and applies to the Australian mining context, having been developed based on the failure points repeatedly leading to multiple deaths and single fatalities, based on the evidence of five countries including Australia. Because of the small number of reports (two) in Western Australia, an analysis of Significant Incident Reports (SIRs) supplemented this lack of information. SIRs are summary reports designed to communicate the direct causes to industry as soon after the incident as possible (and equate to NSW Investigation information releases, IIRs). Information in SIRs was augmented by some information on employment type – contractor or direct employee – found by Google AI searches. These searches sometimes identified further information such as prior concerns about hazards and risks reported in the media by unions.

In Australia, workplace deaths are typically investigated by the responsible workplace health and safety regulator and, independent of this, may also be subject to a coronial inquest. Both investigations and coronial inquests were used because both sets contained significant gaps. Regulator investigations are not always publicly available, and court proceedings typically include only failures selected for prosecution (not all that may have been identified, much to the chagrin of families on occasion) because they are deemed most likely to result in conviction.[359] Coronial inquests, an older form of legal response to traumatic or unexplained death, are an independent process and can be more wide-ranging in the array of issues and evidence considered.[360] In other words, both types of investigations occur. Regulators typically provide evidence to coronial inquests (and this may be broader than what is submitted to a prosecution) and, in some cases, both an investigation report and a coronial inquest may be used. However, in most cases, only one type of investigation was available. Western Australia produces prosecutorial summaries regarding mining fatalities (and other workplace offences) that contain sufficient information to apply the Ten Pathways approach. While these summaries typically contain less information than investigation reports and coronial inquests, they provided enough detail to indicate that, overall, every pathway was present, and the most frequent pathways identified were consistent with what was found in other jurisdictions and more generally. In Tasmania we could not access regulator investigations, but in this state every mine death was subject to a coronial inquest. The period was slightly increased (from 2004 to 2000 onwards) to ensure that one coal mining fatality was included and because the overall numbers were lower (10 deaths in total). The death of Larry Knight at the Beaconsfield mine in 2006 was subject to an independent investigation, including two expert reports used by the Coroner, one of which was drawn on for this report. Few coronial inquests into mine deaths had been undertaken in Western Australia, and in Queensland there was a larger number but still far below the total number of miners who were killed in the period. Together, the investigations and coronial inquests identified 18 incidents that could be assessed. Two additional incidents were added to these 18 incidents. One was the 2020 Grosvenor mine explosion, where five mine workers were severely injured (and which, but for serendipitous circumstances, could have resulted in fatalities) and which was the subject of a detailed Board of Inquiry investigation and report, plus follow-up parliamentary reports. Another non-fatal incident was

[359] Matthews, L. Johnstone, R. Quinlan, M. Rawling-Way, O. and Bohle, P. (2019) Work Fatalities, Bereaved Families and the Enforcement of OHS Legislation, *Journal of Industrial Relations*, 61(5): 637-56.

[360] Families may also have issues with these due to delays and their inability to make their views known (unlike the victim impact statements available in prosecutions). For evidence of research into family views of the coronial inquest process with regard to workplace death see Ngo, M. Matthews, L. Quinlan, M., Bohle, P. (2021) Bereaved Family Members' Views and Experiences of the Value of Coronial Inquests into Fatal Work Incidents, *OMEGA - Journal of Death and Dying*. 82(3):446-466. DOI: 10.1177/0030222818819344

selected based on Mark Parcell's suggestion that it illustrated other serious events in mines and revealed typical patterns of failure based on his extensive experience.

Overall, the results were consistent with previous research, including that undertaken for the first report on NSW. All pathways were present in at least some incidents, and in the vast majority of incidents, five or more failures were identified. Note this analysis is conservative, as it is based on official investigations/inquiries that vary in quality and comprehensiveness. Like the Pike River Royal Commission, independent investigations such as the Grosvenor Board of Inquiry and the Beaconsfield Investigation tend to be more searching and thorough, and they identify more pathways (all 10 in the case of Pike River and eight in the case of Grosvenor and Beaconsfield). The examination also revealed a clear pattern with regard to the most frequently recurring Ten Pathway failures, most notably Pathways 1 'failures in engineering, design and maintenance', Pathway 3 'failures in risk assessment', Pathway 4 'safety system failures', Pathway 5 'auditing failures', Pathway 7 'regulatory failure' and Pathway 9 'poor worker/management communication'. While the effectiveness of worker representation may impact most of the 10 failures, it is perhaps most directly relevant to Pathways 2, 8 and 9. While failures in Pathways 2 and 8 were not as common as some others, they were present, and their presence was revealing in several incidents (such as Cornwall Colliery and Grosvenor). We would also note that worker concerns before an incident are – as far as can be judged from the reports we examined – not a common subject of investigation.

The fourth body of evidence used in Chapter 5 was an examination of HPI forms completed by mine workers who took part in interviews/focus groups. As noted in this chapter and Chapter 2, mine workers were asked to complete a short HPI form on an incident or hazard exposure that they were familiar with. The form used questions derived from Ten Pathways (plus a question on contractors). In total, 83 incidents were assessed: 53 from NSW coal and metalliferous mines (equal split of coal and metalliferous mine workers), four from WA (all metalliferous), two from Tasmania (coal) and 23 from Queensland (coal). In NSW, metalliferous miners identified more failures per incident than coal miners.

Table 9-1 compares the results drawn from official investigations into serious events with responses to HPI forms completed by those interviewed in the course of this project.

Table 9-1: Comparing Ten Pathways results for investigations and HPI responses

	P1	P2	P3	P4/P5	P4*	P6	P7	P8	P9	P10
Analysis of formal investigation findings (% of 107)	77	32	56	75/39	-	25	29	21	31	21
Worker HPI informal analysis (% of 83)	73	64	60	54	27	64	27	48	58	19

*Contractor management

Given the small number of assessments from WA and Tasmania, it was not possible to make more than a cursory comparison between WA, Tasmania, and other states, and it is more meaningful to make observations based on responses from all jurisdictions as a whole. First, there is agreement on common failure points, regardless of the source of knowledge about the incident. The most common

failure points were Pathway 1 'Failures in design, engineering' and Pathway 3 'Failures in risk assessment'. However, Pathway 4, 'Failures in safety management systems', was more commonly identified in formal investigations. Second, what is especially distinctive about the responses from worker representatives is that pathways more relevant to worker representation – P2 'warnings ignored', Pathway 8 'concerns of workers and others ignored', and Pathway 9 'Poor management/worker communication' – were identified more frequently. Third, Pathway 6 'production/cost pressures compromising safety' was identified more frequently by worker representatives than in formal investigation reports. Fourth, an additional failure point not normally separated in Ten Pathways but treated as part of management systems, namely contracting, was identified in 27% of incidents, reinforcing the importance of this issue (as indicated elsewhere in this report). Fifth, overall, there is a more even spread of pathways identified in mine worker HPI forms than the results from fatality investigations.

The bulk of worker-representative HPI assessments come from coal mining, where the SSHR/ISHR regime operates, and this could be interpreted as implying that this system is not as effective as expected. However, that interpretation has two problems. One obvious cautionary point is that the small number of responses from Tasmania and WA (where the WHS representation model applies) means that such comparisons are not meaningful. Another cautionary point is that, where we could compare larger numbers of HPI forms under the SSHR/ISHR regime (NSW coal mining) and the HSR regime (NSW metalliferous mining), metalliferous respondents identified more pathways/failures overall than their coal mining counterparts (see Table 5-11). Finally, another observation is worth making. It should not surprise that mine workers identified more failure pathways, because we asked respondents to assess each of the 10 pathways. In contrast, official investigations/coronial inquests do not specifically do this. Further, where Ten Pathways was surveyed over several years as part of the Western Australian inspectorate's annual road show and for Jenke's PhD (reported in Chapter 5), workers/HSRs tended to score lower with regard to health and safety management systems addressing pathways than managers, including safety managers, who also responded. This indicates they had less confidence in the systems in place or were more aware of gaps/deficiencies.

Several conclusions were drawn from the review of these bodies of evidence. First, the NSW experience indicated that the mining-specific representative arrangements comprising the two levels of representation – ISHR and SSHR – are more effective than the general WHS model of workgroup-based HSRs supported by WHS entry permit holders, i.e., union industrial officers. The Queensland experience added further insight into the mechanisms that support worker representation – namely industry-level tripartite arrangements. The Grosvenor explosion and gas management issue demonstrated the important role of ISHRs and the union in elevating 'worker voice'. ISHR and MEU evidence presented to the BOI (together with evidence from expert witnesses) exposed the deleterious impact of contracting and labour hire on hazard reporting and the effective functioning of representative arrangements. The CMSHAC forum[361] on gas and spontaneous combustion management illustrated the importance of worker representative contribution to understanding longwall ventilation, gas management, and managing oxygen in the goaf. The Queensland experience

[361] Coal Mining Safety and Health Advisory Committee. (2026) *CMSHAC gas and spontaneous combustion management in a longwall goaf—Forum summary*, 12-13. Retrieved from https://www.qgcio.qld.gov.au/documents/information-access-and-use-policy

also highlighted the significant contribution of the MEU and ISHRs to identifying and management dust disease, including promoting best-practice diagnosis of MDLD.

The second conclusion is the importance of effective worker representative structures for communicating and implementing inspector-led interventions. This conclusion is drawn from two pieces of evidence. First, the low visibility of NSW inspector assessment programs in metalliferous mines and the metalliferous sector's poorer safety performance, as measured by the increasing SIFR after the HSR model was adopted. The second piece of evidence comes from Queensland, where the BOI uncovered the inspectorate's decision to stop the electronic exchange of inspection/investigation reports between SSHRs/ISHRs and inspectors at the beginning of 2020, before the Grosvenor fire and explosion.[362] The Johnston Review highlighted issues with lack of information sharing and transparency and the deleterious impact on stakeholder confidence in conjunction with the deteriorating safety performance as measured by the Grosvenor and Moranbah mine explosions and four single fatalities [insert date].

With regard to Chapter 5, there is limited evidence to draw on from WA and Tasmania about the function of the HSR model except to say that in Tasmania the Beaconsfield mine fatality inquiry identified ineffective worker representation arrangements as a contributing factor and recommended that these be strengthened. In WA, there was some evidence that union entry permit holders raised concerns about poor safety standards in WA mines and inadequate risk management practices, primarily associated with maintenance, construction, and other activities involving elevated work. The Ten Pathways investigation/coronial report analysis illustrates some aspects of representation, especially concerning warning signals that were ignored (Pathway 2), prior concerns being raised by workers or others (Pathway 8) and poor worker/management communication and trust (Pathway 9) – particularly the latter.

The review of safety and health performance in NSW, Queensland, WA and Tasmania highlights the importance of tripartite collaboration in achieving the objects of safety and health legislation and the importance of the 'prevention triangle' provided by the tripartite working arrangements enshrined in the legislation. The overall conclusion from Chapter 5 is that, rather than focusing on incident causation, we should focus on how incidents can be prevented.

The final method used in this report was interviews/focus groups conducted with mine workers, HSRs, SSHRs, ISHRs, or District Worker Representatives, and a small number of union officials in Queensland, Western Australia, and Tasmania. The interviews explored 10 broad themes relevant to worker representation and mine safety and health, and researchers analysed the interviews for evidence. In essence, this was the same as research conducted in NSW for the first report. This information is presented in Chapter 6 (Western Australia), Chapter 7 (Queensland) and Chapter 8 (Tasmania). The findings for each of these chapters will be summarised in turn, followed by more general observations based on all three chapters.

Chapter 6 dealt with interview/focus group responses in Western Australia, where mining occupies a pivotal place in the economy and mining activities are globally significant in areas such as iron ore, as

[362] Affidavit of Stephen Woods to the Queensland Coal Mining Board of Inquiry, July 2020. Retrieved from https://www.coalminesinquiry.qld.gov.au/__data/assets/pdf_file/0009/1620981/Affidavit-of-Stephen-Woods.pdf

well as post-carbon economy minerals like Lithium and rare earth minerals. In contrast, coal mining is confined to the Collie region and is geared to domestic needs, not exports, as in NSW and Queensland. The key findings demonstrate that while, in line with the WA regulatory provisions, HSRs exist in the mines of large global mining companies that operate iron ore mines in the Pilbara, the extent to which these representatives can fulfil the functions described for them by the legislation, or receive the necessary support to do so, are heavily constrained by the company management arrangements for health and safety, which serve to marginalise their role. They are further constrained by the wider despotic management practices of the companies operating these mines and by their anti-trade union cultures. The very strong sense conveyed by the testimonies of the present and former HSRs who took part in the discussions reported in this chapter is one of a group of individuals who are doing their very best to operationalise the standards and practices of a set of regulatory provisions within an entirely unsupportive, if not overtly hostile, management culture. They had managed to become HSRs in circumstances heavily influenced by the autocratic efforts of the mine management. HSRs suggested that, for the most part, their fellow HSRs had been selected by supervisors and approved by managers as individuals unlikely to question the prevailing managerial controls. Under such circumstances, the discussants felt isolated, vulnerable and under great pressure. They were unable to simply step into established practices of representation and consultation, such as inspecting workplace health and safety, taking part in joint consultative bodies for health and safety, addressing health and safety issues raised by fellow workers, or making representation to management. Rather, in each case, they were obliged to pursue these matters through a struggle to perform a set of functions and rights that appeared to be entirely out of step with the prevailing management culture of their employers. Whether it was intentional, or simply a consequence of the management arrangements for health and safety in the mines and the restriction of their representation to particular work groups, they saw themselves largely as being directed towards dealing with small and relatively inconsequential health and safety matters and away from issues of a more serious (and possibly more costly nature). Here again, the impression was conveyed of an unsympathetic management that did not welcome interference with its prerogatives to manage production at the mines. While management tolerated legally mandated HSRs, it marginalised their roles and obstructed their efforts. Extensive international research has identified the conditions for effective representation, notably:

- a legislative steer, provided by legislation, along with support for its operation from the regulatory inspectorate charged with its enforcement;
- company prioritisation of participative approaches to the management of health and safety that acknowledges both the importance of preventive health and safety *and* the validity of a pluralist approach to its operation;
- a supportive industrial relations culture;
- support for the activities of health and safety representatives from their constituents and the institutions and structures of organised labour within and outside the workplace
- trained and competent health and safety representatives.[363]

[363] There are many studies that make up this body of research, in different sectors, establishment sizes and countries – for detailed reviews of the literature, see: Hall, A. 2021. *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; Walters, D. and Nichols, T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan.

Few of these preconditions were evident in Pilbara mines, and in some cases they were absent. Consistent with findings for other jurisdictions, such as metalliferous workers in NSW and Tasmania more generally, the legislative steer in place had weaknesses, such as restricting HSRs to representing the interests of work groups, and lacking measures comparable to those in coal mining in other states. Further, respondents did not refer to the regime receiving strong support from the regulator in terms of activities as distinct from policy pronouncements (see Chapter 5). For example, in WA, WorkSafe WA stated in its annual performance reports for 2022-23 and 2023-24 that educating PCBUs about the importance of consultative mechanisms, including HSRs, was a priority for the regulator.[364] As noted above, respondents reported that company management's attitude was entirely unsupportive of HSRs as autonomous representatives of labour interests.

Additionally, there was no sign that the companies had made any of the facilities recommended in the guidance to the regulations available to support the HSRs. It is well documented that the industrial relations culture in the Pilbara mines operated by these large global companies is hostile to the presence and activities of trade unions. HSRs who were trade union members therefore faced further hostility for their role in this respect. Their often-repeated feeling of 'having a target on my back' was a direct consequence of this culture.

There were signs that the active HSRs who took part in the discussion groups had received some support from among the constituents of their work groups, but this was unstructured, ad hoc, and ephemeral. It may have helped to sustain a sense of purpose for the HSRs in pursuing health and safety matters. But it was not in the same league as the support that effective health and safety representatives have been shown to receive from the structures of organised labour in other sectors where their effectiveness has been demonstrated in research studies.[365] No workplace trade union structures were in evidence in the mines where the discussants were employed, which also reflected the company's hostility towards them.

The experience of the discussants was in sharp contrast to the level of support available to site health and safety representatives in coal mining in other Australian states, notably Queensland and New South Wales, where active health and safety representatives can rely not only on the support of their fellow mine workers but on that of other mine delegates, their workplace structures and the lodge to which they all belong: as we have detailed elsewhere in this report, research studies show such

[364] WorkSafe Western Australia, 2025, Safety performance in the Western Australian mineral industry – incident and injury statistics 2022–23. Department of Local Government, Industry Regulation and Safety, Western Australia,1.;WorkSafe Western Australia, 2025, Safety performance in the Western Australian mineral industry – incident and injury statistics 2023–24. Department of Local Government, Industry Regulation and Safety, Western Australia,1.

[365] As described in Chapter 4, there is an extensive literature on the role of organised labour in supporting the effectiveness of health and safety representatives. Key studies include: see, for example, Walters, D. and Nichols, T. (2007) Worker Representation and Workplace Health and Safety. Basingstoke: Palgrave Macmillan; Walters, D. and Nichols, T. (eds.) (2009) *Workplace Health and Safety: International Perspectives on Worker Representation.* Basingstoke: Palgrave Macmillan. Hall, A. (2021) *The subjectivities and politics of occupational risk: mines, farms and auto factories.* Routledge: Oxford; Hall, A., Oudyk, J., King, A., Naqvi, S. and Lewchuk, W. (2016). Identifying knowledge activism in worker health and safety representation: a cluster analysis. *American Journal of Industrial Medicine*, 59(1), pp. 42-56; Ollé-Espluga, L., Vergara-Duarte, M., Menéndez-Fuster, M., Benach, J., & Vázquez, M.-L. (2019). Workers' Knowledge and Views on Interaction with Health and Safety Representatives: An Exploratory Qualitative Study. *Relations Industrielles / Industrial Relations*, *74*(4), 719–741. https://www.jstor.org/stable/26872958

support contributes to their effectiveness in establishing forms of organised resistance to despotic mine management and to improve health and safety despite an unsupportive industrial relations culture.[366] Achieving effective representation in other sectors, especially in coal mining in NSW and Queensland, relies on substantial support from unions outside the workplace.[367] The WMWA organisers for the Pilbara indicated they were available and would provide support if requested, including using their rights of entry to the workplace, but there was little sign of its uptake among the participants. And as noted in the findings, the WMA organisers are acutely aware of their need to proceed carefully with a strategic approach to rebuilding trade union organisation. As the NSW report made clear, ISHRs (industrial safety and health representatives) have more extensive powers and specialised knowledge than union organisers or officials who also perform industrial functions.

One area where discussants had received some support was with their initial training as HSRs. The mining companies appeared prepared to provide the required time off for them to attend the initial training required for HSRs to exercise all their rights and functions. Generally, they found this training useful. However, many contrasted what they learned with their subsequent experience trying to put it into practice at the mine site. Again, the absence of appropriate structures and procedures at the mines to enable them to progress issues effectively was evident. Discussants/respondents were sceptical about corporate claims to prioritise the safety of their workers, rather believing that production was prioritised over safety, something consistent with previous studies of iron ore mines in the Pilbara.[368] As was the culture of fear and intimidation to which the discussants also frequently referred.[369] The behavioural safety systems that dominate the health and safety regimes in these companies, and that severely limited the capacity of the HSRs to engage effectively in resolving health and safety issues, focus on procedures that establish worker accountability. They are also seen as doing so in the literature on these mines.[370] Similarly, participants noted frequently that downgrading incidents to avoid reporting them is another common practice, even when they managed to investigate incidents to some extent.[371] Finally, it is clear that the discussants were far from alone in finding the long hours, contract work, stresses and strains of FIFO employment to be psychologically

[366] See Chapter 4 and Walters, D., Wadsworth, E., Johnstone, R., Quinlan, M. 2014. *A Study of the Role of Workers' Representatives in Health and Safety Arrangements in Coal-Mines in Queensland*. Available at: http://meu.com.au/the-role-of-worker-representatives-inhealth-and-safety-in-qld-coal-mines-new-study; Walters D., Wadsworth, E. Richard Johnstone, R., Lippel, K., Quinlan, M., Bhattacharya, S. and James, P. 2018. *The role and effects of representing miners in arrangements for safety and health in coal mining: a global study Report submitted to the IOSH Research Committee. Volume 2: Case studies in five countries,* IOSH Leicester

[367] See also Chapter 4 and the above studies

[368] See for example: Ellem B. (2017) *The Pilbara: From the Deserts Profits Come,* UWA Publishing, Crawley WA; Vassily A. (2025) *Striking Ore: The Rise and Fall of Union Power in the Pilbara, Monash University Publishing, Clayton,* Victoria. Trade union concerns have appeared often in Western Australian media sources – see for example Young E: https://www.watoday.com.au/national/western-australia/concerns-about-rio-safety-were-raised-before-workers-death-union-20160630-gpvleq.html

[369] See, for example, a quote from a union organiser following a fatality at a mine in the Pilbara, that appeared in the West Australian in 2018: 'The culture at Paraburdoo is that if a worker raises concerns about safety, they fear intimidation and victimisation for doing so.'
https://thewest.com.au/business/mining/paraburdoo-mine-deaths-fuel-union-fury-at-rio-tinto-over-safety-ng-b88957273z

[370] See Vassily A. (2025) *Striking Ore: The Rise and Fall of Union Power in the Pilbara,* Monash University Publishing Clayton Victoria.

[371] Vassily (page 181) quotes a report by the WMA that augured several of the findings of the present study, including the downgrading of serious reportable incidents; relatively few workers knowing who their HSR was; and the sidelining and marginalisation of HSRs.

damaging. They are also well documented in the literature on this form of work and employment, where patterns in the Pilbara mines are described as extreme.[372] These conditions of work were extremely challenging for the HSRs to address because they were consequences of work and employment over which they were not consulted, and are frequently identified as problematic in the literature. When discussing how the situation might be improved, HSRs indicated they would value additional support for their role from a source that was independent of the company and its management. There was consensus that qualified, experienced trade union health and safety specialists, such as the ISHRs in Queensland and New South Wales, could provide that independence from company influence. They were also seen as a valuable source of support through mentoring and training (as they are in the states where they exist). There was widespread agreement across the discussion groups that HSRs in the mines of the Pilbara were in considerable need of the kind of support that was available in other states through the legislative requirements for Industry Health and Safety Representatives to help them address many of the issues they confronted in their everyday experience of representation and consultation on health and safety.

However, discussants were aware of the challenges inherent in the difference in unionisation between metalliferous mining in WA and the position in coal mining in Queensland and NSW. They were realistic about the implications of this and the degree of change needed to achieve a similar position in the Pilbara. As is outlined in Chapter 3, there was, in fact, a two-tier system in place in WA until 2014, when it was removed. Reflecting on that experience, the trade union organisers who could remember it felt that it had been a useful support for workplace representatives that had been lost largely as the result of the significant decline of the trade union presence in metalliferous mining which (as the literature also makes plain) was a consequence of the determined campaign waged by the large mining companies to remove the presence and influence of organised labour from the mines they operated in the Pilbara. The result, according to the organisers, was that the role of the Workmens' Inspectors became increasingly less conspicuous, in parallel with the declining presence and influence of unions. Since then, there has been some effort to reintroduce this model into the legislation, but without success. Whatever the reasons for the lack of progress with such submissions, the value of such a voice on behalf of mine workers was abundantly clear to the organisers. At the same time, they recognised that without greater union presence and organisation in the metalliferous mines than currently exists in WA, the full extent of its potential effectiveness was unlikely to be achieved.

In short, therefore, the findings of this study suggest that support for improvements in the operation of pluralist approaches to representation and consultation on health and safety in metalliferous mines in WA would be enhanced by the re-introduction of measures to effect the election and practice of industry-level health and safety representatives, akin to those in coal mining in Queensland and NSW. However, as both the testimony of HSRs and union organisers in WA *and* the research evidence on

[372] See for example: Langdon, R. R., Biggs, H. C., & Rowland, B. (2016). Australian fly-in, fly-out operations: Impacts on communities, safety, workers and their families. *WORK: A Journal of Prevention, Assessment & Rehabilitation*, *55*(2), 413-427; Bowers, J., Lo, J., Miller, P., Mawren, D. and Jones, B., 2018. Psychological distress in remote mining and construction workers in Australia. *Medical Journal of Australia*, *208*(9), pp.391-397; Fruhen, L. S., Gilbert, J., & Parker, S. K. (2023). Fly-in-fly-out work: A review of the impact of an extreme form of work-related travel on mental health. *Organizational Psychology Review*, *13*(2), 177-204; Gardner, B., Alfrey, K.L., Vandelanotte, C. and Rebar, A.L., 2018. Mental health and well-being concerns of fly-in fly-out workers and their partners in Australia: A qualitative study. *BMJ open*, *8*(3), p.e019516.

the operation of this legislation make abundantly clear, regulatory reform alone will be insufficient to ensure effective practice. As is discussed at length in Chapter 4, previous research evidence of 'what works' in representation and consultation on health and safety mining in both Queensland and NSW shows very clearly that while a legislative steer is an important stimulus and framework for the activities of both mine and industry level representation, it is not the only factor that is necessary to support and sustain effectiveness. Especially in the hostile climate of labour relations typical of mining, a strong presence of the collective institutions of organised labour both within and around mines that prioritises the interests of mine workers in ensuring their safety, health and wellbeing, and has carefully thought through strategies for achieving desired improvements, is an essential prerequisite for the effective operation of the standards and practices defined in regulation. Because this strong presence is currently missing not only in representation and consultation on work health and safety, but also in the wider labour relations context of metalliferous mining in WA, a primary function of revised regulatory standards would be to stimulate and support its development. Achieving this improved presence and power is unlikely to be straightforward, but as this chapter has shown, HSRs and trade union organisers are well aware of the need for it in metalliferous mining in WA.

In this report, the present centrality of work health and safety issues in the practice of collective representation in NSW and Queensland is vividly illustrated by the chapters on current practices in these two states. These serve to confirm the earlier findings described in Chapter 4. While Chapter 3 shows that historically, strong and autonomous representation on health and safety has been central to the mobilisation and organising practices of mine workers. For the trade unions involved, therefore, a key factor in determining future action and its outcomes in WA will be the extent to which the lessons of both history and current practice can inform the embedding of effective representation on health and safety in their organising strategies in metalliferous mining in WA, alongside a campaign for regulatory reform. This report demonstrates awareness of this need among both union organisers and workplace health and safety activists. It is to be hoped that this awareness will be put to good use in building more effective representation of mine workers' health and safety interests in metalliferous mining in WA in the future.

Chapter 7 dealt with interview/focus group responses in Queensland, a state with both extensive coal and metalliferous mining, and which retained the SSHR/ISHR regime in coal mining and its equivalent model in metalliferous mining (see Chapter 3). Previous research showed that the system for representing mine workers' interests in health and safety in Queensland coal mines was effective. It made a significant contribution to protecting their health, safety, and wellbeing, even in work regimes where company health and safety management policies did not favour pluralist approaches to worker participation and where labour relations were often hostile. An important finding of the previous research, therefore, was that the strategies that union SSHRs and ISHRs, the union lodges to which they belonged, and the union itself, had all adopted at workplace, district and national levels, were an effective response to this unfavourable climate for pluralist participation. Indeed, previous research convincingly demonstrated that the system for mine worker representation in Queensland was among the most effective approaches to worker representation and consultation on health and safety anywhere, not only in Australia but in other countries too. And this was apparent despite the absence of a supportive consensus-based culture often associated with such effectiveness in other studies.

More than 10 years have passed since the data on which those conclusions were based was collected and analysed. The intervening period is widely seen as one characterised by rapid changes. It was

therefore timely to look again at the operation of the regime for worker representation and consultation in coal mining in Queensland and to explore the possible effects of some of these changes. At the same time, it was an opportunity to explore separate but, in many ways, comparable arrangements that apply in metalliferous mining under the Queensland *Mining and Quarrying Safety and Health Act* 1999 (as amended 2024).

The key conclusion from the parts of this chapter that address coal mining is that, despite changes in the intervening years, the system for representing coal mine workers' health and safety interests remains robust and effective in supporting health and safety. Representatives at both levels continue to use their powers responsibly and effectively and make a significant contribution to securing better health and safety outcomes in the mines where they are active. Cross-reference to data analysed in Chapter 5 corroborates this conclusion. It was abundantly clear from the discussions with SSHRs in the present study that collectively, they constitute a mature and experienced group of lay representatives whose confidence, skills and experience strongly identified them as 'knowledge activists' on health and safety, in line with what wider research has shown to be best case examples of operationally effective forms of worker representation in other sectors and countries too. The SSHRs were very aware of the important support they receive from the ISHRs through training and information, as well as the effectiveness of the ISHRs' own actions in inspecting coal mines and investigating incidents in their own right. Again, cross-reference to data analysed in Chapter 5 confirms this. Overall, the present research confirms that the system for worker representation on health and safety in coal mines remains an effective response to the context in which it operates in Queensland mines and is comparable with best-practice representation and consultation in other sectors and other countries.

This is not to say that this system doesn't continue to meet significant obstacles to its operation, and threats to its existence. In particular, while the role of the ISHRs was highly valued, major concerns were expressed about their number and the resources available to them, which were widely seen as inadequate to meet needs. Nor has industry hostility to the pluralist form of worker participation in health and safety that the system represents, and for which statutory support remains in place, diminished to any significant extent in the intervening years since the previous study.

Despite its general effectiveness, the present study found that the system for representation on health and safety has not been entirely effective in addressing the changes that have occurred, and continue to occur, in how work and employment in coal mining are organised and in the technologies that are used to support its productivity. Company perspectives on health and safety management continue to be framed within a unitarist understanding and place strong emphasis on behavioural approaches to safety arrangements in coal and other mines, dominated by managerial prerogatives that determine policies and practices in which production needs appear to take strong precedence over notions of worker health, wellbeing, and dignity.

In this scenario, SSHRs and ISHR acknowledged limitations in their capacity to effectively address the psychosocial risks for coal mine workers, arising largely from how work and employment are organised under the direction of the large mining companies that dominate the sector. They expressed their need for more training in this area to enable them to deal more effectively with what they regarded as a growing problem of mental ill health in the sector.

New technologies adopted in the sector, including autonomous and remote mining, AI, and the increased use of digital technologies, were far more apparent in the current study than in previous

Queensland studies. Worker representation and consultation in relation to their introduction had rarely occurred, as intended by the legislative provisions, well before they became operational; representatives were largely confined to addressing the consequences of their operation rather than engaging in planning their introduction.

The present study extended its inquiry to systems and practices for mine worker representation in metalliferous mining and found some similarities in the institutions of representation in the two sectors. It was also apparent that many hazards in the two sectors were similar, and that the procedures and institutional means for representing mine workers' health and safety interests were also similar. However, there were significant institutional differences, including the apparently more central role of safety committees in metalliferous mines.

Overall, the system for health and safety representation in coal mining seemed far more robust than in the metalliferous sector. The study concluded this is due to a stronger presence of the coal miners' trade union in the sector and its strong commitment to the system of representation at both workplace and state levels.

While it wasn't possible to explore the experience and effectiveness of the SSHRs in metalliferous mines directly, and more detailed research is required, the accounts obtained convey an impression of a weaker and far less developed system for representing mine workers' health and safety interests in these mines. They suggest potential for development, with support for training and continued engagement of the DWRs. However, these accounts do not make it possible to infer how widespread the successful strategies and practices they described are across the sector. As noted above, this and previous studies show that the strength and focus of the MEU in coal mining are major factors underpinning the system's success there. The organic nature of this support, seen especially in the integration of the SSHRs, ISHRs, and health and safety into the trade union's activities at the workplace, lodge, district, and national levels, is important. Significant differences exist in the presence and organisation of trade unions in the two mining sectors. The weaker and more diffuse presence of AWU in metalliferous mining means this same level of organic support for its representatives' health and safety activities cannot be assumed. Further, more detailed research is required to explore these issues in the sector.

At the same time, it must be acknowledged that the model of trade union support for health and safety representation differs between the two mining sectors. As Chapter 3 describes in detail, this has been the case throughout their historical development. In coal mining, the ISHRs are resourced by the trade union and are union representatives. In contrast, in metalliferous mining, the union nominates them, but the state resources and administers them as part of the regulatory inspectorate. The interviewees' evidence suggested that these institutional differences may not result in major differences in the practice of DWRs and ISHRs. The trade union official interviewed in the metalliferous sector was very clear that, in recent years, the trade union strategy had been to free DWRs from the oversight of the regulator's administration and management and to align their purpose more closely with the trade union's role in representing workers' interests. The DWR also made clear that he saw himself as primarily representing workers' interests rather than delivering a regulatory inspection function on behalf of the state. Nevertheless, both were clear that, in their view, the DWR's position and resourcing within the regulatory inspectorate still had significant advantages over being an entirely trade union function, as in coal mining. Here again, further research is required to explore the

consequences of these differences more fully, but it seems clear that they need to be taken into account when assessing 'what works' in supporting worker representation and consultation on health and safety in the sector, and in making this support work better.

Chapter 8 dealt with interview/focus group responses in Tasmania, a small state but where mining occupies a very significant part of its economy, especially in terms of mercantile exports. Regarding coal mining, the focus group interviews with Tasmanian coal miners echoed several problems with the HSR regime identified in other states, as well as the state's failure to implement a comprehensive mine safety regulatory framework, which was raised repeatedly from 2006 onwards and referred to in Chapter 5. The level and scope of HSR representation at the mine was not an issue, nor was coordination, given the mine's small size. However, they did lack some of the powers granted to SSHRs (such as the right to conduct regular inspections or issue suspension orders in circumstances of serious and imminent risk). Unlike metalliferous miners in other states (except Queensland), HSRs felt relatively confident raising OHS issues and bringing issues raised by workers to management, but expressed frustration about their capacity to resolve issues, especially significant ones involving expenditure of funds. They were also critical of the training they received, including updates conducted remotely. Interviewees were unanimous in their desire to have access to an ISHR to provide advice/mentoring and support in resolving issues. Taking all issues into consideration, mine worker representation among coal miners in Tasmania seems somewhat better than among most metalliferous workers (apart from Queensland), but well below that found among coal miners in NSW and Queensland. As indicated in Chapter 4, research indicates that effective representation relies on a combination of legislative steer and active union involvement and support. This difference between coal miner representation in Tasmania and metalliferous miners in most other jurisdictions probably owes much to the unionised nature of the mine, as well as the regulatory framework (which is arguably inferior to that in Western Australia and NSW, not to mention Queensland).

The key frustrations of respondents were their inability to have issues satisfactorily resolved, especially when remedies involved expenditure and the inspectorate/regulator lacked coal mining expertise. This Chapter referred to some measures taken from around 2008 onwards, and especially after 2010 when NSW-based ISHRs made several inspections – something valued by the Tasmanian mines inspectorate and others including the coal miners at Cornwall Colliery. However, momentum for this measure seems to have weakened after Andrew Tunstall retired as Chief Mines Inspector. Like those in other HSR-based regimes, the respondents supported having the mentoring support of an ISHR who would also inspect the mine regularly. Given that Tasmania has only one coal mine, there is no scope to make a full-time appointment; rather, the arrangement should formalise an arrangement with ISHRs in NSW or Queensland (probably the former). There is also an urgent need for the Tasmanian inspectorate to acquire coal mining expertise by enabling an engineering-trained inspector to undertake training/inspections in NSW and ensuring a qualified/experienced coal mine inspector (perhaps retired) inspects the colliery at least annually, and additionally if required by circumstances.

Drawing on the findings of the interviews/focus groups conducted in Western Australia, Queensland and Tasmania, the following observations can be made.

Specific Issues and Findings

In addition to these general findings, this chapter addresses several specific points and issues pertinent to the issues being addressed in this report. In what follows, the first three subheadings address separate counter-arguments put forward by opponents of legislative reforms in mining that are relevant to the findings and recommendations of this report. The remainder cover suggestions and specific issues relevant to the findings and recommendations on how the identified problems might be addressed.

Both coal mining and metalliferous mining are highly hazardous

One of the points made in removing the specialist mine-representatives scheme in NSW (progressively in 2004 and 2013), while retaining it in coal mining, was that coal mining was especially hazardous to a degree not found in metalliferous mining. The NSW report addressed this question at some length, finding it essentially unpersuasive, and that, while coal mining might involve particular hazards, it was more appropriate to view both as especially hazardous. Given that similar arguments may be made about the jurisdictions addressed in this report, it is worth briefly summarising some points from the NSW report and referring to other jurisdictions. The evidence noted in the NSW report included data showing this was not the case with regard to serious injuries or incidents. The NSW report noted that, historically, representative provisions were extended to metalliferous mining for the same reasons they were established in coal mining, and there is considerable documentation on this (see chapter 3).[373] The eight mechanisms that kill miners are found in both metalliferous and coal mines.[374] While explosive gases such as methane are overwhelmingly (but not universally) found in coal mines, fire/explosion remains a serious risk in metalliferous mines. Indeed, the worst metalliferous mine disaster (and fourth worst mine disaster overall) in Australia occurred as a result of a fire and entrapment at the Mount Lyell mine in 1912. The Tritton mine underground fire, which resulted in the withdrawal of workers, and the Perilya PUR fire are reminders that this risk still exists in metalliferous mines. Fire was also ranked the highest risk at the Beaconsfield gold mine (due to the use of timber supports in older/upper levels), and the recent incident at a Broken Hill mine should be a reminder that this risk remains significant.[375]

Reference was also made to evidence from other jurisdictions which remain pertinent to the present report. Following the 2010 Pike River Mine disaster, there was a major overhaul of mine safety regulation applying to both coal and metalliferous mining. The new laws were largely modelled on NSW and Queensland mine safety legislation. This included representative provisions (SSHR and ISHR) modelled on NSW and Queensland. The Brady Review of mine safety in Queensland painted a complex picture regarding fatalities and other serious incidents. Between 1999-2000 and 2019-20, most fatalities occurred in open-cut coal mining (14), followed by metalliferous underground (9), metalliferous open-cut (8), quarries (7) and underground coal mining (6). The fatality frequency rate was highest in quarrying, followed by metalliferous underground, metalliferous open-cut, coal

[373] Quinlan M & Walters D, (2020) Knowledge Activists on Health and Safety: Workmen-Inspectors in Metalliferous Mining in Australia 1901–25, *Labour History*, Number 119 (November 2020): 33–60.
[374] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney.
[375] Quinlan, M. (2009), *Report on OHS management at the Beaconsfield Joint Venture Gold Mine, Tasmania up to and including the time of the rock fall incident at the 925 level of the mine that occurred at around 9.23pm, resulting in the death of Larry Paul Knight and the entrapment of Todd Andrew Russell and Brant George Webb* (expert report prepared for Greg Melick SC, Independent Investigator appointed by the Tasmanian Government), 30 August 2007.

underground and coal open-cut.[376] As discussed in a later subsection, both coal mining and metalliferous mining are subject to adverse effects from increased contractor use. Further, US research has found a more complex pattern regarding the relative risks of fatal and serious injuries in coal and non-coal mines, which does not support the assertion that coal mining is generally more dangerous.[377]

For this report, a series of fatal incidents in coal and metalliferous mines were also examined in some detail: 53 in Western Australia, 18 in Queensland, and eight in Tasmania (see Chapter 5). Again, this demonstrated that a substantial number of these occurred in metalliferous mines, even in Queensland, and that these entailed a pattern of repeated/disturbing failures with regard to most basic regulatory requirements such as inadequate risk assessments, inadequate safety systems and engineering/design or maintenance failures.

It is also important to acknowledge the problem of under-reporting of notifiable/serious incidents/high potential incidents (HPIs), which can both distort comparisons between the coal and metalliferous sectors (as there was evidence of NSW) and understate the extent of poor safety events. This problem appears to some degree in all jurisdictions we examined, a point reinforced by interviews/focus group observations. Mandatory requirements to report specific types of incidents or exposures (within different time spans based on severity) are critical because they are based on hard-won historical knowledge of the precursors of fatal events; ensuring all notifiable incidents are reported has remained a challenge in NSW, Queensland, Tasmania, and indeed other mining jurisdictions with which we are familiar. In practice, some notifiable incidents are not notified or even recorded, something regulators often acknowledge and which was confirmed by interviews/focus groups in this and the NSW report. In other cases, the incident is ranked at a level below the reporting threshold, for example, based on evaluations of its potential impact or whether mine workers were in proximity. Detailed investigations into serious incidents such as the 2006 Beaconsfield gold mine fatality/entrapment, and subsequent audits of the Tasmanian inspectorate, revealed serious disagreements between management and the inspectorate as to whether particular incidents should have been notified. The Beaconsfield gold mine experienced 24 serious unplanned falls of ground in the 30 months leading to the fatal fall, a number of these unreported to the inspectorate. It is worth asking what the inspectorate might have done had it been aware of this pattern, which continued even after the company changed its mining methods following a particularly serious rockfall in October 2005, six months before the fatal fall, and in the same levels (915 and 925).[378]

The strength of representative structures appears to affect reporting. As in NSW, Queensland coal miners (but not those in Tasmania or Western Australia, which were subject to weaker regimes) were

[376] Brady, S. (2019) *Review of all fatal accidents in Queensland mines and quarries from 2000 to 2019*, Report prepared for the Department of Natural Resources, Mines and Energy, Brisbane, 159.
[377] See for example Karra, V. (2005) Analysis of non-fatal and fatal injury rates for mine operator and contractor employees and the influence of work location, *Journal of Safety Research*, 36:413-421; Muzaffar, S. Cummings, K. Hobbs, G. Allison, P. & Kreiss, K. (2013) Factors Associated With Fatal Mining Injuries Among Contractors and Operators, *Journal of Occupational and Environmental Medicine*, 55(11): 1337-1344.
[378] Quinlan, M. (2009), *Report on OHS management at the Beaconsfield Joint Venture Gold Mine, Tasmania up to and including the time of the rock fall incident at the 925 level of the mine that occurred at around 9.23pm, resulting in the death of Larry Paul Knight and the entrapment of Todd Andrew Russell and Brant George Webb* (expert report prepared for Greg Melick SC, Independent Investigator appointed by the Tasmanian Government), 30 August 2007.

more confident that notifiable incidents were being notified than metalliferous miners in NSW and Western Australia. Metalliferous workers interviewed in the latter two states, as well as coal miners in Tasmania, also expressed more concern that serious incidents were receiving a lower ranking, thereby affecting notifiability and the corrective/investigative measures that might need to be taken. In NSW, the influence of the SSHR/ISHR representative structures in ensuring serious incidents were reported was reinforced by several respondents who had worked in both sectors (including metalliferous mines in WA). Metalliferous respondents also raised greater fear of retribution for reporting issues and expressed the view that the presence of an ISHR would mitigate this.

Another important difference was the involvement of SSHRs/HSRs in serious incident investigations, with SSHRs (coal mining) indicating they usually, if not always, were involved and kept apprised of outcomes. In contrast, HSRs in metalliferous mining indicated they were often not involved. This arguably can have implications for notification and is also an important distinction between SSHRs and HSRs relevant to any comparison between the two (see below). Further, during our research, we were given information on at least two serious/dangerous events in metalliferous mines that were unreported, both identified by workers (one an HSR).

In sum, the available evidence does not support the argument that metalliferous mining is so much less hazardous than coal mining that it does not require representative arrangements similar to those in coal mining, especially if under-reporting is acknowledged.

Changes to existing representative arrangements are unnecessary given the resourcing and activities of the regulator.

Another argument is that the regulator's existing resourcing and activities in the three jurisdictions examined do not warrant additional representative requirements in metalliferous mining. This argument has several problems. First, the argument overlooks the history of these measures and misinterprets the roles of stronger representative structures and the regulator/inspectorate as alternatives rather than as complementary. This was long recognised from the very beginnings of the legislation (see Chapter 3). The removal of these provisions arose from a rationalisation process that failed to consider the evidence on the nature and effectiveness of these roles, which continued to operate in Queensland because it did not render mine-safety legislation subordinate but rather parallel to general OHS legislation following the post-Robens reforms. The arrangements were retained in coal mining in NSW because a strong case was made for their retention. This was not the case with metalliferous mining, where a series of government inquiries and reports recommended their reintroduction, as documented in the first report. Second, the importance of an independent and effective mechanism for mine worker input into OHS was not just something unions long campaigned to secure and retain (important in its own right), but also provided an additional feedback loop in a high-hazard industry. Previous research has identified the importance of this role in preventing and minimising the likelihood of serious events, as does the evidence presented in this report. Lessons can also be drawn from events where such mechanisms were not present, notably Pike River and Beaconsfield. Third, both historically (see Chapters 3, 4 and 5) and into the present (see evidence in this report and the NSW report), the stronger worker representative structure has, if anything, promoted closer and more collaborative engagement with the inspectorate than in situations where these positions do not exist. Fourth and finally, far from being an alternative, this mechanism becomes even more important where the regulator's resources are strained, or coverage

is incomplete. This report pointed to recurrent resourcing issues in Tasmania, and while the WA regulator is well funded via an industry levy (unlike Tasmania), maintaining sufficient staffing has been a challenge given competition from the private sector offering better-paid positions.

Existing HSR arrangements are working well, and the presence of SSHRs and ISHRs would overly complicate things, including the role of statutory office-holders.

There is, to our knowledge, no evidentiary base to this suggestion. At the same time, there is considerable evidence on the efficacy of these positions in coal mining and serious deficiencies arising from their absence in metalliferous mining in NSW and WA, including the evidence collected in this report. We are unaware of evidence that the presence of SSHRs/ISHRs has overly complicated representative arrangements or WHS management in coal mining in NSW and Queensland, or in metalliferous mining in Queensland. To our knowledge, this alleged problem was never raised in the rationalisation of OHS legislation as part of the post-Robens and national uniformity reforms (see Chapter 3). The NSW report also indicated that complexity was not a problem in coal mining in mines where there were both HSRs and SSHRs because clear protocols were maintained, and the same applied to their relations with ISHRs. Chapter 7 of this report (Queensland) indicated that the SSHR/ISHR regime (in coal mining) and the SSHR/District Worker Representative regime (in metalliferous mining) were operating effectively. Most pointedly, this contention is based on a fundamental misunderstanding of worker involvement in mine safety, which developed a regime specific to its needs and is important in its own right and complementary to other regulatory requirements, including certification and licensing. Finally, on an evidentiary basis, the findings of the NSW report, drawn from both statistical/incident analysis (Chapter 5) and interview/focus group responses, were that the existing HSR regime was not operating effectively in metalliferous mines. Even in those mines where the HSR arrangements appeared stable and operating better (a minority), respondents indicated that an ISHR role was needed. The report documented the deficiencies and problems being experienced in some detail, including instability, fear of retribution, under-reporting of serious incidents and the inability to resolve significant issues. This report documented similar problems in Western Australia and Tasmania, being seemingly especially acute in the Pilbara region of WA. Contact with inspectors was also more problematic than in coal mining (NSW and Queensland) and metalliferous mining in Queensland, due in part to resourcing issues but also to the absence of the ISHR position, which previous research shows provides critical support to ISHRs. Further, there are coverage issues, with HSRs confined to representing a designated work group, while SSHRs can deal with site-wide issues, have a statutory power to conduct regular inspections, and can speak to anyone on site, including office staff, management, and contractors. This is also the case with ISHRs/District Worker Representatives, who have powers beyond those of union industrial officials/organisers (who can only talk to those belonging to the union or who are eligible to join and can only issue advice in the case of a serious issue), are focused on OHS, and can readily inspect non-unionised mines.

There are significant differences between SSHRs and HSRs.

The positions of SSHRs and HSRs are sometimes portrayed as essentially the same, but this is inaccurate, as there are significant legislative and practical differences. First, SSHRs cover an entire mine site, whereas HSRs cover designated workgroups. Normally, mine sites consist of multiple workgroups and therefore HSRs. In our interviews/focus groups, the mines discussed had at least two or three HSRs. This difference is significant because SSHRs can represent everyone on site, including

professional and office staff (see comments elsewhere) and contractors (including those undertaking remote activities on site), and pursue site-wide issues (such as dust/lead exposure) that HSRs cannot. Our interviews/focus groups reinforced the importance of this distinction. Second, the functions and powers of site safety representatives are more extensive and detailed than those of HSRs, including the right to undertake inspections, secure cooperation from contractors, and have their reports taken seriously. Third, site worker representative provisions reflected the historic role of mine check inspectors (and the ongoing role of SSHRs in coal mining), which were designed to address the mining industry and its hazards, including through regular inspections. Further, unlike HSRs, site worker representatives were required to prepare a report of their inspections. In many respects, they were analogous to provisions still applying in coal mining. By contrast, HSRs have a more generalised role and functions designed to cover a wider array of workplaces and industries, and, as revealed in the WA focus groups, management was able to confine their role to minor safety issues. Given this, the report would strongly argue that the role of SSHR needs to be reintroduced into metalliferous mining, while properly designated and trained HSRs can be retained, as seems to be the practice in coal mining in NSW. Finally, as discussed earlier, given the fractured nature of HSR representation, SSHRs as well as ISHRs would be in a stronger position to secure the attention of both management and inspectors on significant issues.

ISHRs and union industrial officials/organisers are not equivalent in key respects.

It has been suggested that full-time union officials can perform the functions of an ISHR or its equivalent, making the latter unnecessary. The argument is flawed, notwithstanding commendable efforts by union officers to fill the void left by the removal of district check inspectors/employee inspectors in NSW and Western Australia, or their non-existence in Tasmania. Unlike union organisers (who, in the case of the AWU, may be responsible for an array of members, not all of whom are miners), ISHRs and DWRs must be experienced miners (normally having previously served as an SSHR) and in coal mining with a supervisor-level qualification (deputy or open-cut examiner). It is recommended that the same arrangements apply to Western Australia and Tasmania (as the NSW Report recommended for metalliferous mining). Their statutory role pertains exclusively to OHS, and the minister can remove them from office (a serious sanction) if they engage in other activities, such as industrial relations.

In practice, ISHR access to a mine is less problematic than for union organisers (see the discussion in the NSW report, and also Chapter 6 in this report). Further, even if able to obtain entry, the most an authorised person may do, if concerned about a safety or health issue that poses an imminent and serious risk and remains unaddressed, is issue a warning and notify the regulator. In sharp contrast, an ISHR has powers close to those of a government inspector and, after accessing a mine, can inspect any area, hold discussions with any relevant person, demand copies of any relevant documentation (pertaining to a task, risk assessment or more general OHS management systems) and in situations of serious imminent risk to mine worker health and safety, where an accommodation with management is not reached, issue an order suspending that part of the operation. Detailed research into SSHRs and ISHRs in Queensland and NSW indicates that these powers are used rarely, carefully and judiciously (see Chapter 4). Commonly, the very existence of these powers is enough to command respect and resolve issues. This interpretation was reinforced by interviews/focus groups in coal mining, where ISHRs were seen to provide independent and critical support, advice, and mentoring to SSHRs; provide an additional layer of preventative oversight; and fill an important gap at mines where organisation

was weak, or representatives were fearful of raising/pursuing OHS issues. Interviews/focus groups conducted in Western Australia and Tasmania for this report were strongly supportive of the value of having ISHRs for precisely the same reasons, especially given the absence of SSHRS (which they also wanted), the more fractured HSR representation, and fears amongst HSRs and workers of the consequences of taking a stand on an OHS issue. There was a uniform view that ISHRs would help to ameliorate these problems and increase the traction and willingness of HSRs to pursue OHS problems, as well as the trust and cooperation they would obtain from other mine workers.

Bonus regimes and production pressures

Production-based bonus/payment schemes are a long-term feature of both coal and metalliferous mining. The earliest form was piecework in coal mining (typically in payment according to hewing rates) and tribute/tut-work in metalliferous mining. The capacity of these schemes to undermine safety by encouraging corner-cutting has also long been recognised. For example, in 1868 Ballarat miner and unionist John Trevana claimed 'three-fourths of the fearful accidents which occur in our mines are attributable to … men being compelled to work at such reckless speed in order to earn a crust.'[379] More recently, studies across an array of industries, including road transport, have confirmed the adverse effects of incentive payment systems on health, safety and wellbeing.[380]

As noted in Chapter 5, economic/production pressures contributed to several fatal incidents in NSW, Queensland and Western Australian mines, and there was some evidence of these pressures in two Tasmanian incidents (although it could not be shown they contributed to the incidents). One near-disaster in Queensland brought these issues into stark relief. This occurred at the Grosvenor coal mine in Queensland in May 2020, when five workers were severely burned by a methane explosion/fire. Several serendipitous events arguably prevented this explosion from resulting in multiple fatalities and indeed endangering others underground at the time. First, an unplanned accumulation of stone dust near the ignition prevented the methane explosion from transitioning into a coal-dust fire that would almost certainly have had more catastrophic consequences. Second, a senior anaesthetist visiting the town of Moranbah that day for COVID-19 training was able to stabilise the miners so they could be transferred to a burns unit. The Board of Inquiry into Grosvenor found that mining operations were repeatedly conducted in a manner where gas emissions generated by the rate of production exceeded the mine's gas drainage system capacity. The mine was operated by a contractor using

[379] *Ballarat Star* 23 September 1868.

[380] See, for example, Hopkins A & Maslen S (2015) *Risky Rewards: How Company Bonuses Affect Safety*. London: Routledge; Hensher D, Batellino H, Gee J, & Daniels R, (1991) Long Distance Truck Drivers On-road Performance and Economic Reward, Research and Analysis Report. Institute of Transport Studies, Graduate School of Management & Public Policy, Sydney; Mayhew, C. & Quinlan, M. (2006) Economic pressure, multi-tiered subcontracting and occupational health and safety in the Australian long haul trucking industry *Employee Relations*, 28(3): 212-229; Rodriguez, D., Targa, F. and Belzer, M., (2006), 'Pay incentives and truck driver safety', *Industrial and Labor Relations Review,* 59(2): 205-225; Johansson, B. Rask, K. & Stenberg, M. (2010). Piece rates and their effects on health and safety - a literature review, *Applied Ergonomics*, 41(4): 607–614; Premji, S. Lippel, K. & Messing, K. (2008) "We work by the second!" Piecework remuneration and occupational health and safety from an ethnicity- and gender-sensitive perspective, *Perspectives Interdisciplinaires Sur Le Travail et La Santé*, 10(1), 1-35; Williamson A, (2007) Predictors of Psychostimulant Use by Long Distance Truck Drivers, *American Journal of Epidemiology*, 166(11):1320-1326; Mooren, L., Williamson, A., & Grzebieta, R. (2015). Evidence that truck driver remuneration is linked to safety outcomes: a review of the literature*, Proceedings of the 2015 Australasian Road Safety Conference*; Thompson, J. & Stevenson, M. (2014) Associations between heavy-vehicle driver compensation methods, fatigue-related driving behaviour and sleepiness, *Traffic Injury Prevention, 15*(sup1) S10-S14.

labour hire, and the Board also found that these workers were afraid to raise issues, and that some issues raised were ignored.[381] Reflecting this climate of fear of victimisation/retribution, only one labour hire employee gave evidence to the Board. Reflecting these broader concerns, the Board commissioned one of the authors of this report to prepare a background report reviewing research and other evidence on production pressures/bonus regimes and safety, Board responsibilities in this area, contracting/labour hire, and the operation of representative mechanisms in mining.[382] The effectiveness of representative mechanisms, including union input at Grosvenor, had been weakened by the overwhelming dependence on labour hire, and a decision by the then Chief Mines Inspector to stop the electronic exchange of inspection reports between the mines inspectorate and SSHR and ISHR inspections. This practice enabled the ready exchange of information and views, and, as noted in Chapters 4 and 5, had been praised in earlier assessments of the SSHR/ISHR regime in Queensland. In the aftermath of Grosvenor, the exchange of electronic copies was re-instituted.

As with incentive payment/bonus systems, a focus on boosting production and cutting operational costs has been linked to safety problems and disasters across a range of industries, so these findings are not especially exceptional.[383] Consistent with this, a large survey (7,821 respondents) undertaken by the Commissioner for Resources Safety and Health of coal, metalliferous mine and quarry workers and managers in Queensland identified production planning and resourcing as one of the most significant areas for improving reporting of safe and health incidents.[384] As noted in Chapter 5, along with repeated references to fears of victimisation, the interviews and focus groups conducted for this report made repeated reference to production pressures (and related points such as tight scheduling) both directly and indirectly in situations where this could result in compromises on safety or health, notwithstanding the oft-stated pronouncements by mine operators/managers that safety always trumps production/profit. Concerns were also expressed that production bonus schemes compromise safety, including specific incidents, which we would have liked to elaborate on but cannot, to protect the anonymity of those we spoke to. In addition to undermining reporting, production pressure may also undermine HSR functions by limiting time for inspection and issue resolution, and by pressuring people to 'turn a blind eye' to unsafe practices to protect the production bonus.

Contractors and labour hire

As with production pressures and bonus schemes, concerns about the adverse effects of using contractors are longstanding, not only in mining but in an array of other industries, and there is a body of international peer-reviewed research that has, in broad terms, found these arrangements are associated with worse OHS outcomes, including disasters.[385]An extensive body of international

[381] Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review *The Economic and Labour Relations Review*. 35(3):576-613.

[382] Quinlan, M. (2020) *Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters*, unpublished.

[383] See, for example, Hopkins A. (2012) *Disastrous Decisions: The Human and Organisational Causation of the Gulf of Mexico Blowout*, CCH, especially 97-110; Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from fatal incidents in mines and other high hazard workplaces*, Federation Press, Sydney, especially 157-158.

[384] Commissioner for Resources Safety and Health (2024) *The state of safety reporting culture in Queensland's mining industry*, Queensland Government, Brisbane, 25.

[385] See, for example, Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review. *The Economic and Labour Relations Review*. 35(3):576-613; Nygren, M. (2025) Mining

research across a wide array of industries also points to the adverse OHS consequences (including higher injury rates and problems reporting OHS issues) of labour hire, known outside Australia and New Zealand as temporary agency work.[386] These problems are compounded after injury. In most instances, self-employed contractors are precluded from accessing workers' compensation, and while contractors who are employees of a firm and temporary/labour-hire workers (most, though not all, employees) have access to workers' compensation, in practice evidence suggests they experience poorer outcomes in terms of compensation and rehabilitation/return to work compared to direct hire employees – what Underhill has termed a double-jeopardy situation.[387] A discussant in one WA focus group (where the proportion of contractors is high) gave an example of being kept at work on alternative duties for a week before he was due to fly home. His own doctor identified a fractured ankle, which had remained untreated for a week. The MARS Landmark research in WA also found that not all serious injuries were reported.[388]

Contracting has been a long-term feature of the mining industry, but its extent has grown substantially in recent decades. A recent international review of research (using an array of different research methods) into the relationship between contracting (including labour hire) and OHS outcomes

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industry approaches to risk and responsibility: managing safety in outsourced environments, *Mineral Economics,* https://doi.org/10.1007/s13563-025-00555-1; Mayhew, M. Quinlan, M. & Ferris, R. (1997) The Effects of Subcontracting/Outsourcing on Occupational Health and Safety: Survey Evidence from Four Australian Industries, *Safety Science* 25(1-3):163-78; Mayhew, C. & Quinlan, M. (2006) Economic pressure, multi-tiered subcontracting and occupational health and safety in the Australian long haul trucking industry *Employee Relations*, 28(3): 212-229; Quinlan, M. (2023) 'Subcontracting, Repeat Latent Failures and Workplace Disasters' in J. Le Coze and Journe, B. eds. *Safe Performance in a World of Global Networks: Case Studies, Collaborative Practices and Governance Principles*, Springer, 27-36.

[386] See for example Francois M, & Lievin D, (1995) Emplois Precaires et Accidentabilite: Enquete Statistique Dans 85 Entreprises. Paris, Institut National de Recherche et de Securite; Storrie D, (2002) *Temporary Agency Work in the European Union*, European Foundation for the Improvement of Living and Working Conditions, Dublin; Silverstein B, & Foley M, (1998) Protecting contingent workers from work-related injury. Paper presented to the Ergonomics Society of Australia Conference, October 5-7, Melbourne; Park Y, & Butler R, (2001) The safety costs of contingent work: Evidence from Minnesota, *Journal of Labor Research*, 22(4):831-850; Underhill E, (2008) Double Jeopardy: Occupational injury and rehabilitation of temporary agency workers, PhD thesis, UNSW Sydney; Lippel K, MacEachen E, Saunders R, Werhun N, Kosny A, Mansfield L, Carrasco C, Pugliese D, (2011) Legal protections governing the occupational safety and health and workers' compensation of temporary employment agency workers in Canada: reflections on regulatory effectiveness, *Policy and Practice in Health and Safety*, 9(2):69-90; Underhill, E. and Quinlan, M. (2011) How precarious employment affects health and safety at work: the case of temporary agency workers.*Relations Industrielles* 66(3):397-421.

[387] Underhill E, (2008) Double Jeopardy: Occupational injury and rehabilitation of temporary agency workers, PhD thesis, UNSW Sydney; Lippel K, MacEachen E, Saunders R, Werhun N, Kosny A, Mansfield L, Carrasco C, Pugliese D, (2011) Legal protections governing the occupational safety and health and workers' compensation of temporary employment agency workers in Canada: reflections on regulatory effectiveness, Policy and Practice in Health and Safety, 9(2):69-90; Quinlan, M. & Mayhew, C. (1999), Precarious Employment and Workers' Compensation, *International Journal of Law and Psychiatry*, 22(5&6):491-520; Quinlan, M. (2004), Workers' Compensation and the Challenges Posed by Changing Patterns of Work: Evidence from Australia *Policy and Practice in Health and Safety,* 2(1): 25-52; Quinlan, M., Fitzpatrick, S. J., Matthews, L. R., Ngo, M., & Bohle, P. (2015) Administering the cost of death: Organisational perspectives on workers' compensation and common law claims following traumatic death at work in Australia. *International Journal of Law and Psychiatry*. 38:8-17.

[388] Yam, C., Chapman, M., Iles, L., Fruhen, L., Anderson, M., Hendriks, J., Burns, S., and Parker, S. K. (2023). *The Mental Awareness, Respect and Safety (MARS) Program Landmark Study: Insights from the Worker Survey and Interviews.* A report prepared by the Centre for Transformative Work Design for the Government of Western Australia. 29, 144.

concluded that the overwhelming majority (indeed almost all) found an adverse effect on injury and fatality rates, and several other indices (including exposure to or the capacity to measure exposure to hazardous substances). These findings did not differ noticeably between coal and metalliferous mining or by region, suggesting existing regulatory arrangements were not affecting this as might be hoped. The review findings dovetailed with fatality data for mining in Western Australia and Queensland and were also evident in several incident investigations.[389] In terms of the underlying causes of this, the most prevalent factors in mining (and elsewhere) are the greater susceptibility of these workers to economic/reward/production pressures, the greater likelihood of disorganisation at the workplace (due in part to the more complex work-systems and authority structures) and regulatory failure (due to more complex chains of legislative responsibility, lower union presence and greater challenges to regulators). The findings do not mean contractor use is harmful or dangerous in all situations, and some activities (like non-routine maintenance) may benefit from specialist contractors. However, the findings indicate that contracting and labour hire undermine OHS in most situations; notwithstanding, more rigorous oversight should probably be confined to those activities, not operations and routine maintenance (indeed, recent fatality analysis in Western Australia and our analysis of fatal incidents in Chapter 5 suggested a clustering in on-site maintenance activities together with limited site experience).[390] The use of labour hire was associated with other practices that can adversely affect worker health, safety, and wellbeing (including family/work balance and sexual harassment), including fly-in-fly-out (FIFO) and drive-in-drive-out (DIDO), not to mention impacts on transport-related emissions and deleterious socio-economic effects on neighbouring towns. Whether planned or not, contracting and labour hire are also associated with lower levels of union membership, which in turn weakens their capacity to provide logistical support to SSHRs and HSRs and increases demands on ISHRs.[391] International evidence links union presence to better OHS outcomes in mining (and other industries, for that matter).[392] During the course of our interviews and focus groups, repeated statements were made which essentially echoed the last three sentences, including the accentuated fears of contractors and labour hire workers to speak out on safety and the greater challenges in more weakly organised districts, especially metalliferous mining, but also with regard to at least one coal mining sub-region.

Again, these observations are not new. As with production/bonus systems, the OHS challenges associated with contracting/labour hire were brought to the attention of the 2004-05 NSW Mine

[389] Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review *The Economic and Labour Relations Review*. 35(3):576-613

[390] Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review *The Economic and Labour Relations Review*. 35(3):576-613

[391] Beach, R. et al (2003) Workforce Turnover in FIFO Mining Operations in Australia: An Exploratory Study, University of Queensland; Peetz D and Murray G (2008) Black gold and big girls' toys. *Griffith REVIEW*, Editorial 22, 1–10. Available at https://www.academia.edu/3107444/Black_gold_white_nights_and_big_girls_toys; REVIEW REPORT (2015) An independent review of existing, predominantly fly-in-fly-out resource projects in Queensland, Queensland Government; Western Australian Mental Health Commission (2018) Impact of FIFO work arrangements on the mental health and wellbeing of FIFO workers, Government of Western Australia; Community Development and Justice Standing Committee (2022), Report 2 'ENOUGH IS ENOUGH' Sexual harassment against women in the FIFO mining industry, Parliament of Western Australia, Perth; The issue was also dealt with extensively in Quinlan, M. (2020) Report on a number of matters with regard to the Board of Inquiry Investigation into the methane incident at the Anglo American Grosvenor Mine at Moranbah on 6 May 2020 and related matters, unpublished.

[392] See, for example, Morantz AD (2013) Coal mine safety: Do unions make a difference? *ILR Review* 66(1), 88–116. https://doi.org/10.1177/001979391306600104

Safety Review and confirmed by subsequent research undertaken and reported in the *Digging Deeper* reports referred to elsewhere in this report. It was also identified as a challenge to SSHRs in research on SSHRs and ISHRs in Queensland and NSW.[393] A study argued that the extensive use of contractors was a contributory factor to the 2010 Pike River mine disaster, and the Board of Inquiry into the 2020 Grosvenor mine explosion also criticised the extensive use of labour hire – and the practice changed subsequently.[394]

As part of this project, we asked interviewees/focus groups the extent to which contracting/labour hire was present at their mine and if this had affected OHS in their view. Where contracting was prevalent, many respondents expressed concerns consistent with the research evidence above, notably that these workers were more susceptible to production/bonus pressures and were also less likely to raise OHS issues. Still, they did raise some via the HSR, SSHR or ISHR where these were present. At the same time, some pointed to a reduced use of labour hire/contractors more recently. In coal mining, the most commonly cited reason was the implementation of the same job/same pay principle under recently passed industrial relations legislation. In metalliferous mining, other factors were also identified, notably a desire to reduce workforce numbers, with contractors being removed and then some re-engaged as direct hire workers. The overall reduction in workforce numbers while production/output levels remained unchanged was seen as leading to overload and compromising OHS (see discussion on reducing unit cost of production in Chapter 5, NSW cases). This view was consistent with international research into the OHS consequences of downsizing,[395] which was a concern identified by the Chief Inspector in Queensland.[396] Notwithstanding the last point, contracting/labour hire remains a serious issue in the mining industry in terms of its effects on worker health, safety and wellbeing. Representative structures, most notably SSHRs and ISHRs, provide an important avenue for contractors and labour hire workers to raise OHS issues, but these mechanisms are both missing in metalliferous mining in NSW.

The importance of the tripartite stakeholder relationship

The review of NSW consolidated targeted assessment and compliance priority reports, and Queensland government reviews and inquires after the Grosvenor mine explosion and recent fatalities, which raised stakeholder concerns about the regulatory framework (after the Resources Safety and Health Act came into force in 2020), in our view highlights the importance of an effective

[393] Walters, D. Quinlan, M. Johnstone, R. & Wadsworth, E. (2016) Cooperation or resistance? Representing workers' health and safety in a hazardous industry, *Industrial Relations Journal* 47:4, 379–395; Walters, D. Johnston, R. Quinlan, M. & Wadsworth, E. (2016) Safeguarding Workers: A Study of Health and Safety Representatives in the Queensland Coal mining Industry, 1990-2013, *Relations Industrielles*, 71-3, 418-441; Walters, D. Quinlan, M. Johnstone R. & Wadsworth, E. (2019) Representing miners in arrangements for health and safety in coalmines: A study of current practice, *Economic and Industrial Democracy*, 40(4): 976-996.

[394] Lamare R, Lamm F, McDonnell N. & White H, (2015) Independent, dependent, and employee: Contractors and New Zealand's Pike River Coal Mine disaster, *Journal of Industrial Relations*, 57(1): 72-93; Queensland Coal Mining Board of Inquiry (2021) *Queensland Coal Mining Board of Inquiry Report, Part II*. Available at www.coalminesinquiry.qld.gov.au; Jackson H, Quinlan M. (2024) Contract labour in mining and occupational health and safety: A critical review *The Economic and Labour Relations Review*. 35(3):576-613

[395] For a review of this research see Quinlan, M. & Bohle, P. (2009), Over-stretched and Unreciprocated Commitment: Reviewing research on the OHS effects of downsizing and job insecurity *International Journal of Health Services* 39(1): 1-44.

[396] The Department of Natural Resources and Mines 2017, Queensland Mines and Quarries Safety Performance and Health Report 2015-16, 2.

worker representative.[397] [398] While union organisation has been shown to underpin an effective representative system, our evidence suggests that effective worker representation increases the impact of regulatory compliance programs. In NSW, we observed that the inspector compliance interventions were more effective in coal mines where representative arrangements facilitated information sharing. In the Pilbara, WA, focus group participants reported minimal interaction between HSRs and inspectors. While objective safety and health performance of surface mines (iron ore mining in the Pilbara is predominantly surface mining and highly automated) was strong, HSRs painted a picture of marginalisation and the relegation of their role to less serious health and safety issues. The HSR model, promulgated in the interests of harmonisation, has not, in our view, promoted the WHS object in enabling worker participation to contribute to achieving health and safe workplaces.

In Queensland, mining-specific representative arrangements have come under pressure in recent times, as uncovered after the Grosvenor mine explosion and fire, and by broader problems with gas management as described in Chapter 5. Evidence and comment in the inquiry into coal mining safety and health and the review of the RSHQ Act highlighted recent developments in Queensland that undermined co-operation and information sharing between inspectors, worker representatives, and industry representatives at mine level and within consultative committees. While it is not possible to claim a causative relationship between this and objective measures of safety and health performance, there has been a slight upward trend in the fatal injury frequency rates (FIFR) and a clear upward trend in serious injury frequency rates (SAFR) since 2021, which is particularly evident in underground coal mining.

Are mechanical or electrical site safety and health representatives needed?

In NSW there is formal recognition of electrical SSHRs, and there is a growing number of mechanical SSHRs. These more specialist positions (occupied by those with trade qualifications) were viewed positively (see NSW Report) in having specialist skill sets to deal with complex electrical and mechanical issues in mines (especially given increased automation and remote mining). The Bills' statutory review raised the need for mechanical safety and health representatives. Given this, the question was raised in interviews/focus groups for this report. In Tasmania, the issue had already been addressed in a de facto fashion with both mechanical and electrical trade-qualified HSRs. Participants in the discussions in Queensland and Western Australia acknowledged the value of having representatives with specialist knowledge. They saw the merit of formally recognising this in NSW, giving many examples of situations in which specialist knowledge had proved useful in investigations and in addressing mine workers' concerns.

OHS Training and learning from failure

As already indicated, there were differences regarding training. In Queensland coal mining, the ISHRs operate an annual five-day training conference in either Rockhampton or Mackay in the Bowen Basin, where coal mining is concentrated. Both recently appointed and longer-serving SSHRs attend widely. Attendees are issued a handbook covering their statutory powers and functions (also issued to all

[397] Transport and Resources Committee,(2023) *Inquiry into coal mining industry safety*. Report No. 29, 57th Parliament, Queensland, Brisbane. 23.
[398] State of Queensland. (2025).*Review of the Queensland Resources Safety and Health Regulatory Model* (S. Johnston, Chair). [Review Panel]. 40 Retrieved from https://www.rshq.qld.gov.au/

SSHRs upon appointment), and workshops focus on hazards specific to underground or open-cut operations. The conference also includes a series of presentations by inspectors and academics on specialised topics such as dust, noteworthy incidents, psychosocial hazards, and the patterns and causes of fatalities. The ISHRs themselves give presentations, as do others with specialist knowledge deemed valuable. Recent examples of the latter include police presentations on commuting fatigue, sexual harassment (by lawyers) and suicide prevention (by Mates in Mining). The industry focuses strongly on serious hazards, but the conferences also cover more generic OHS issues, as the foregoing examples illustrate. Members of the research team have attended these conferences over several years. All sessions tend to be highly interactive, with considerable participant involvement. There is significant interaction between SSHRs from different mines, both in formal and informal sessions (coffee/tea breaks and meals). The conferences simultaneously serve as introductory training for recent appointees and as an update/refresher course for longer-term SSHRs.

In the Queensland metalliferous industry, a new training package has been developed for SSHRs that covers legislative powers and key activities such as conducting investigations and preparing reports. The package is geared to meet the practical needs of newly appointed SSHRs by building their knowledge and confidence to deliver their functions and exercise their powers. The course is intended to be delivered by using the participant-centred pedagogic methodologies generally adopted in labour education. The interviewees in this study welcomed it as a major improvement over previous training provision. They suggested this was the same kind of training supervisors received, and they regarded it as entirely inappropriate for supporting new SSHRs in delivering their statutory functions and powers. At the time the interviews were conducted, this new course was going through the required approval process, a necessary step before packages become available for use in SSHR training. It is hoped that approval will be granted, as this training is clearly both an important support and a significant advance on what is currently available.

In WA and Tasmania, HSRs working in mining largely received more generic training (in keeping with OHS training in other industries), while SSHRs in other states received more mining-specific training. Given the specific array of hazards in mining and specific legislative requirements, more targeted training, including a focus on significant mining hazards (and lessons from past failures in this regard), has significant advantages. For example, Tasmanian coal mine respondents described their training as generic rather than mine-specific (including dealing with mining hazards), and this included refresher programs. This was a point of criticism: respondents wanted mine-specific training, and they also criticised the remote delivery of refreshers. Coal mine respondents wanted mine-specific training for safety representatives, and one expressed the view that this would be best if done by the union (as occurs in Queensland – see earlier chapter).

In WA it is a regulatory requirement that newly elected HSRs should receive appropriate training within three months of requesting it. Participants who were or had been HSRs reported that the companies they worked for generally acceded to these requests and sent them on a five-day training course delivered by a recognised training provider. Most participants found this initial training useful. They described the course they attended as covering the rights and functions of HSRs. It was attended by newly elected HSRs from a variety of employment sectors, not restricted to mining, which generally meant that the amount of mining-specific material included in the training was relatively limited. Participants agreed that such follow-on training would be best provided by sources independent of their employers. There was a strong feeling that employer-driven training did not equip HSRs with the

kind of relevant, autonomous knowledge and skills they needed to make representations on behalf of their co-workers. Instead, it was oriented toward ensuring they were compliant with company procedures. There was considerable interest in the potential future role of trade union support in providing training. Participants also pointed out HSRs were expected to do a lot of things in their own time. Further training required additional time. There was a strong feeling that employers should make more allowance for this and provide paid time off for follow-on training, but the collective experience was that this was generally not forthcoming.

In concluding this section, it is worth referring to one industry training package offered in NSW. From 2018, the NSW Resource Regulator introduced a modular industry-training package, *Learning from disasters*, developed by the Regulator, including eight case studies identifying key/repeat failures and lessons learnt from previous events.[399] The program drew on the book *Ten Pathways to Disaster and Death: Learning from fatal incidents in mining and other high hazard workplaces,*[400] and possibly the Royal Commission into the Pike River Tragedy. The MSAC strongly endorsed this program, which included an hour-long induction program (refresher), a two-hour program for quarry managers (practising certificate holders – restricted), and a day-long workshop (practising certificate holders – any class).[401] The package provides not only a strong reminder of the need to learn from past deaths and disasters in NSW but also recurring failure points that continue to occur up to the present, including those resulting in single fatalities and dangerous incidents. The failures identified in the existing case studies include a number (including warning signals ignored, concerns raised, and poor communication) where stronger worker representation could have influenced the outcome. The package might be updated to include more recent incidents, including single and double fatalities (and maybe a retitle, as the present version is not confined to disasters). But even as it stands, it is an excellent initiative by the NSW Regulator and one that mine and quarry regulators in other jurisdictions should copy. At the time of writing, this package doesn't form part of the SSHR training program (something we would recommend), though it is clearly relevant. There have been occasional presentations on the topic at two-day district SSHR training workshops in NSW (most recently the South-Western district in late 2025) and also the annual weekly SSHR training conferences held in Queensland. The WA inspectorate-run industry roadshow in 2023 focused on Ten Pathways, with some HSRs attending (although they were a minority of overall attendance). Incorporating a Ten Pathways package into HSR (or SSHR if this was reintroduced) training in WA would not only have value in its own right but dovetail with the regulator's strategic focus on repeat incidents (see Chapter 5), which makes specific reference to Ten Pathways.

There is a strong case for extending the *Learning from disasters* package to the training of SSHRs and HSRs (and arguably workers more generally) in mining and quarrying. It is important to note that the case studies that formed the basis of the book *Ten Pathways* included coal and metalliferous mines and included single-fatality incidents as well as multiple-fatality events, often referred to as disasters. The same 10 repeat/latent failures were found in both single-fatality incidents and disasters. Jackson's study of 51 serious mine incidents (coal and metalliferous) in NSW from 2004 to 2020 demonstrated

[399] See https://www.resources.nsw.gov.au/resources-regulator/safety/training-and-education-programs/learning-from-disasters

[400] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney.

[401] *Annual Report Mine Safety Advisory Council 2018/19*, NSW Resources Regulator, 8.

the relevance of this approach to single fatalities and serious incidents (as noted elsewhere).[402] This finding was reinforced by the updated serious incident analysis in the incident chapter of this report. Its relevance was also indicated by High Potential Incident reports prepared by workers, SSHRs, HSRs, ISHRs and others as part of the research undertaken for this report. The failures identified that are repeatedly associated with fatalities and HPIs are important lessons that should inform OHS training in mines and quarries.

It is worth noting that these 10 failure points are not confined to mining but have been identified in fatal events in other high-hazard industries, such as construction, road transport, chemicals/manufacturing, and tourist/leisure centres.[403] The hazards are not identical (and training in this regard needs to be industry specific, as in mining), but the repeat failures/risks are, and there would be value in including this approach to training in other high hazard industries.

Representative Legislative Provisions

As was the case for NSW, this report found evidence that the current Queensland coal mining model of SSHRs representing the whole mine, and ISHRs representing all mines in a district, is working well (echoing earlier research) and the same applies to the parallel model operating in Queensland metalliferous mining. As indicated in this report and the NSW report, there is a strong case for both SSHRs and ISHRs, although the position of HSR could be retained (as occurred in NSW coal mining), which might prove valuable on larger mines to cover specific areas and assist SSHRs. To alter the regime where it doesn't presently exist would be relatively straightforward. Indeed, New Zealand did this, introducing the SSHR/ISHR representative scheme covering both coal and metalliferous mining, modelled on NSW and Queensland, as part of the regulatory reforms that followed the Pike River mine disaster. Western Australia could adopt a similar approach, with some modification if needed. Multiple ISHR positions would be required given the industry's size and dispersed nature (Queensland has three ISHRs and District Worker Representatives, and NSW has four ISHRs in coal mining at present). In WA there was some support (though not as strong as amongst NSW metalliferous respondents) amongst interviewees for ISHR/DWR equivalents being paid for by unions (MEU and AWU). A similar approach could be adopted in Tasmania. One issue with Tasmania is that there is only one relatively small coal mine and currently four metalliferous mines (though this number could easily grow). As described in Chapter 8, one remedy would be to empower a NSW ISHR to act in Tasmania via a formal agreement, and a similar arrangement could be made for metalliferous mines if numbers do not justify a full-time appointment. Alternative options include part-time appointments or a government subsidy. There are probably other options. The key point is that the gap in mine worker representation needs to be addressed.

[402] Jackson H (2023) Pathways to single fatality and serious injury incidents in coal and metalliferous mining in NSW, Australia: Can we learn from multiple fatality incidents to prevent serious injury? *Safety Science*, 165(2):
[403] Quinlan, M. (2014) *Ten Pathways to Death and Disaster: Learning from Fatal Incidents in Mines and Other High Hazard Workplaces,* Federation Press, Sydney; Gregson S, Quinlan MG. (2024) Death at Dreamworld: Ten pathways to disaster and failure to learn, *The Economic and Labour Relations Review,* 35(2):436-453.

Chapter 10 Recommendations

ISHR or equivalent related recommendations

1. The statutory position of Industry Safety and Health Representative or an equivalent designation should be established in Western Australia with similar election/appointment processes, qualifications/experience requirements and statutory powers to those found in the Queensland *Coal Mining Safety Act* (1999) or metalliferous industry under the *Mining and Quarrying Safety and Health Act* 1999 as amended as at March 2026. Given the size of the mining workforce and its geographic dispersion in Western Australia, there should be at least four such positions to cover major regions like the Pilbara, Eastern Goldfields and South-West (with scope for additional appointments should this be required). Consistent with Queensland legislation, these positions should be clearly established to represent the interests of mine workers, for example by being paid for by the unions (AWU and MEU). One of those appointments should have sufficient knowledge/experience, or training to inspect coal mines to cover the Collie district.

2. Drawing on the lessons Beaconsfield and other incidents, it is recommended that the Tasmanian government should give urgent attention to provisions providing for the appointment of an ISHR, or equivalent position with similar election/appointment processes, qualifications/experience requirements and statutory powers to those found under coal mine safety legislation in NSW and Queensland, or metalliferous mine safety legislation in Queensland, to cover Tasmanian metalliferous mines. Suitable arrangements should be made for Cornwall Colliery, or any future coal mine in Tasmania, to have access to a duly qualified ISHR via a formal agreement.

3. The Western Australian government should provide funding to assist ISHRs in conducting mining-specific training for SSHRs and HSRs.

4. The Tasmanian government should provide funding to assist in providing mining-specific training for SSHRs and HSRs within the state (i.e. not remotely).

5. The provision of only three ISHRs for coal mining in Queensland should be reviewed. A strong view was held ubiquitously among the SSHRs who took part in the study in Queensland that, although the ISHRs were hugely valued for their support, they were insufficient in number to meet SSHRs' needs. At very least, the provision needs to be reviewed in the light of the number and geographical distribution of coal mines in Queensland at present (compared with that at the time the original provision was made) and having regard to the requirement for four appointees in both the NSW legislation and in the case of DWRs in metalliferous mines in Queensland.

SSHR and HSR related recommendations

1. The position of site safety and health representative (SSHR) should be established in mining in Western Australia with election/appointment (two per mine), experience requirements and statutory powers similar to those found in the *Coal Mining Safety Act* (1991) or the metalliferous industry under the *Mining and Quarrying Safety and Health Act* 1999 as amended as at March 2026. As noted throughout this report, SSHRs have powers and coverage significantly different to HSRs. The position of HSR could be retained, as is the case in NSW, with regard to coal mining.

2. The position of site safety and health representative (SSHR) should be established in mining in Tasmania with election/appointment provisions (two per mine), experience requirements and statutory powers similar to those found in the *Coal Mining Safety Act (1991),* or the metalliferous industry under the *Mining and Quarrying Safety and Health Act 1999*, as amended as at March 2026. As noted throughout this report, SSHRs have powers and coverage significantly different to HSRs. The position of HSR could be retained, as is the case in NSW, with regard to coal mining.

3. Both SSHRs and HSRs in mining in Western Australia should receive dedicated and mine-specific training appropriate to the particular challenges of working in a high-hazard industry and consistent with the proven quality of pedagogic methods employed in labour education. This should include training on mine safety regulations and their powers and functions as SSHRs and HSRs, as well as elements similar to the NSW Learning from Disasters package based on Ten Pathways. There should also be a focus on specific serious hazards in mining, most notably fire/explosion, inrush or inundation, ground or strata failure control, machinery fires, air quality (dust, lead exposure), explosives and heat exposure. These hazards should also form the subject of metalliferous mine worker inductions.

More General Recommendations

1. In both Western Australia and Tasmania, the regulator should ensure that in mining, HSRs and SSHRs are notified of their inspections except where this is unavoidable (i.e., unannounced inspection). Both management and SSHRs and HSRs should be made aware of their right to accompany the inspector and that this does not impose on the inspector's visit.

2. Regulators should take steps to promote worker SSHR/HSR involvement in risk assessments and investigations, and, as far as possible (while maintaining confidentiality), indicate failures in worker involvement or communication where this contributed to serious incidents. Regulators should also disseminate consolidated targeted assessment

and compliance inspection reports to HSRs/SSHRs for communication to workers in shift-start safety meetings.

3. Given references to the inappropriate use of Job Safety Analysis (JSAs) et al instead of SWPs in routine tasks in both coal mining and metalliferous mining in Queensland and Western Australia, regulators should undertake a compliance audit of the current status and use of SWPs and JSAs in mines, and whether SWPs are to be updated (and the review/updating process), especially with regard to metalliferous mines.

4. Some issues requiring more attention uncovered by this report were dust/lead exposure, the use of contractors, identifying and managing hazards associated with new technologies, and the failure to undertake or consult about changes in work methods or staffing levels where consultation was sometimes construed as explaining changes to be made).