A study of the role of workers' representatives in health and safety arrangements in coal mines in Queensland

FINAL REPORT

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Research supported by the
Construction, Forestry, Mining and Energy Union (CFMEU) Mining and Energy Division

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Abbreviations

BBS	Behaviour-Based Safety
CFMEU	Construction Forestry and Mining and Energy Union
ERT	Emergency Rescue Team
ERZC	Explosion Risk Zone Controllers
HPIs	High potential incidents
HSW	Health and Safety at Work
ILO	International Labour Organisation
ISHRs	Industry safety and health representatives
JHSC	Joint health and safety committees
JSA	Job Safety Analysis
LTIFR	Lost time injury frequency rate
MI	Mines Inspectorate
MS	Management System
NSW	New South Wales
OHS	Occupational health and safety
PHMPs	Principal Hazard Management Plans
PIN	Provisional improvement notice
PPE	Personal protective equipment
Qld	Queensland
SHMS	Safety and Health Management System
SOP	Standard operating procedure
SSE	Senior site executive
SSHRs	Site safety and health representatives
SSRC	Safety Representatives and Safety Committee
TARPS	Trigger Action Response Plans
UMM	Underground Mine Manager
WERS	Workplace Employment Relations Surveys
WIRS	Workplace Industrial Relations Surveys

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1 Introduction

This study is a preliminary investigation of the role and effectiveness of site and industry safety and health representatives in Queensland Coal Mines. It aims to review the evidence of the role and activities of these representatives with a detailed analysis of the records of their activities in a selection of coal mines in Queensland during a period of approximately 15 years and links this with detailed semi-structured interviews with a sample of site safety and health representatives, past and present industry safety and health and representatives, and a representative of the Queensland Mines Inspectorate. It is intended to inform policy discussions concerning the role and effectiveness of both site and industry safety and health representatives.

The study has been undertaken on behalf of the Construction Forestry and Mining and Energy Union (CFMEU), which funded the work. It is, however, an independent investigation. Its findings, their discussion and the conclusions drawn, are those of the researchers and neither represent nor necessarily reflect the views or policies of the funding organisation.

While significant improvements in arrangements for health and safety in coal mines have occurred over time, and the position in Queensland is relatively good in comparison with elsewhere, it is widely accepted that coal mining remains a dangerous industry and strong emphasis must continue to be placed on securing the most effective means to protect miners' health, safety and well-being at work. The aim of the present study is to contribute further knowledge concerning this effectiveness.

1.1 Background and context

Site and industry safety and health representatives are workers' health and safety representatives who operate under statutory provisions governing their functions and powers in coal mines in Queensland. Similar (but not identical) regulatory measures are found in some other Australian states, such as New South Wales (NSW). These statutory measures have been in place with relatively minor modifications for some considerable time — in Queensland they date from 1915.

Site and industry safety and health representatives were originally known as check inspectors. They were first appointed by trade unions in the Hunter Valley, NSW coalfields in the early 1870s, before being adopted on the southern and western NSW coalfields. From the very outset check inspectors – who were experienced miners elected in a ballot – conducted detailed inspections of mines, prepared reports, identified serious hazards (relating to issues like ventilation and ground conditions) and became highly respected members of mining communities. The check inspector system spread to other states (and encompassed both coal and metalliferous mining) in the first decades of the 20th century, including Queensland by 1915. Formal statutory recognition of the check inspector role in mine safety legislation was granted and then progressively strengthened, often in response to serious mine disasters like the 1912 Mount Lyell mine disaster in Tasmania and the 1921 Mount Mulligan coal mine disaster in Queensland. These disasters highlighted the need for miners to be able to take a more proactive role in ensuring their own safety. The provisions also drew inspiration from similar measures found in the UK and France.

Despite their longevity, there has been little independent evaluation of the role or effectiveness of these measures and there are differing views concerning their effects. On the one hand, trades unions and regulators have been at pains to emphasise the value they attach to the role of trade union representatives appointed under statute in securing and sustaining improved arrangements for health and safety in coal mines. Indeed, the Royal Commission inquiry into the Pike River tragedy in New Zealand echoed these views in its recommendations to adopt similar provisions to help prevent disasters such as Pike River.

Research more widely has pointed to the role of statutory support for such forms of representation in improving health and safety outcomes, as we detail below. On the other hand, spokespersons for the mining industry in Queensland have argued that the powers granted to workers' representatives under the regulatory provisions that apply in the state are excessive and unwarranted and that they may threaten productivity if acted upon over-zealously by trade union representatives.

This difference of opinion concerning the use and effectiveness of the statutory measures means there is a good case to be made for undertaking empirical research to explore how the statutory provisions for site and industry representatives operate in practice and to gather evidence concerning their effects. In addition, there are further issues to be explored in the nature of the statutory provisions themselves and their relationship to measures found in wider regulation of arrangements for the representation of workers' interests in occupational health and safety (OHS) in Australia more generally. The exploration of these issues is particularly relevant currently in relation to discourse surrounding the harmonisation of mine health and safety measures at state level with those found in the harmonised general Work Health and Safety Acts.

The regulation of health and safety in the mining industry has developed separately from protective health and safety regulation in other industries in Queensland. This is not unusual. Indeed, it is the common experience in relation to mining in many countries. This is, to a large extent, a reflection of the very particular and serious risks of mining and the organisational, engineering and technological aspects of managing those risks to ensure the health and safety of miners. Measures concerning worker representation on health and safety in mining generally have also tended to follow this separate trajectory in their development, often predating those in industry more generally and arguably extending representational rights further in mining than is the case elsewhere (though strong representative regimes are also found in other high hazard industries such as offshore oil production). It is obviously important to understand the effect of these differences and at the same time to consider whether they continue to offer significant advantage in mining over provisions that apply more generally, or whether recent developments in the latter actually reverse this position and suggest ways in which provisions on worker representation on health and safety in mining could be improved.

1.2 The structure of the report

In the first chapter of the report following this Introduction we outline current indicators of the nature and extent of risk in coal mines and comment briefly on both the regulatory approach and the record of effective risk management in Queensland coal mines.

Requirements concerning the protection of workers and the management of the risks to their health and safety follow a broadly similar pattern in most industries and in most advanced economies nowadays. That is, modern regulatory arrangements adopt a process-based approach towards the management of occupational safety and health risks in which participative arrangements for representative worker involvement are a common feature. Research evidence indicates there is good reason for this since, broadly speaking, such arrangements have a positive effect on health and safety outcomes. This has been demonstrated in a range of studies internationally and we will explore the evidence this research provides for the effectiveness of these approaches in Chapter 3.It should be noted in passing that mining and other high hazard industries also continue to include substantial prescriptive regulation dealing with well-known hazards like explosions. However, here too safety representatives are engaged in monitoring compliance.

Our investigation is specifically focused on the experience of representative participation in Queensland coal mines and, therefore, following our overview of representative participation and its effectiveness, we concentrate on research that has examined the effectiveness of such arrangements in coal mines generally, before narrowing our review to focus on the evidence of the effectiveness of the arrangements that apply

to coal mines in Queensland specifically. We could find no directly relevant and robust research that has properly evaluated this situation and therefore in this section we first examine the regulatory requirements on representative worker participation in arrangements for OHS management in Queensland coal mines and note points of similarity and difference with those applying elsewhere. We then consider literature that has offered commentary on the effectiveness of the regulatory requirements along with the findings of research on mining more generally in order to help to identify the key issues which we aim to explore in our own study of these matters.

This leads us to the presentation of our own preliminary empirical study of the present experience of worker representation on OHS in Queensland coal mines, the subject of the remainder of the report. In Chapter 4 we outline the methods adopted in the study. Essentially, we have used a mixed-method approach in which, as well an extensive review of the literature, we have:

a) Analysed documentary evidence of the activities of worker representatives in a selection of Queensland coal mines during the last 15 years and,
b) Undertaken: (i) a number of in-depth interviews with a sample of site safety and health representatives (SSHRs), all three current industry safety and health representatives (ISHRs), two former ISHRs and a senior mines inspector; and (ii) some non-participant observation of SSHR training.

In the case of SSHRs our analysis has focused on their role in injury and ill-health prevention, including their main activities, perceived outcomes, and their relations with workers, managers, inspectors and others. We pay particular attention to their perceptions of the support received from ISHRs, as well as considering other sources of support and the extent to which they receive time off to undertake functions, receive training etc. For the ISHRs, the evidence from the documentary analysis and in-depth interviews enables us to address their role in injury and ill-health prevention, including the activities they undertake and the outcomes they perceive them to have. Through our analysis of the OHS documentation from the selected mines we are able to scrutinise the perceptions of the representatives against the background of documented actions. ISHRs relations with managers, and their other activities, including the support they provide for SSHRs and their work with the industry more generally, including their input to government policy and liaison with the inspectorate, are also investigated.

We are concerned with understanding how the regulatory provisions shape the activities of both types of representative, how statutory powers are used, and how useful they are found to be. We consider the supports and constraints to the roles of SSHRs and ISHRs, as well as the challenges they encounter and what they perceive would be necessary to help make things work better.

The findings derived from our mixed-methods approach allow us to present an evaluation of the effectiveness of the arrangements for worker representation on OHS in Queensland coal mines and to throw some light on 'what works and why it works'. We discuss the strengths and weaknesses of the arrangements for representative participation and the roles of both the ISHRs and SSHRs. We situate this within a wider discussion of the evidence for the role and effectiveness of worker representation in arrangements for OHS management and the preconditions for its success. This discussion includes an account of problems identified in the present research relating to the high turnover of managers, issues with time off and facilities, the role of regulation, including the appropriateness of the regulatory provisions, and further allows some comparison with measures in the harmonised Work Health and Safety Acts. In situating these issues in relation to the wider literature we are able to comment on how the system in place in Queensland coal mines compares with a more global view of worker representation in OHS as well as the extent to which it supports existing documented views concerning its efficacy.

Our conclusions concern the role and effectiveness of the worker representatives whose activities have been the main focus of the study, the efficacy of the statutory arrangements that provide the regulatory basis for these activities,

the support for their activities and the barriers to them in practice, as well as the implications these have for the possible reform of the regulatory arrangements that are currently in place.

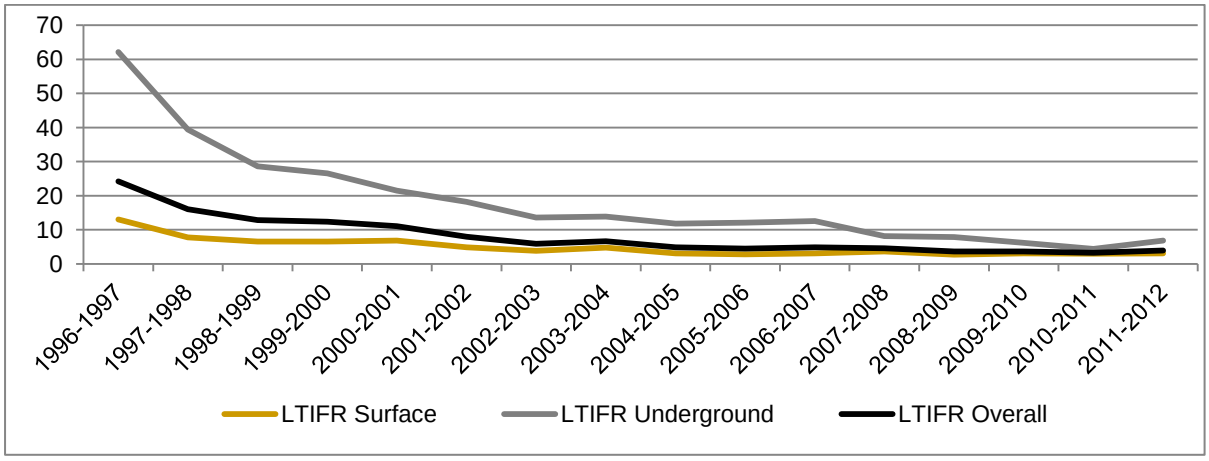
2 Health and safety outcomes and the practices that lead to them in the coal mines of Queensland

Measures of health and safety outcomes in coal mining in Australia during the period broadly embraced by our investigation suggest that while there was improvement in lost time injury and in fatalities, especially during the late 1990s and early 2000s, this improving trend has slowed in recent years both in Australia generally and in Queensland specifically, while man hours worked have increased, in particular in the last two to three years (Figures 2.1 and 2.2). As Gunningham and Sinclair observe concerning mining in the state:

> *Over the five years to 2008/09, a broad range of indicators (these include a combination of severity, duration and disabling rates for both lost time and disabling injuries, covering both coal mining and mining in general) have either held relatively steady or shown only gradual improvement. … Over the same period for coal and for mining in general, Queensland fatalities have shown no clear trends but there has been an upward trend in the permanent incapacity frequency rate.*
> (Gunningham and Sinclair, 2012:15-16)

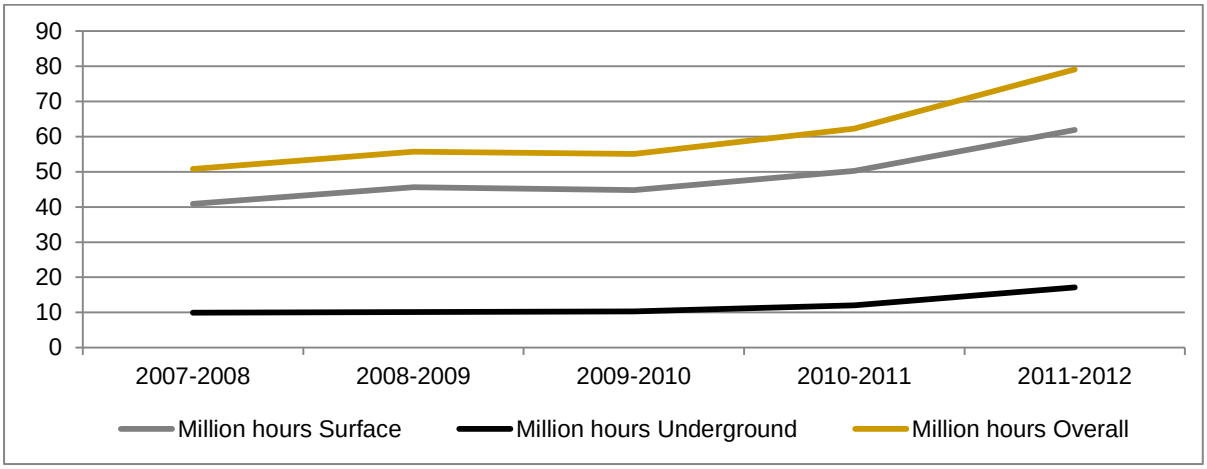
This chapter of the report is in two parts. The first part presents an outline of the general picture of health and safety outcomes in coal mines, drawing on published literature reviewing coal mine health and safety outcomes in a variety of countries in recent years. We compare this picture with the available evidence of trends in OHS outcomes in coal mining in Queensland during the same period. This allows both an understanding of the extent to which the approach to managing the risks to safety and health in coal mining in Queensland has been successful and also provides an indication of the continuing challenges to improvement experienced in the industry. In the second part of the chapter the approach to regulating the management of OHS risks in coal mines is explored. In particular we examine the broad character of the approach and the type of management systems for health and safety that have been mainly adopted in the industry. Referring to studies of the strengths and weaknesses of such systems in Queensland and more generally, we pose some questions concerning the compatibility of these approaches with the arrangements for worker representation on health and safety that are required by law in the Queensland mines.

Figure 2.1: Lost time injury frequency rates per million hours worked for Queensland coal mines 1996/1997 to 2011/2012*



*Data source: Queensland Mines and Quarries Safety Performance and Health Reports (2000 - 2001 through to 2011 - 2012)

Figure 2.2: Hours worked in Queensland coal mines 2007/2008 to 2011/2012*



*Data source: Queensland Mines and Quarries Safety Performance and Health Reports (2007 - 2008 through to 2011 - 2012)

2.1 Some features of health and safety outcomes in coal mines

Mining is correctly regarded as a high hazard industry. Its reputation is built on a litany of catastrophic events stretching back hundreds of years. In Australia notable disasters include those at the New Australia Gold Mine, 1882; Bulli colliery, 1887; Mount Kembla, 1902; Mount Lyell, 1912; Mount Mulligan, 1921; Bellbird colliery, 1923; Collinsville, 1954; Box Flat, 1972; Kianga, 1975; Appin colliery, 1979; Moura No.4, 1986 and Moura No.2, 1994. Even disregarding its propensity for disaster (unmatched by any other industry with the exception of maritime transport), mining has also been marked by a high incidence of fatal injury. For example, notwithstanding improvements over time, US and Australian data show that mining remains amongst four occupations with an incidence of fatal injury conspicuously higher than all other industries – the other three industries being road transport, construction and forestry/fishing/farming (Bureau of Labor Statistics, 2013; Safe Work Australia, 2013).

Mine workers can encounter an array of hazards capable of causing fatal injuries including fire/explosions; inundation/inrush of water or materials (and drowning from other causes); falls of ground; outbursts of poisonous gas; contact with dangerous machinery or equipment (including transport incidents and pressure vessel explosions); electrocution; falls from height; and entrapment underground or in confined spaces. Coal mining is, in general, more hazardous than metalliferous mining because the material being mined is inflammable (and may spontaneously combust) and more unstable; the gases associated with mining coal (most notably methane but also including others like hydrogen) can explode; and mine fires can be propagated by accumulations of highly inflammable coal dust. Fire and explosion have long been and remain the most common sources of mass fatality incidents in coal mines. Accumulations of noxious gases (including carbon monoxide arising from spontaneous combustion often referred to as a heating) or noxious gases collecting in faults and expelled by pressure (outbursts) can also cause death. Underground coal mining is more dangerous than open cut mining due to the problems of confinement. However, open cut mining still encounters most of the hazards just mentioned as well as other hazards such as the failure of dams and, if anything, greater potential for transport incidents involving collisions between vehicles and between vehicles and pedestrians, as well as vehicles slipping off roadways or tipping points (and sometimes falling hundreds of metres in large open cut pits).

As noted earlier, the shift to process standards has not meant the abandonment of specification standards. Rather, prescription has been retained with regard to well-known major hazards (responsible for numerous mine worker deaths over the years) and known effective measures in relation to monitoring and controlling these

hazards (e.g. setting maximum methane levels, requiring fire suppressing machinery, requirements to notify specified events etc.). What the Queensland (and NSW) regimes also do, however, is integrate these requirements within the broader framework of a process/systems approach (e.g. they are incorporated into major hazard plans developed by a mine and then monitored and enforced by the inspectorate). These regulatory regimes were introduced into both Queensland and NSW in late 1990s (and further strengthened subsequently) in response to catastrophic disasters (the Moura No. 2 mine explosion in 1994 in Queensland and an inrush of water at the Gretley colliery in NSW in 1996). In both states the implementation of the new regime (especially inspectorate oversight) was strengthened following critical reports in the mid-2000s. While other Australian states (like Tasmania and Western Australia) also overhauled their laws, these changes were more modest (including worker participation provisions) than Queensland and NSW. Drawing on an international comparison of mine regulatory regimes the Pike River Royal Commission found that Queensland and NSW represented world's best practice in mine safety regulation and they were subsequently used as the template for the complete overhaul of New Zealand's mine safety legislation (including requirements for major hazard plans and both ISHRs and SSHRs).

The hazards just mentioned, along with a number of others, are also responsible for serious (acute and chronic) non-fatal injuries in mines, including amputations and crushing resulting from contact with moving machinery; slips, trips and falls; and sprains and strains (Biswas and Zipf, 2000; Karra, 2005; Burgess-Limerick, 2011). Heat exhaustion and sun stroke (in open cut mines) as well as fatigue are additional safety issues.

Mining also entails serious risks to health. Dust diseases, including silicosis amongst metalliferous miners and pneumoconiosis or black lung amongst coal miners, were responsible for the deaths of thousands of mine workers in Australia alone in the late 19th and early 20th century. While these dust hazards have been mitigated in Australia and other rich countries (though note that post-mortems found that a number of the victims of the Upper Big Branch mine disaster in the USA in 2010 showed evidence of dust-related lung damage), miners are exposed to other harmful substances, most notably diesel fumes, which are now listed as a human carcinogen (see, for example, Stewart et al, 2012). Reflecting imbalances in health and safety more generally, the health effects of mine work are less well recorded than injuries (Quinlan et al, 2010). The increased use of contract workers together with workforce turnover in the mining industry (and at particular mines) make it difficult to track the long-term health effects of exposure to harmful substances, long hours and other health hazards. Mines are required to monitor conditions and mine inspectors and health and safety representatives also routinely monitor conditions in mines pertaining to health and other risks (such as recording ventilation and dust levels).

While increased attention is being given to health issues and a more elaborate set of OHS outcome indicators is being used for at least some mining operations in Australia, for many years the key safety performance indicators used in the industry were lost time (including fatalities) and medically treated injuries. While injury frequency rates have value in preventing routine injuries they are, as incidents such as the Moura mine explosion in 1994 and the Beaconsfield mine incident in 2006 demonstrated, of little value in preventing low frequency high impact events such as fatalities and disasters (Hopkins, 2000). Indeed, there has been some recognition of this within the industry itself, most apparent in the fact that the decline in lost-time injuries in mining was not accompanied by a proportionate decline in fatalities (Towsey, 2003). Nonetheless, the influence of behaviour-based safety within the mining industry and its focus on unsafe acts or behaviours has not helped because these approaches offer at best a limited insight into low frequency high impact events. Workers' compensation claims data are also better suited to tracking 'routine' injuries of the more serious type.

There is evidence that the need to look to outcome measures other than lost time and medical treatment has been better understood by mine safety inspectorates. In particular, mine inspectorates recognise that near miss/near hit

incidents with the potential to be a lot more serious (what in Queensland are termed high potential incidents or HPIs) should form an important element of OHS outcome performance, especially when it comes to preventing fatal/catastrophic events. This is because past investigations have revealed that such incidents can and have been the precursor to a fatal event. In other words, HPIs are good predictors or warning signs of the potential for fatal incidents. This is not a new connection. Mine health and safety legislation in Queensland and elsewhere typically sets out a range of incidents (excessive methane levels, falls of ground, ignitions, machinery faults and the like) which must be reported to the inspectorate (and also to the site and industry safety representatives in the case of Queensland). Australian mines also typically record near misses, including HPIs. The critical issue is what use is made of this information. In this regard, the mines inspectorate in Queensland (and elsewhere like NSW) has become more proactive in reviewing reports, visiting mines following an incident to ensure an adequate investigation is carried out and suitable remedial measures are implemented, and following up on interventions more generally. Failure to report a HPI or to do so in a timely fashion is regarded as a serious breach of mine health and safety legislation which may lead to serious penalties being imposed (including suspending the mining operation for a period of time) or at least threatened. The inspectorate will also track HPI trends over time to gauge a mine's performance and inform management of incidents at other mines which raise issues requiring attention. In some cases a single incident will be of sufficient magnitude to warrant significant follow up, whereas in other cases it may be a worrying trend or the failure of investigation or remedial measures to address root causes (for example, repeatedly attributing HPIs to a failure in training). Inspectorates also collate data on HPIs across the industry to identify trends with regard to various HPIs, for example falls of ground.

As will be noted later in this report, the higher profile of these incidents, and legislative requirements to report them, has also meant that site and industry safety representatives are notified and respond to HPIs, including becoming involved in the investigation, monitoring responses and where it is felt justified, even suspending operations.

2.2 Health and safety regulation and management

The substantial improvements that occurred in Australia (especially Queensland and NSW), especially in safety outcomes, in the period from the 1990s onwards coincided with a shift in the approach embraced by both external and internal regulation of health and safety in the coal mining industry. The results of the approach and the reasons for them have been favourably compared internationally (see, for example, Yang (2012) for comparison with the US). Characteristic of this change was a greater focus on the *process* of managing health and safety as opposed to the introduction and maintenance of specification standards. In such process-based approaches the central elements of concern are the management systems and corporate architecture used to achieve improved health and safety outcomes. They are customarily accompanied by more prominence of aspirations towards improvement in OHS outcomes in corporate policy statements and in the pronouncements of corporate leadership (such as 'zero harm' objectives in corporate mission statements, and notions of greater centrality for health and safety in organisational arrangements). Management strategies attendant to such corporate efforts emphasise greater accountability for health and safety performance at all levels of management and supervision and a greater focus on changing the attitudes and behaviours of workers to achieve safer work practices, leading to measurable improvement in safety outcomes. Such approaches also pay considerable attention to monitoring and evaluation, continuous improvement and worker engagement. It is with the latter that we are primarily concerned in this report — but, as the review of the research literature on this subject in Chapter 3 makes clear, not only are forms of such engagement varied, but one precondition for their effectiveness is the degree of support they receive from organisational management. An important issue, therefore, is the extent to which the 'new' approach to health and safety

management strategy evident in Queensland coal mines during the past 15 years relates to and integrates representative forms of worker participation in its approach.

In parallel with these developments have been those taking place external to the organisation in both public regulation and in the bodies responsible for developing voluntary standards. While it is sometimes difficult to determine the order of their influence, it is obvious that external and internal developments in both voluntary and compulsory approaches to process-based regulation of health and safety arrangements are related and have an effect on one another. For example, an emphasis on OHS management systems in the strategies of coal mining corporations in Queensland is clearly reinforced by the same emphasis in current approaches to regulation. Moreover, the scrutiny of company OHS management systems by regulatory inspectors and their use as indicators of compliance with regulatory standards clearly serves to reinforce their adoption by the companies concerned — even if they claim to have adopted them independently of public regulation. The shift to process-based regulation in legislative measures in Queensland was heralded by the Coal Mining Safety and Health Act 1999 in which there are several key requirements concerning systematic risk management, including the introduction of safety and health management systems and hazard management plans. Emphasis in the Act is on the control and management of risk and there is an absolute obligation to achieve an 'acceptable level of risk'. This emphasis and the absence of overarching 'general duties' sections in the Act, however, has caused some scholars to suggest that the absence of general duties sections is a significant weakness that should be remedied (Gunningham, 2007).

Safety and health management systems are required by the Coal Mining Safety and Health Act 1999 (see sections 41, 42 and 62) and in the regulations made under the Act (Coal Mining Safety and Health Regulations 2001). Importantly for our purposes, they require that procedures and practices be established in consultation with mine workers. The mine operator is obliged to appoint a senior site executive (SSE) who has responsibility to develop and implement a safety and health management system. The safety and health management system must incorporate risk management practices to ensure the safety and health of persons who may be affected by the mining operation. The management system must be auditable, documented and include an organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, renewing and maintaining a safety and health policy. In particular it must define this policy for the mine and set out a plan for its implementation, state how the mine operator intends to develop capacity to implement the policy, include principal hazard management plans and standard operating procedures, contain a way to measure, monitor and evaluate the system as well as to implement corrective measures and contain a plan for the continual improvement of the system as well as for immediate review in the case of significant change in operations. The regulator must be supplied with a copy and contractors have duties to ensure that both the provisions of the Act and the safety and health management system are complied with in relation to their work.

Characteristic of both the Queensland mining provisions, and the regulation of systematic approaches to OHS management more widely, is the link they make between risk management and worker participation in which not only is there a general requirement concerning worker participation but also specific requirements concerning representative participation detailing, for example, the functions and powers of worker representatives, trade unions, joint safety committees and so on. We will consider these in greater detail in Chapter 3. It will suffice to note here that the 1999 Act and its regulations provide for significant engagement of workers' representatives.

However, a further important point of note in relation to OHS management systems is that the style of such systems does not always wholly embrace such representative forms of participation, but instead may focus more in practice on achieving more direct forms of participation. This is what seems to occur at least in part Queensland coal mines where, as

Gunningham and Sinclair (2012:26) have pointed out, the mining companies they studied all actively pursued worker engagement through a variety of means including: '... regular meetings and consultations between workers and senior mine management (both formal and informal and including WHS [1] committees); worker involvement in risk assessments and accident investigations; feedback through incident reporting and WHS suggestion programmes; and participation in internal audits'. They did so in an environment in which the development of the corporate architecture and systems of OHS management was characterised by a particular approach to worker engagement through the application of Behaviour-Based Safety (BBS). BBS systems strongly emphasise methods of direct participation in which managerial prerogatives and control are maintained in relation to OHS requirements and where the capacity for autonomous participatory action by workers and their representatives may be constrained. Such systems are not necessarily oppositional to forms of representative participation and the two can co-exist effectively within the same organisation; however, an excessive focus on the former may serve to marginalise representative participation (Walters and Frick, 2000; Walters and Nichols, 2007). Moreover, as we discuss on some detail in Chapter 3, while there is good evidence of the effectiveness of representative participation in arrangements for health and safety management, it is far less clear how successful are systems that emphasise other forms of worker participation.

BBS systems for managing health and safety are commonly adopted by large organisations. Such systems are controversial. At the extreme ends of the spectrum of views on their usefulness are those who regard them as a panacea to solve all the problems of preventing injury and ill-health at work, while an opposite, but equally well-established view, sees them more as insidious ways in which some companies try to exert unilateral control over their workforce and avoid making arrangements to facilitate consultation with workers' representatives. There is a substantial literature in which these perspectives are aired (see for example, Dalrymple et al, 1998; Frick et al, 2000; Frick and Kempa, 2011; Hopkins, 2000, 2005a and 2005b; Kogi, 2002; Dejoy, 2005, to name but a few). It points to several main concerns. For example, there are concerns with recording and reporting systems emphasising more visible safety incidents and thus reinforcing an organisation's focus on safety issues at the expense of less visible work-related health. Moreover, most reporting systems are to some extent flawed, with under-reporting or miss-reporting a common experience (Zoller, 2003; Rosenmann et al, 2006). Where improved performance in these matters is a monitored objective, an unintended consequence may be that emphasis shifts to the requirement to produce documented evidence of the activity, rather than remaining focused on the reason for the activity itself, thus leading to both over-bureaucratisation and further distortion of the outcomes (Knudsen, 2009).

An important element in the successful adoption of effective reporting systems as well as other elements of BBS management is the amount of trust that exists between workers and their management concerning their purpose and the use made of the information reported (Conchie et al, 2006). Where trust is low, as Gunningham and Sinclair (2012) have argued to be the case in coal mines, research evidence indicates that outcomes are likely to be poor. This is even more the case in relation to monitoring safe behaviours. Such monitoring and its encouragement are fundamental to BBS programmes and researchers have noted it to be much in evidence in the management of safety in coal mines. But where monitoring unsafe behaviour, and requiring workers to monitor and report the unsafe behaviour of other workers, takes place in situations in which trust between workers and managers is already low, there is a likelihood that it will fail to achieve the beneficial effects intended. Indeed, as Hopkins (2005a) concludes in relation to behavioural safety programmes generally: 'Where such distrust exists it is pointless for employers to seek to introduce such programmes. The evidence is that they will fail.'

The limitations of BBS management are also displayed in its approach to the investigation of accidents and incidents. Research literature

[1] WHS — Workplace Health and Safety.

indicates that the focus of accident and incident investigation in such programmes tends to be at the point at which the accident occurred. That is, it establishes the unsafe behaviour that was its proximal cause. Yet virtually all of the serious literature on injury and ill-health prevention argues for two basic principles that should apply in any investigation of a harmful incident if its causes are to be properly understood. The first is that there is seldom a single cause of an incident leading to injury or death. Such incidents are the result of multiple-causality and to understand them properly requires investigation of deeper causes including issues of work organisation and payment systems[2] (see, for example, Bohle and Quinlan, 2000; Hopkins, 2000 and 2005b; Nichols, 1997; Perrow, 1984; Reason, 1997). Second, there is a widely accepted hierarchy of control for addressing prevention in which the most effective control is to entirely eliminate the hazard in question. Further down the hierarchy, in order of decreasing effectiveness, come engineering controls, still further down are managerial and administrative control and the hierarchy ends with behavioural 'safe person' requirements, to use personal protective equipment (PPE) and follow safety procedures, that are placed on individuals. These are acknowledged to be the least effective form of control, yet they are the ones often perceived to be most emphasised by BBS management systems.

In summary, Frick and Kempa (2011) write of BBS systems:

> *Safety is given much more attention than health, despite the fact that diseases cause far more ill-health than accidents do. The prevention described more often revolves around control of 'safe' procedures than the prescribed upstream prevention of eliminating risks at the design stage. And the worker participation described in these examples is more a top down communication on why and how to obey management safety procedures than a genuine dialogue between management and workers on ends and means in a MS [Management System] which aims to reduce occupational risk.* (Frick and Kempa, 2011:10)

This description resonates well with the systems described by Gunningham and Sinclair in their (2012) study, in which they argue persuasively that the absence of trust represents a major obstacle to further improvement of OHS systems and outcomes in Australian coal mines, including those in Queensland. As we detail in Chapter 5 it is also one with which the ISHRs and SSHRs interviewed in the present study were familiar.

2.3 Conclusions

This section demonstrates that while data on OHS outcomes in Queensland coal mines showed a distinct improving trend that can be correlated with moves towards the introduction of more systematic approaches to OHS management in mines, this trend has slowed in recent years. Researchers have suggested that part of the reason for the lack of continued progress may be found in the limitations of the health and safety management systems in place to achieve the desired continuous improvement. They have variously argued that these limitations result from the combined effects of several main elements including: the limited corporate level understanding of what is required to operate management-based regulation exemplified by systematic OHS management; the inertia of middle management and the unwillingness of line management to take responsibility for implementing OHS management systems, especially in situations in which mine management express distrust of corporate level management; and general managerial inflexibility alongside organisational restructuring in which decentralisation is prioritised.

All these factors operate in an organisational climate in which there is limited trust between workers and management resulting from a long history of conflict in labour relations which,

[2] For example, the Royal Commission into the Pike River mine explosion found a bonus payment scheme (which reduced as time targets weren't met) contributed to the incident by encouraging mine workers to subordinate safety to production, including over-riding methane trip meters on machinery.

according to Gunningham and Sinclair (2012) does little to promote the participative engagement in OHS management which is widely held to be an important element of the successful application of systematic OHS management. They also 'emphasise the fact that although the industrial relations history of the mining industry is one salient factor, there is a variety of other *mine-specific factors*[3] that have also played important roles in nurturing mistrust' (2012:209). This latter element is of interest in the present research for, as we document in the following Chapter, research in many other sectors has found the will and capacity of the management of organisations to engage with and support arrangements for the representation of workers interests in OHS to be among the most important prerequisites for its effectiveness. If, as we have pointed out above, the kinds of management systems adopted in the Queensland mines, in which behaviour-based safety strategies are emphasised, are themselves counterproductive in stimulating trust between workers and managers, this in turn may contribute barriers to effective representative participation. In this study we are, therefore, particularly interested in exploring how these seemingly contradictory strategies for achieving improved OHS support or limit the effectiveness of the forms of representative worker participation required by law in Queensland coal mines.

To understand these issues in context we first turn to the wider evidence of the effectiveness of systems for representing the interests of workers in OHS and examine what the research literature has to say about the preconditions for the success of worker representation on OHS in general and in coal mining in particular.

[3] Emphasis in the original.

3 Representative participation on health and safety — experience elsewhere and the situation in Queensland

Before exploring the particular situation in Queensland coal mines, we think it is helpful to review what is known about worker representation on health and safety more widely, especially concerning the operation of such arrangements, analysis of their effectiveness and what previous research suggests supports or constrains it in practice. Such knowledge is helpful in explaining *how* things work in Queensland and more significantly *why* they work in the way they do, as well as also perhaps understanding how they might work better. Therefore, this chapter first presents a brief review of the key findings drawn from experiences in other industries and countries. It then considers findings on worker representation on health and safety in coal mines, before turning to the situation in Queensland.

3.1 Representative participation in arrangements for health and safety management

Worker representation on health and safety has been the subject of statutory arrangements in some countries for many years. Such requirements existed in most national jurisdictions by the end of the 1980s and were also given further international effect by being included in International Labour Organisation (ILO) Convention 155. It is widely acknowledged that, along with employers' obligations and the deployment of competent expertise on OHS, they were among the central tenets around which process-based requirements concerning systematic management of OHS were developed from the 1980s onwards. Statutory provisions in different countries are largely based around a similar model in which workers and/or their trade unions are given rights to select workplace representatives to represent workers' health and safety interests and in some cases to establish further arrangements for representation through joint health and safety committees at establishment level. As well as governing the appointment of such representatives and/or joint committees, the provisions generally include measures establishing their rights to carry out inspections and investigations, to receive information and make representations, as well as to receive appropriate time off and training to enable them to undertake these activities. Employers have obligations to facilitate and support such arrangements.

Statutory measures generally provide for a number of minimum legal rights for worker representation through:

- Selection of representatives on health and safety by workers
- Protection of representatives from victimisation or discrimination as a result of their representative role
- Paid time off to be allowed to carry out the function of health and safety representative
- Paid time off to be trained in order to function as a health and safety representative
- The right to receive adequate information from the employer on current and future hazards to the health and safety of workers at the workplace
- The right to inspect the workplace
- The right to investigate complaints from workers on health and safety matters
- The right to make representations to the employer on these matters
- The right to be consulted over health and safety arrangements, including future plans
- The right to be consulted about the use of specialists in health and safety by the employer
- The right to accompany health and safety authority inspectors when they inspect the workplace and to make complaints to them when necessary.

In some countries there are other rights, such as the right to seek assistance, or be present at an interview between a worker and an employer or inspector, and additional measures such as the right to stop dangerous work or, as is the case in Australia, to serve provisional improvement notices on employers. In some countries there are minimum sizes of workplace below which rights to representation on health and safety do not apply, while conversely, in others there are measures explicitly supporting peripatetic activities of representatives in representing the interests of workers in such small and micro-sized workplaces.

3.1.1 Worker representation on health and safety — the evidence of effectiveness

The key question concerning these measures is how effective are they? Curiously, much of the research literature on the role and activities of health and safety representatives and joint health and safety committees does not address effectiveness directly. When it does, it tends mostly to focus more on relationships between representation and proxy indicators of health and safety outcomes, such as 'good management practices', than on objective measures of outcomes, such as work-related injuries, ill-health or mortality. There are some good reasons for this, which are to do with the availability, reliability and interpretation of data.

Studies that consider the relationship between representative worker participation and better OHS management activities tend to consider such things as the presence of health and safety policies and their communication to workers, provision of improved health and safety information and training, the use of health and safety practitioners, the presence of written evidence of risk assessment, the existence of health and safety audits and inspections, accident investigations and so on. Generally, they indicate that participatory workplace arrangements are associated with improved OHS management practices, and many claim this might be expected to lead to improved OHS performance outcomes. In an early review of this research, which included investigations in the UK (Beaumont et al, 1982; Coyle and Leopold, 1981) and in other countries, (Bryce and Manga, 1985, for Canada; Roustang, 1983; Cassou and Pissaro, 1988, for France; Assennato and Navarro, 1980, for Italy), Walters (1996a) found they showed an overall association between the presence of arrangements for worker representation and improved health and safety management practices. A series of early Australian studies also generally supported the positive relationship between the presence of representative participation and better health and safety management arrangements as well as raised awareness of health and safety matters (Biggins et al, 1991; Biggins and Phillips, 1991a and 1991b; Gaines and Biggins, 1992; Biggins and Holland, 1995; Warren-Langford et al, 1993). In Canada, one study found that non-unionised workplaces had lower levels of compliance than unionised ones which had procedural requirements for joint health and safety committees and that, in addition, worker members of joint health and safety committees who had completed core certificated training were more likely than those who had not begun such training to report improvements in a wide range of OHS conditions (SPR, 1994:33, 56). Studies in the UK further indicated that (trained) representatives participated in and stimulated workplace OHS activity through engagement with management structures and procedures, tackling new OHS issues and 'getting things done' to help resolve health and safety problems (Walters et al, 2001).

In small workplaces, regional health and safety representatives have been found to stimulate 'activation' of health and safety as well as engaging in more prescriptive aspects of their tasks such as inspecting workplaces, as is shown in reviews of the Swedish experience (Frick and Walters, 1998; Walters, 2002a). In the UK, the evaluation of the Worker Safety Advisor pilot scheme provided detailed evidence on how 'the activity of Workers' Safety Advisors made a difference to perceived standards of health and safety practice at small workplaces' (Shaw and Turner, 2003). Such findings are further supported by reviews of experiences in other European countries, such as Norway, Italy and Spain, where the engagement of trade unions and peripatetic workers' representatives have been found to be influential in raising awareness and contributing to the establishment of better

OHS arrangements in small firms (Walters, 2001 and 2002a).

There is also evidence that the presence of workplace trade union organisation influences the enforcement of OHS regulation (for example, Robinson, 1991; Weil, 1991 and 1992).

The Europe-wide ESENER (2009) project broadly confirmed the positive association between the presence of arrangements for worker representation on OHS and management procedures to support prevention. Its findings concerning perceptions of effectiveness of arrangements for formal representation suggest that health and safety representatives and joint health and safety committees are influential in promoting good safety management practices (ESENER, 2009). Detailed secondary analysis of the survey results lent further support to conclusions concerning the benefits of the presence of arrangements for worker representation, not only in relation to general workplace risk management, but also in terms of managing psychosocial risks more effectively and supporting the involvement of individual workers in this process too (Walters et al, 2012).

Research attempting to establish a more direct relationship between the role of worker representation and indicators of improved health and safety performance, such as injury or illness rates, includes studies of specific exposures, where incidences of ill-effects have been shown to be greater in non-unionised situations. For example, Fuller and Suruda (2000) show that deaths from hydrogen sulphide poisoning were more frequent in non-unionised workplaces than unionised ones in the United States. Further examples include a comparison of health and safety outcomes for unionised and non-unionised construction workers in the US (Dedobbleer et al, 1990) and Grunberg's (1983) early work on safety in manufacturing in Britain and France. Both studies indicated that better standards of health and safety were achieved in unionised workplaces than in non-unionised ones.

Older studies of joint arrangements and their relationship to OHS performance present somewhat mixed findings concerning the beneficial effects of such arrangements. In the US, for example, Cooke and Gautschi (1981) researched manufacturing plants in Maine and found that joint management-union safety programmes in larger companies reduced days lost and that such plant-specific arrangements were more effective than external regulation. Another American study based on manufacturing, this time in New York State, concluded that major safety improvements were less a function of union participation in safety committees than a direct consequence of external regulations (Kochan et al, 1977:72). A comparative study on the North American logging industry found that, although joint safety committees were associated with improved fatality rates, they were only one of a number of factors associated with such improvements. Other factors included training, enforcement and changes in managerial practices (Havlovic, 1991). In Canada, Lewchuk et al (1996) found that where management and labour had some sympathy for the co-management of health and safety through joint committees, the shift to mandatory joint health and safety committees was associated with reduced lost-time injuries. Also in Canada, Havlovic and McShane (1997) concluded that 'there was some support for the idea that structured joint health and safety committees' activities help to reduce accident rates'. A further Canadian study by Shannon et al (1996) found that 'participation of the workforce in health and safety decisions' was one of several factors related to lower claims' rates.

A later study of US OHS committees conducted in public sector workplaces in New Jersey, however, found that 'there was little consistent evidence for any significant effect of the simple existence of a committee on reports of illness or injury cases', but that 'committees with more involvement of non-management members, both in sheer numbers and in agenda setting, are associated with fewer reported and perhaps fewer actual illnesses and injuries' (Eaton and Nocerino, 2000:288-89).

An overview of Canadian work on this subject further suggested that 'empowerment of the workforce' was one of a number of organisational factors consistently related to lower injury rates (Shannon et al, 1997). In an earlier study Shannon et al (1992) had indicated that such

'empowerment' included the presence of unions and shop stewards, union support for worker members of joint health and safety committees and general worker participation in decision-making. A later extensive review of the literature, again conducted in Canada, pointed to 'a correlation between unionisation and the effectiveness of the internal responsibility system' and that joint health and safety committees were 'more likely to be found in unionised workplaces and [to be] more active in those workplaces' (O'Grady, 2000:191). Most recently, Yassi et al (2013) in a wide ranging review concluded that joint health and safety committees (JHSC) are only effective where 'empowerment mechanisms' ensure workers have a real voice. At the same time they argue that JHSCs are not a substitute for effective regulation, and note that the 'only strong conclusion that can be made is that JHSCs cannot take the place of regulation and government enforcement due to the nature of power relations in the workplace.'

Exceptionally in the UK it has been possible to undertake multivariate regression analyses of the relationship between various workplace employment relations' structures, such as the presence of trades unions, safety representatives and safety committees, and the incidence of injury and ill-health, by using data collected in the Workplace Industrial Relations Surveys (WIRS), which later became known as the Workplace Employment Relations Surveys (WERS) 1990-2004. What can be achieved with these methods is somewhat constrained by the range and quality of available data. Moreover, such multivariate analyses also face methodological problems. For example, the effects of trade unions on health and safety at work are difficult to disentangle because of the possibility that union presence may itself increase reporting, at least for certain types of injury, and because adverse conditions of work may bring trade unions into workplaces and result in the appointment of health and safety representatives in the first place (Nichols, 1997). Either one of these processes could lead to the result that trade union presence correlates with higher injury rates, not vice versa, and they are probably responsible for several British studies using the WIRS/WER achieving mixed and inconsistent results. These include, for example, Reilly et al 1995 (where a strong union effect was found) Robinson and Smallman 2000 (where this effect extended to health issues) and Fenn and Ashby 2004 (who, in contrast, found no effect). Studies from some in other countries that used similar surveys have had similarly mixed results (such as, Currington, 1986, in the United States; and Wooden, 1989, and Wooden and Robertson, 1997, in Australia).

Such lack of consistency prompted Walters and Nichols (see Nichols et al, 2007; Walters and Nichols, 2007:30-40) to conduct a statistical re-analysis of 1990 WIRS data as part of their larger study to investigate the effectiveness of health and safety representatives in the UK (Walters et al, 2005). This sought to improve technically on previous multiple regression analyses. [4] Their results suggest with a fair degree of robustness that, as judged by serious injury rates in manufacturing, it is significantly better to have health and safety committees with at least some members selected by trade unions than to have such committees with no members selected by trade unions, which further suggests that there is a mediated trade union effect on safety; and that the presence of health and safety representatives also has a beneficial effect – and this after controls had been made for a number of variables including the percentages of manual and female employees, industry and region, union density and also size of establishment (which, as in many other studies, was found to have a negative relation to injury rate).

Such findings are confirmed and further developed in a recent analysis of data from WERS 2004 (Robinson and Smallman, 2013). Its authors conclude:

> *The empirical modelling of workplace injuries also reveals that representative participation matters. Participation is associated with lower levels of injuries*

[4] Briefly, as compared to Reilly et al 1995, they reduced the large number of regional and industry dummies to make a more robust model; reduced the number of independent variables, some of which rested on fine and unclear distinctions; used a Poisson count method instead of a Cox zero corrected method (which entailed adding a bit to the many zero observations); and tested for endogeneity and interaction effects.

> *and conversely, non-participation is associated with a higher incidence of injuries… this adds to the empirical literature on institutional arrangements by linking union effectiveness to the level and access to participation they enjoy vis-a-vis management. Specifically this perspective reveals that some participation is better than none, higher is better than lower and that the alignment of voice between management and unions is fundamental to success.*
> (Robinson and Smallman, 2013:689)

In sum, therefore, the weight of the evidence on the effectiveness of worker representation on health and safety is in line with the idea that better health and safety outcomes are likely when employers manage OHS with representative worker participation and that, in various ways, joint arrangements, trade unions and worker representation on health and safety at the workplace are likely to be positively associated with such outcomes.

3.1.2 What supports effectiveness?

A problem with such statistical analysis of outcomes such as injury and fatality data, however, is that it stands at some distance from the daily experience of representing workers' interests at the workplace. It can tell us relatively little about the quality of experiences in this respect, or the kinds of conditions that support or constrain these observed positive effects on health and safety outcomes. To better understand this we need to turn again to more qualitative studies.

These frequently point to the importance of training in making representatives more effective and indicate a strong correlation between the nature and level of activities in which trade union safety representatives are engaged and their experience of training (see, for example, Beaumont et al, 1982; Coyle and Leopold, 1981; Biggins and Phillips, 1991a and 1991b; Warren-Langford et al, 1993; SPR, 1994; Raulier and Walters, 1995; Walters, 1997; Walters, 2001; Walters et al, 2001; Walters and Kirby, 2002). But there are other important supports for their activities too. In early studies Walters (1987) and Walters and Gourlay (1990) showed the importance of management commitment to participative arrangements for health and safety in supporting the actions of safety representatives, as well as the role of industrial relations' factors such as the extent of trade union workplace organisation. They argued, along with a host of other researchers in this field then and subsequently, that their qualitative studies suggested that good industrial relations' factors were helpful in facilitating co-operative approaches to improving health and safety. This acknowledges that the practice of participation on health and safety involves the interplay of power, trust and responsibility, the balance between which helps determine the nature and direction of OHS outcomes in the same ways as it does in relation to other aspects of representation and consultation on conditions of employment.

In a large study in the UK, Walters and Nichols examined the detailed practices of worker representation and the factors that supported and constrained them (see also Walters et al, 2005; Walters and Nichols, 2006; Nichols et al, 2007; Nichols and Walters, 2009). As a result they were able to identify a set of preconditions necessary for effective worker representation and consultation on health and safety, which they also found supported by studies previously undertaken in other sectors and countries. These included:

- A strong legislative steer
- Effective external inspection and control
- Demonstrable senior management commitment to both OHS and a participative approach and sufficient capacity to adopt and support participative OHS management
- Competent management of hazard/risk evaluation and control
- Effective autonomous worker representation at the workplace and external trade union support
- Consultation and communication between worker representatives and their constituencies.

Where combinations of these preconditions were found, their study showed that worker

representation and consultation made a significant contribution to improved health and safety arrangements, awareness and performance, thus confirming observations reported in earlier studies. For example, statutory rights are clearly important and in Walters' and Nichols' case studies both health and safety representatives and managers based their ideas on what they were entitled to do and how they were supported in their role, and on their knowledge of the requirements of the statutory provisions governing them. Representatives also made reference to these provisions when requesting additional facilities or information to enable them to conduct their representative functions. There were seldom cases where representatives had undertaken activities that went beyond these requirements. Similar findings are reported in studies in other countries (see, for example, Frick, 2009; Coutrot, 2009; Garcia et al, 2007).

Clearly, the question of regulatory compliance is also important in relation to statutory provisions for worker representation and consultation. Here for the most part the international evidence suggests that, while labour inspectors may be prepared to advise on the operation of these measures, they do not generally seek to enforce them (see, for example, Walters and Nichols, 2007 and 2009). Sometimes inspectors do not even consult with workers' representatives when they carry out inspections (Walters et al, 2011). This is, of course, another reason why the strong presence of trade unions in workplaces to which these measures are applied is important since it is possible, through this presence, to ensure that appropriate participative arrangements are followed, and further that workers' representatives are consulted and involved when regulatory inspections take place (see also Weil, 1991).

However, while statutory rights and support for their application in workplaces are important preconditions for successful representative participation, on their own they are insufficient guarantees of effectiveness. Researchers have pointed to the importance of management will and capacity in making for the success of self-regulatory strategies that characterise modern approaches to regulating risk management at work. Such employer 'will and capacity' are essential in driving the 'prevention triangle' of competent employer engagement, worker representation and consultation and regulatory inspection, widely argued to be the basis for effective management of workplace risks in all sectors, including coal mining (see, for example, Dawson et al, 1988). Many studies of worker representation in health and safety have emphasised the considerable importance of the full engagement of management in facilitating representation and consultation on health and safety if it is to operate effectively (discussed at some length by Walters and Frick (2000), for example, with reference to previous studies). Other studies of the activities of joint health and safety committees have pointed to the important role of senior management leadership of the committee, identifying, for example, the need for representation on the committee of sufficiently senior and appropriate levels of management to help to ensure that decisions made by the committee are subsequently acted upon (see, for example, Kochan et al, 1977; Coyle and Leopold, 1981).

In all the cases studied by Walters and Nichols (2007) the importance of managerial support was clearly in evidence. Where representational and consultative practices on health and safety issues worked to the satisfaction of the health and safety representatives and the workers involved, they were where there was also strong evidence of a conspicuous commitment to such approaches on the part of senior management. More recently the same strong association was reported in the Europe-wide ESENER survey (Walters et al, 2012). Arrangements to facilitate consultation in these cases included:

- Properly constituted joint health and safety committees at site and departmental levels
- Accountability of managers to the joint health and safety committee
- Engagement of health and safety representatives with health and safety practitioners from the safety, health and environment departments
- Dialogue between local area and line managers within the establishment and health and safety representatives

- The provision of time to undertake health and safety representative functions such as joint health and safety inspections, investigations of workers' complaints, making representations to managers and so on, without loss of pay
- Involvement of health and safety representatives in risk assessment
- Involvement of health and safety representatives in reporting and monitoring on OHS
- Health and safety representatives' access to workers
- Access to training for health and safety representatives.

Walters and Nichols' (2007) research demonstrated that in cases where management commitment to participatory approaches was poorly developed, these kinds of arrangements were either absent or set up in very limited ways. Moreover, workers' perceptions were that OHS outcomes in these situations were poorer than in situations in which such arrangements were operational. Again, a similar finding emerged on a much wider scale in the analysis of the ESENER survey (Walters et al, 2012).

Further process-based pre-conditions supportive of worker representation and consultation on OHS include the presence of effective means of autonomous worker representation at the workplace and the support for it from trades unions outside the workplace, as well as the practice of consultation and communication between worker representatives and their constituencies (Walters and Nichols, 2007). In this respect, Walters and Nichols (2007) note that, while there is seldom any dissent from the notion that worker participation improves health and safety outcomes, what distinguishes worker representation and consultation from employer and management led initiatives to achieve greater 'worker engagement' with health and safety issues is the independence of the former from an employer dominated approach and they point out that there are sound reasons and much evidence, both historical and current, to argue that such independence is valuable.

Arrangements for autonomous representation bring with them opportunities to construct a conceptualisation of occupational risk and its consequences that is grounded in the experiences of workers and which may be different from that of employers and their advisers. As many of the studies cited here attest, workers' representatives benefit from the support of trades unions outside workplaces to develop, sustain and apply this independent conceptualisation in their workplaces. They do so specifically through training delivered by trade unions and through its use of the pedagogical techniques common in labour education. Trade unions play the major role in the provision of training and other forms of support for the majority of health and safety representatives in most countries (Raulier and Walters, 1995) and the advantages of its pedagogical model have been demonstrated (Biggins and Holland, 1995; Culvenor et al, 2003; Walters, 1996b; Walters et al, 2001). Trade unions further support workplace representatives through the extensive and independent OHS information they provide. In these ways they contribute to building and sustaining an understanding of occupational health that is independent of that developed by their employer and which helps to strengthen the knowledge, skills and confidence of representatives to be able to represent the interests of their fellow workers in pluralist consultations with their management.

In summary then, overall the research findings internationally support the view that statutory provisions, and the facilitation of their implementation by management, support effective representative participation, and in a host of both direct and indirect ways, trade union representation plays a key role in improving health and safety management practice and outcomes.

3.2 The situation in coal mines

Despite the acknowledged risks of coal mining, the relatively extensive unionisation of the industry and the longstanding presence of regulatory provisions on worker representation, there is relatively little robust research that directly addresses the operation and effectiveness of these participatory arrangements. In the

following section we first review the findings of such research as exists.

3.2.1 Research evidence on the effectiveness of arrangements for worker representation in coal mines

Research in the US is exceptional in as much as there is a series of research papers concerning the relationship between trades unions and safety outcomes over quite a long period. Early studies in this series present mixed findings on the effects of trades unions and joint arrangements on health and safety outcomes. Appleton and Baker (1984), using data from the 1970s, claimed unions had the effect of increasing accidents. However, this study was subject to considerable criticism concerning the limitations of its method (Bennett and Passmore, 1985; Weeks, 1985). Indeed, a study undertaken for the National Research Council (1982) showed the effect disappeared when analysis focused solely on injuries that were least susceptible to reporting bias, such as fatal and serious injuries. In a later paper focused on the same period Reardon also failed to establish that the United Mine Workers of America had an effect on reducing injuries in coal mines. However, his analysis did not compare union and non-union settings and remains unconvincing.

In contrast, a recent historical study focused on the early part of the 20th century demonstrated that the presence of trade unionism in mining, as measured both by membership and contract coverage, reduced fatal accidents by around 40 per cent — an effect the author further demonstrated to be highly statistically significant. He argued that the 'union effect' probably operated at the mine level by unionised miners supporting one another in refusing to work in unsafe situations (Boal, 2009). This finding is to an extent supported by British qualitative historical research using the testaments of Scottish coal miners (McIvor and Johnston, 2002).

More importantly, however, Morantz's (2011) recent analysis of more contemporary data, which is both methodologically more rigorous than any of the previous studies and also takes account of a much wider set of circumstances, variables and possible influences, concludes that its results:

> *... are broadly consistent with the hypothesis that unionisation improved real mine safety levels (as reflected in traumatic and fatal injury rates) around the turn of the twenty first century; that reporting bias confounds empirical identification of the union safety effect, especially when outcome measures examined include minor and non-traumatic injuries; and that the union safety effect has become more pronounced since the early 1990s.*
> (Morantz, 2011:13)

In short, the research evidence on the effects of trade unions on injuries and fatalities in coal mining in the US is consistent with that for other sectors across a range of countries and demonstrates, as far as it has been possible to do so, that their presence is more likely than not to have a positive effect on health and safety outcomes. However, on the whole, the studies that demonstrate this association in relation to US coal mines are themselves limited to the investigation of possible associations between unionisation and injury rates and do not investigate the how or why such an association occurs.

Findings from elsewhere are more limited. Generally research has not concerned quantitative analysis of large data sets, such as has been the case in the US. Indeed any form of research on the actions of workers' representatives and arrangements for consultation on health and safety in coal mines is scarce and inconclusive. In contrast, in countries in which such arrangements have been in place in mining for some time there is a fair degree of expert opinion concerning their effectiveness. This provides some indications of perceived positive relationships between arrangements for representation on health and safety and improved health and safety practices. In this respect, both the Australian and British antecedents of the statutory arrangements for worker representation in Queensland coal mines are worth a short digression.

3.2.2 Historical observation and commentary on the effectiveness of provisions for worker representation in coal mines

The UK provisions for workers' inspectors had their origins in the Coal Mines Regulation Act of 1872. A further development of these measures in section 16 of the 1911 Coal Mines Act entitled workers in coal mines to appoint two mine workers with at least five years' work experience to inspect the mine in which they worked. The same provisions obliged employers to allow them the facilities to do so. They were entitled to inspect the mine at least once a month, have access to any part of it, to examine statutory safety documentation in this respect and to investigate the causes of accidents. They were further required to report the findings of the mine inspections (but not inspections of accidents) in a record book kept at the mine for this purpose. While there is little historical research on the effectiveness of these measures, observers have generally noted their positive effects. Indeed, their activities caused the 1938 Royal Commission on Safety in Mines to comment:

> *… it was the opinion of the Mines Department that safety can be promoted by the workmen and their representatives taking an active part in matters of safety through the medium of these inspections and suggested as an important matter for our consideration, the question of how such inspections can be made more general and still more effective.*
> (Mines Commission, 1938:140)

The Royal Commission was itself in little doubt of the value of such inspection and the need for its promotion:

> *All the evidence we heard supported the view that periodic inspection of a mine by representatives of the workmen is a desirable safeguard which ought to be encouraged in every way …*
> (Mines Commission, 1938:142)

As Williams (1960) notes, in Annual Reports from 1932 onwards the Chief Inspector of Mines frequently commented favourably on their role, claiming their inspections 'served a useful purpose' (1939:6). Williams quotes the Chief Inspector writing with approval of the inspections undertaken by workmen's inspectors in 1947:

> *All these inspections….made by workmen's examiners are welcomed by and are of considerable value to the Inspectors of Mines and managers for not infrequently they bring to light defects which might otherwise have remained undetected and unremedied and which might well have seriously affected the safety of the mine.*
> (Annual Report of HM Chief Inspector of Mines, 1947:5)

Such expression of approval and support for the activities of workers' health and safety inspectors appointed under section 16 of the Coal Mines Act 1911 on health and safety in British coal mines continued to appear regularly in the Annual Reports of the Chief Inspector in subsequent years.

In addition to the section 16 provisions there were voluntary arrangements known as District Safety Boards that were set up initially under collective agreements between the miners' unions and the coal owners and continued after the nationalisation of the coal industry. They included qualified mines inspectors appointed by the miners' unions who had the right to visit the mines in their district to undertake inspections.

Like the presence of the workmen's inspectors, the coverage of these arrangements was somewhat patchy across the industry as a whole. Williams gives estimates of workmen's inspectors appointed under section 16 covering about 30 per cent of coal mines and compares this with estimates of inspection as a result of the activities of the District Boards in about 50 per cent of mines. He argues that the main reason for this incomplete coverage was employer hostility (Williams, 1960:154), but acknowledges that a further reason was the cost of such arrangements for the trade unions involved. He illustrates this by quoting the words of a miner from South

Wales from a source published in the 1930s [5]— which was one of the more active regions for workers inspections:

> *… we send Workmen's Examiners down occasionally, but our financial position is such that we cannot afford to keep this up.*
> (Williams, 1960:162)

The Mines and Quarries Act 1954 made some modifications to the provisions for representation on health and safety in which an attempt seems to have been made to bring together features of the two systems of statutory workmen's inspectors and voluntary District Safety Boards. Under section 123 it provided that a panel of persons with at least 5 years' experience be appointed by the miners' union for each mine or quarry and it also obliged employers to allow two members of this panel to inspect mines at least once a month. All the members of the panel need not be employed at the mine covered, although when two were inspecting a mine one needed to be employed there. They were also allowed to be accompanied by 'advisers' and to inspect documents, take samples of air, dust or water from the mine, be informed of plans for future work and, in a further development of the previous provisions, were entitled to investigate accidents. Interestingly, like the arrangements under the 1911 Act, there was provision for inspections to be recorded in a book provided for this purpose. Theoretically, therefore, it should have been possible to examine these records to ascertain the role and effectiveness of such inspections, but it appears that such research was never undertaken.

Therefore, published evidence of effectiveness is again limited to expert opinion, but here there is a continuation of positive reports. From 1955 onwards the Chief Inspector, summarising the information to be found in each of the reports of the district mines inspectors, continued his repeated acknowledgement of the usefulness of the inspections by workmen's inspectors. He also reported the overall number that had taken place each year as well as sometimes including information on the number of inspections by (trade union) appointees of the District Boards. This continued until 1978 after which all mention of both types of inspections ceased. As required by the Mines and Quarries Act, the Annual Reports also contained information on Quarries, Metalliferous and miscellaneous mines but there is no mention of workmen's inspections in these mines (even though the section 123 rights applied). Comments in some of the district inspectors' reports indicate that there were few such inspections in these workplaces. Later reports express hopes that following the Health and Safety at Work (HSW) Act in 1974 and the application of the Safety Representatives and Safety Committee (SSRC) Regulations in all workplaces, representation in such workplaces might increase. The reports of the district mines inspectors are more informative on the activities of workers' inspectors than the summary information in the report of the Chief Inspector. There is considerable variation between them with regard to such detail and, even within the same districts, little consistency year on year as to what is included beyond recording the number of inspections, but such information reflects the different kinds of inspections undertaken by workmen's inspectors as well as the proportions of inspections that led to follow-up by the mines inspectors.

The section 123 provisions have remained in force after the demise of the British coal industry following the mines closures and privatisations of the 1980s and 1990s, although it is far from clear how much they continue to be used in the privatised remnants of the industry. The aggressively anti-trade union policies pursued in the privatised coal mines in the UK from the late 1980s (see, for example, the account by Parry et al, 1997) would suggest their use is likely to have been minimal and, as Wallis's (2000) account makes clear, many miners themselves felt that their role and the protection offered for safety was substantially reduced. Ironically, there are signs that recent fatal incidents in British coal mines may have led to a resurgence of employer and inspectorate interest in the supporting role of workmen's inspectors in UK mines (Hazards, 2011). However, the current pursuit of reducing

[5] The quote had originally appeared in Hutt, A, (1933) *The Condition of the Working Class in Britain*, London, Martine Lawrence Ltd, page 24.

regulation on OHS more widely means that the future of the section 123 provisions is parlous. The most likely result of these changes is the merging of the provisions with those under the Safety Representatives and Safety Committees Regulations 1977 and the Health and Safety (Consultation with Employees) Regulations 1996 that apply more generally in other sectors of employment. Whether the enhanced rights for miners' representatives found in section 123 are kept remains to be seen.

This digression on the British antecedents of statutory arrangements for worker representation on health and safety in Queensland is significant in several respects. First, because it suggests that in the UK such arrangements were held to make an important contribution to improved health and safety practice, and demonstrates that claims made to a similar effect in Queensland are shared elsewhere (note too New Zealand also had workmen inspectors and has reinstituted the system based on the Queensland model following Pike River).

Second, there are parallels between the British system and that in Queensland which suggest that in the case of ISHRs, for example, the development of the British equivalent of this role (in the form of full-time inspectors employed by the miners' union who undertook mines inspections on behalf of the District Safety Boards) was regarded as a particularly helpful improvement to the existing system.

Third, acknowledgement of the importance of trade union support for the role of workers' inspection features prominently in observations on the British experience, which again anticipates parallels with current Queensland experiences. We will return to some of these issues in the following discussion of the current debate concerning the system in Queensland.

There is a similar body of historical commentary on the role of workmen's inspectors in the coal mines of Queensland and New South Wales (the system also developed in metalliferous mining, beginning in Broken Hill before being adopted elsewhere in NSW and Queensland). For example, independent of union records the activities of district and mine check inspectors were extensively reported in Australian newspapers. At the time of writing there were well over 9,000 reports referring to mine check inspectors in the digitalised newspaper collection held by the National Library of Australia (trove) covering the period 1871 to 1995 and all states (though the majority of reports relate to NSW and Queensland).[6] The reports refer to elections of district and mine check inspectors; often detailed summaries of their inspection reports; their involvement in health and safety issues including injuries, deaths, disasters and rescue operations; annual reports of safety activities to the union; and also their prominence in local community activities. Newspapers in mining regions, and especially coal mining regions (such as the *Newcastle Herald*, *Maitland Mercury*, *Illawarra Mercury* and *Queenslander*, *Queensland Times*) carried frequent reports (even weekly) of their activities. Check inspectors also feature in the reports of major metropolitan newspapers (like the *Courier Mail* and *Sydney Morning Herald*), both with regard to local activities but more typically with regard to serious safety incidents, health concerns (for example relating to coal dust) and reforms to mine safety legislation.

Check inspectors were elected from the most experienced and knowledgeable miners, especially district check inspectors (a number of early appointees had held the position of union branch president). The progressive strengthening of their statutory recognition and powers over time (and particularly following serious deficiencies identified in the wake of mine disasters) was an indication of growing acceptance of the importance of the role. In addition to the activities already mentioned, on occasion check inspectors were at the forefront of calls for investigation of incidents or conditions at particular mines as well as reviews of legislative provisions (for example those relating to preventing disease in mines). Given their

[6] The number of reports is continuously growing as further newspapers are digitalised and added to the collection. The trove collection also makes reference to other records, including photos, memoirs, biographies and check inspector reports but most of these are not accessible online.

inspection activities and knowledge check inspectors were in good position to identify gaps in regulation or support calls for more wide-ranging reviews of mine safety (such as Royal Commissions) – something government inspectors couldn't do (see for example, *Sydney Morning Herald*, 14 September 1923). It was also not unusual for check inspectors and government inspectors to conduct joint inspections following a serious incident, including assessing hazards or in deciding rescue/recovery efforts.

It is beyond the scope of this report to try and summarise the abundant evidence attesting to the importance of the check inspectors' role and the wide acceptance of this within the mining community that can be found in the newspaper records. Rather, in addition to the foregoing observations several illustrative examples are worth citing. First, in November 1921 the half yearly report of the QCEU check inspector reported on ventilation trends based on 62 inspections of mines in the district. While describing conditions as generally satisfactory the check inspector noted that bad conditions in one mine had been reported to the inspectorate and remedial actions had been taken although conditions would remain hazardous until a new ventilation shaft was completed (*Queensland Times*, 10 November 1921).

Second, with regard to the Bellbird colliery disaster in the Hunter Valley in 1923 a check inspector's report had warned of dangerous levels of coal dust prior to the explosion and check inspectors played an active role in the rescue and recovery efforts, the coronial inquest, and joint meetings with management and government inspectors to consider re-opening the mine (*Maitland Mercury*, 23 September, 1923; *Sydney Morning Herald*, 1 May 1924). Third, union check inspectors were involved jointly with government safety inspectors in assessing the safety of re-timbering activities in the affected area following a gas outburst that killed seven miners at the Collinsville State Coal in Queensland in 1954 (*Courier Mail*, 19 October 1954).

3.3 Perspectives on current arrangements for worker representation in Queensland coal mines

Previous sections of this chapter made plain the evidence to suggest that unionised coal mines may have better health and safety outcomes than non-union ones. However, there is little consideration in this research of the specific contribution of *trade union representatives* to these effects in coal mines and, in particular, of the role of enhanced representational rights such as those found in Australian states, especially Queensland and New South Wales. Assessment of this contribution, while generally positive, is restricted to the opinions and observations of informed participants in regulation such as mines inspectors, trade union officials and OHS experts. A consequence of this is that mining companies continue to question the appropriateness of the actions of mining union representatives on health and safety matters, and the details of statutory measures defining the functions and powers of such representatives remain contentious. Moreover, while there is much to be learned from qualitative studies in other sectors concerning the role of workers' representatives in contributing to such positive effects, as well as the preconditions necessary to achieve them, here again the absence of concrete evidence of these effects in coal mining makes extrapolation controversial and unproven.

Bearing this in mind, therefore, in the following sub-sections we first examine the regulatory framework for representation of workers' interests in health and safety in Queensland coal mines and then, following scrutiny of the published commentary on such representation, we identify some of the key issues in the current discourse concerning the provisions and their use.

3.3.1 The regulatory framework for representative participation on OHS in Queensland coal mines

The current provisions on worker representation in Queensland coal mines are found in the Coal Mining Safety and Health Act 1999, Parts 7 and 8. Those in Part 7 refer to site safety and health representatives (SSHRs) and require the election

of up to two for each mine. The SSHR needs to hold certain competencies recognised by the Coal Mining Safety and Health Advisory Council, in applied risk management (RIIRIS301B), conducting safety and health investigations (RIIOHS301A) and communication (RIICOM301B). They have a number of functions under section 99(1), including the right to inspect the coal mine to assess the level of risk, to review procedures concerning the control of risk, to detect unsafe practices and conditions and to undertake appropriate actions to protect the safety and health of coal miners, and to investigate complaints regarding safety and health. They also have powers to enter any area of the coal mine at any time to carry out the functions of the SSHR, if reasonable notice is given to the site senior executive (SSE), and to examine any documents relevant to safety and health held by the SSE under this Act (section 100). The SSE is obliged to inform the SSHR concerning the occurrence of work injuries and illnesses, high potential incidents, changes to the mine that might affect OHS and the visits and actions of mines inspectors (section 106). SSHRs must be given reasonable assistance to carry out an inspection and they are required to make a written report following the inspection, providing a copy to the site senior executive (sub-sections 99(2) and (4)). If the inspection indicates an existing or possible danger the representative must notify the senior site executive or the responsible supervisor and provide a copy of the report to the mines inspector (sub-section 99(4)). If the representative believes that the health and safety management system is ineffective or inadequate they must inform the site senior executive. If not satisfied that appropriate action has been taken to correct the problem then the representative must inform the mines inspector who is then obliged to make an inspection and record the results of the investigation in the mine record (sub-sections 99(5)-(6)).

Section 101 provides SSHRs with authority to order the suspension of mining operations by means of a written report to the SSE. The SSE must comply (section 102) and must not to restart operations until risk levels are acceptable (section 103)). If the SSHR reasonably believes there is an immediate danger, the SSHR may stop operations or require a supervisor to stop them and then to provide the SSHR with a written report detailing the action and the reasons for taking it (sub-sections 101(3)-(4)).

Section 95(3) stipulates that a SSHR must perform the functions and exercise the powers of a SSHR for safety and health purposes and for no other purpose**,** and section 104 provides that the SSHR must not 'unnecessarily impede production'.

Part 8 addresses the rights and functions of industry health and safety representatives. They provide that the CFMEU may, after a ballot of its members, appoint and pay up to three appropriately qualified persons (they must be holders of a first or second class certificate of competency or a deputy's certificate of competency: subsection 109(3)), each to act as full-time ISHRs for a period four years. The functions of ISHRs are listed in section 118 and include the functions of participating in investigations into serious accidents, HPIs and other OHS matters and coal mines, of helping in relation to initiatives to improve OHS at coal mines, as well as the functions given to SSHRs. Section 119 sets out their powers which include the powers given to SSHRS, and in addition the powers to make inquiries about the operations of coal mines relevant to the safety or health of coal mine workers, to copy safety and health management system documents, including principal hazard management plans, standard operating procedures and training records, and to require the person in control or temporarily in control of a coal mine to give the ISHR reasonable help in the exercise of these powers**.** Section 121 specifies that an ISHR who believes a mine's safety and health management system to be inadequate or ineffective must inform the SSE with the reasons for this belief and that if action is not taken to correct the problem they must inform the mines inspector, who is required to investigate. Section 167 empowers ISHRs to issue a directive (by notice or orally later confirmed by notice – but the directive is not invalid if there is no later notice) to suspend operations in all or part of the mine if the ISHR believes the risk from coal mining operations is not at an acceptable level.

Section 117 indicates that it is a requirement that ISHRs exercise their statutory powers and

functions solely 'for a safety and health purpose', while section 120, like section 104 for SSHRs, provides that they should not 'unnecessarily impede production'.

These measures are different from those applying more generally to worker representation on OHS in other sectors in several respects. The provisions for ISHRs set out quite unique measures governing the appointment of full-time health and safety officials by a trade union with what appear at first sight to be fairly extensive powers of entry into workplaces to make inspections and investigations across a wide spectrum of OHS management practices and to require the suspension of operations where they believe there to be sufficient risk to warrant this. There are few such similar statutory arrangements outside the mining industry, either in Australia or elsewhere (although there are arguably certain parallels between these requirements and those relating to health and safety technicians in Spain and for trade union regional representatives for workers in small firms in Sweden). Similarly, in the appointment of SSHRs, local representatives are given quite extensive powers to inspect and investigate OHS issues as well as to require the suspension of operations in cases where they believe the risks involved to justify such action. However, neither SSHRs nor ISHRs have the power to issue Provisional Improvement Notices and the apparently quite extensive powers of both SSHRs and ISHRs are qualified by other caveats in the Act which demand cognisance of impeding productivity and a clear separation between OHS issues and those concerning other matters — with an explicit requirement not to perform functions or exercise powers in relation to anything other than safety or health purposes. There exists some controversy around these issues in the mining industry in Queensland and this has helped to shape the approach we have taken to the present investigation.

It is worth noting in passing that similar provisions operate in NSW, where ISHRs and SSHRs (previously called check inspectors) have been seen as an important element in mine safety by the relevant government department. Site check inspectors are required to undergo training that includes the legislative framework, their role, OHS management systems, general hazard management, major hazard management, emergency response and safety and health investigations. Their knowledge base and capacity to network ideas and issues with other check inspectors, experts, mine inspectors and industry has been enhanced by annual check inspector conferences. Presentations at these conferences cover a range of relevant issues (some examples include updates on mine rescue [and reference to recent events like the Sago mine disaster in this regard] and the role and activities of the Mine Safety Advisory Council). As in Queensland, the ISHR and SSHR role is formally tied to the relevant union (the CFMEU) which pays ISHRs and provides essential logistical support to SSHRs.

3.4 Representative participation — summary and contentious issues

This chapter has demonstrated that research in other sectors and in other countries supports the conclusion that worker representation, especially when supported by trades unions, is beneficial for health and safety. It further shows that there are several preconditions that help to determine the effectiveness of the arrangements made to achieve such representation in OHS management. They include a statutory framework, its regulatory surveillance, employer and trade union commitment and support, as well as trained and well-informed representatives. The regulatory framework governing the operation of worker representation on health and safety provides a useful baseline against which to measure practice. Such an evaluation in turn is helpful in considering the appropriateness of the regulatory provisions.

It is likely that this is also true of the provisions on coal mining in Queensland. OHS arrangements that apply in coal mining are often the subject of a separate legislative history to that of similar arrangements found in other sectors. This is the case for those on worker representation on health and safety in Queensland. Therefore, the Queensland provisions on OHS representation in coal mining are different in a number of respects to those found in other sectors. Such differences are argued to provide enhanced functions and

powers for worker health and safety representatives in mines. At the same time they have fuelled the development of policy discourse with, on the one hand, recommendations for the application of similar measures elsewhere, and on the other, continued debate between regulators, trade unions and employers concerning their supposed effects.

Rapid structural and organisational change in the way in which work is done and business conducted in the sector makes it important to ask whether, in the face of this, the qualitatively different arrangements that apply to workers' representation in mining, which arguably arose in response to the risks of a very differently organised and structured industry, continue to be fit for purpose in relation to the predominant features of the current industry. In particular, the provisions for SSHRs look quite sparse when compared with the corresponding provisions in the harmonised Work Health and Safety Acts, where elected health and safety representatives (HSRs) are given a broader array of rights and powers, including the right to assistance from experts, the right to be present at interviews between workers and the employer or inspector, the power to issue infringement notices, and the power to issue provisional improvement notices; and where persons conducting businesses and undertakings have clearer obligations to HSRs. HSRs are also better protected against victimisation, and from disqualification.

It is to help address these questions that the preliminary study described in the following chapters was undertaken.

4 Research design and methods

In this section we outline the aims and methods of the study and present a brief account of the rationale behind its design.

4.1 Study design

Since the aim of the study is to consider evidence of the role and activities of site and industry safety and health representatives in Queensland mines and the contexts in which they occur, the project was designed to focus on documentary records of some of these activities, together with a number of semi-structured interviews with site safety and health representatives (SSHRs), industry safety and health representatives (ISHRs) and other key informants. The documentary analysis concerns records of activities undertaken mostly during the past fifteen years (although a somewhat longer period has been examined in some mines) and in the main by ISHRs (though some SSHR and inspectorate records are also considered), while the sample of interviewees includes past and present ISHRs, and current SSHRs, the majority of whom work in the coal mines providing the records for documentary analysis.

To provide context for our fieldwork we have undertaken a review of the available international research literature as well as that of relevant regulation and regulatory policy, which helps to contextualise the local discourse around the subjects of the research. This latter discourse has also been reviewed through scrutiny of the appropriate grey literature and regulatory texts in Queensland. While Queensland, like other Australian states, has traditionally exercised substantial autonomy in relation to OHS regulation, recent national developments in both labour law and health and safety regulation have significant implications and we have found it necessary to take account of these developments in the present research. Similarly, the coal mining industry in Australia (as is frequently also the case elsewhere) is itself considerably autonomous in terms of regulation, with provisions enjoying a separate history of development to those covering other sectors. This is true of the situation in Queensland, but here too this separate trajectory has been somewhat complicated by developments in regulation that apply more generally across all sectors and we have, therefore, also found it necessary to take account of these wider developments in our review.

The fieldwork methods have two main strands, in which analysis of the content of the records of the actions of workers' representatives at the industry (and, to a lesser extent) site level is supported by detailed interviews both with ISHRs and, principally, with representatives at the site level to further test and explore emergent key issues. We also undertook some non-participant observation of the training of the SSHRs which helped further inform findings from the interviews. Further interviews with other key players such as regulatory inspectors of mines concern the same issues but seen from different perspectives.

It is important to note that all the work has been undertaken by experienced researchers who have previously found the methods adopted here to be effective when undertaking preliminary studies in which it is necessary rapidly to generate and test reasonably robust indicators of the key issues in a given situation in order to produce indicative results that are sufficiently strong to inform policy. Thus the mixed-methods approach is similar to that used successfully in previous studies concerning worker representation in arrangements for OHS management (see, for example Walters et al, 2012; Walters and Nichols, 2007). Its strength is that it allows some corroboration of findings originating from different sources of data.

Caution is nevertheless warranted in how far the findings can be said to represent robust data that provide definitive analysis of the situations investigated. While conclusions thus generated are, in the short term, often sufficient to inform policy needs, they are suggestive of a number of areas in which more detailed research is required to produce definitive findings.

4.2 Research methods

4.2.1 The literature review

There were three main focuses for the literature review presented in the previous two chapters. The first concerned recent literature on mining hazards, health and safety outcomes and current methods to regulate and manage the risks of mining more effectively. Conventional search techniques were employed to undertake the review and the previous experience of working on reviews of OHS in coal mining in Australia by some members of the research team was helpful in this respect. The second focus for the review was on recent literature on worker representation in OHS. A comprehensive review has been undertaken of the international research literature on this subject across all sectors of employment and in mining in particular. Much of this work was already underway, the subject of several publications and submissions to inquiries before the start of the project, and internationally acknowledged expertise on the subject is a strength of the research team. The third focus was on regulation itself and on the discourse that has surrounded that of requirements concerning the representation of workers' interests. This was especially the case for Queensland, partly because this is where the project is situated, but also because, as we discovered, there is a dearth of research on the practice of worker representation in health and safety in Queensland coal mines. In addition, to help to contextualise the development of the regulatory provisions and their operation in Queensland, we reviewed reports on workmen's inspectors in UK coal mines on which the regulatory approach that applies in Queensland seems to have been largely based.

4.2.2 Analysis of records of the work of site and industry safety and health representatives in selected mines

The Mining and Energy Division of the Construction, Forestry, Mining and Energy Union (CFMEU) supplied relevant documents they held in relation to 19 Queensland mines. These mines included 12 open cut and seven underground mines, most of which were large or medium-sized (nine and eight respectively) (Table 4.1). Whilst the document set and timeframe covered for each mine varied, these were mainly Industry Safety and Health Representative (ISHR) and Department of Mines and Energy Safety and Health Mines Inspectorate (MI) reports (Table 4.2). The earliest was written in 1984, but most (over 75%) were written in the last 13 years (Figure 4.1). Most of the ISHR and MI reports were written as a result of a site visit (85% and 92% respectively (all of the SSHR reports were written following an on-site inspection)), with those that were not being predominantly postal mine records (for example, reporting on a review of documents supplied, arising from correspondence or contact from mine managers or workers, or following an incident at a similar mine elsewhere).

Table 4.1: Summary of mines included in the documentary analysis and corresponding Site Safety and Health Representative interviewees

Type	Size	CFMEU estimated Union density	CFMEU subjective OHS Assessment	Number of SSHR interviewees
Underground: N=7	Large	98%	Marginal	1
	Large	100%	Good	1
	Large	100%	Good	1
	Large	100%	Good	1
	Medium	3%	Marginal	0
	Medium	100%	Marginal	1
	Medium	100%	Problematic	0

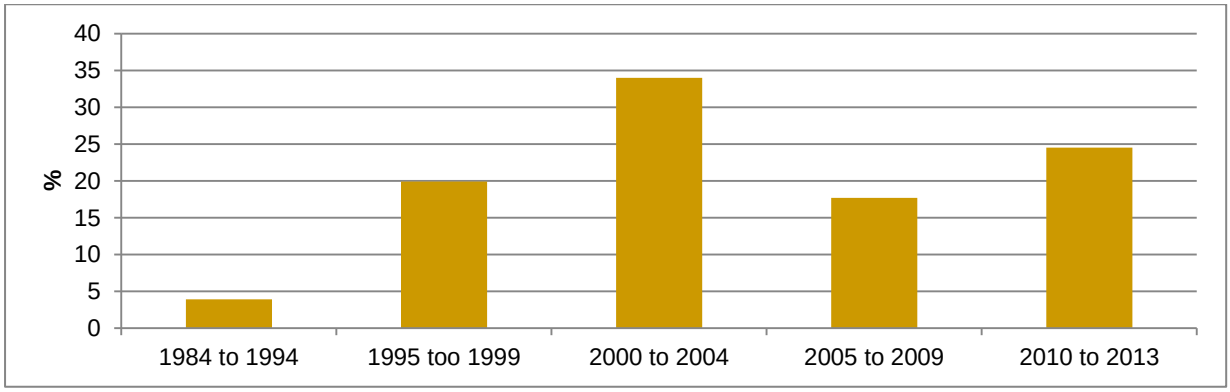
Type	Size	CFMEU estimated Union density	CFMEU subjective OHS Assessment	Number of SSHR interviewees
Open cut: N=12	Large	45%	Good	0
	Large	45%	Marginal	1
	Large	100%		1
	Large	100%	Good	2
	Large	100%	Marginal	1
	Medium	3%	Marginal	0
	Medium	30%	Marginal	1
	Medium	40%	Good	0
	Medium	75%	Good	1
	Medium	100%	Good	1
	Small	3%	Marginal	0
	Small	100%	Good	1

Table 4.2: Documents supplied by CFMEU

Document type	Number	%
ISHR report	473	41%
MI report	605	52%
SSHR report	50	4%
Other*	37	3%
Total	1165	100%

*These included: visit notifications; correspondence between ISHRs and mine managers; and other documents (e.g. photos, plans, mine health and safety documentation)

Figure 4.1: Timespan of documents supplied by CFMEU



As far as was appropriate, each of these documents was considered in order to identify what was recorded in relation to four main areas:

1. Inspections: including why an inspection was made, what was inspected and the outcome of the inspection;
2. Fulfilment of functions defined in the Coal Mining Safety and Health Act 1999;[7]

[7] For comparative purposes, this was applied even to those records pre-dating the legislation

3. Other information: such as reference to relevant background detail;
4. Fatal risks: As part of our analysis of inspections by ISHRs, SSHRs and government mine inspectors we paid particular attention to those hazards that can give rise to single and multiple fatality incidents (including disasters) in mines. 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. In mining, the capacity of a regulatory regime to deal with these hazards is judged as especially important given the high hazard nature of the industry.

The mechanisms that can result in fatalities in mining have been extensively documented and are well-known, many having being recorded over hundreds of years.[8] Broadly, these are:

- 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.

The first four of these hazards have been associated with significant multiple fatalities (especially fire and explosions), although falls and entrapment can also result in multiple fatalities. Machinery and electrocution have led to multiple fatalities, though this is fairly rare.

In checking for these hazards inspections may examine several simultaneously. For example, checking the electrics of machinery and infrastructure will simultaneously address the potential for electrocution as well as potential ignition points for a fire/explosion. Similarly, examining road conditions and berms in mines entails considering the risk of collisions as well as vehicles tipping over the steep inclines and height found in open cut mines. Equally, assessing ventilation regimes and testing for gas levels in mines (including methane [CO_4], carbon monoxide [CO][9] and carbon dioxide [CO_2]) not only addresses the risk of fire/explosion but also the build-up of toxic fumes. In the same way examination of secondary egress and the availability/condition of self-rescuers addresses both the hazards of fire/explosion and

[8] See for example, Biswas and Zipf, 2000; Brune and Goertz 2013; Burgess-Limerick, 2011; Donoghue, 2004; Groves et al, 2004; Hopkins, 1999; Karra, 2005; Nugent et al, 2010; Saleh and Cummings, 2011; Swedziicki, 2001; Towsey, 2003.

[9] Which can be important evidence of a fire including that resulting from spontaneous combustion often referred to as a heating.

entrapment. In recording what was being examined during inspections we were conscious of, and duly recorded, where an activity addressed several different fatality mechanisms among this broad categorisation of eight kinds of fatal risks.

The analysis of the records supplied by CFMEU involved the research team in reading each document and 'coding' its content in relation to the four areas outlined above. The aim was describe the activities of union health and safety representatives (that is, the activities of SSHRs and ISHRs) by creating a typology of those activities (summarised in Table 4.3) and using that typology to consider both the relative frequencies of a range of types of activity and also any changes in these frequencies over time. The intention was to be able to describe what union health and safety representatives do, with a view not only to considering how they meet what is required of them in the Act, but also to building up as detailed a picture as possible of their role in the prevention of ill-health, injury, disability and death. It is, of course, essential to bear in mind that what representatives record in their reports is not an exhaustive description of an inspection, so this analysis can only consider what is actually recorded in those reports. Further details of their activities were obtained from the detailed interviews with representatives listed in (Table 4.1).

4.2.3 Non-participant observation

One of the research team was able to attend and observe sessions of the annual training course provided by the CFMEU for the SSHRs. There were two training courses, one for underground SSHRs and one for open-cut SSHRs, with each training course being of four and a half days duration. The researcher attended two days of each course. The aim of this was to explore the nature of the support that they received, what the SSHRs were trained in, the nature of the pedagogic methods involved, to make a subjective judgement concerning the quality of the training delivered and to observe the nature of the interaction between SSHRs; between them and the ISHRs; between SSHRs and trainers; and between the SSHRs and the trade union more generally.

Table 4.3: Typology coding for union health and safety representative and inspectorate activity records

1. Inspections	Reason for inspection
	Physical inspection (e.g. inspection of work areas, work in progress, machinery etc.)
	Documentary inspection (e.g. inspection of documents, including the SHMS).
	Outcomes of inspection (e.g. formal notification)
2. Legislative functions*	Inspect and assess whether the level of risk at a coal mine is at an acceptable level
	Review procedures that control the level of risk
	Detect unsafe practices and conditions and to take remedial action to lower the level of risk
	Assist investigations into serious accidents and high potential incidents and other matters
	Investigate complaints from coal workers
	Assist with initiatives to improve safety and health
3. Other information	Data (e.g. mine OHS performance)
	Contracting out (e.g. differences in work environments for directly and indirectly employed workers)
4. Fatal risks	Inrush / inundation
	Outburst
	Entrapment
	Machinery
	Fire / explosion
	Rock fall
	Electrocution
	Falls

*ISHR functions shown

4.2.4 Interviews with key informants

Interviews were undertaken with 24 people including: SSHRs, most of whom worked in the mines listed in Table 4.1; current and former ISHRs; and a very senior mines inspector (Table 4.4).

Table 4.4: Project interviewees

Interviewee	Number
SSHR at mine included in the documentary analysis	14
SSHR at other mine	4
Current ISHR	3
Former ISHR and current CFMEU District President	1
Former ISHR and current CFMEU District Secretary	1
Senior mines inspector	1
Total	**24**

Interviews were conducted either in between training sessions while the representatives were attending training organised by the CFMEU in June 2013, or at the district offices of the CFMEU in two separate districts during August 2013. Each interview lasted for approximately one to one and a half hours and they were all recorded and subsequently transcribed. All the interviews were undertaken following procedures approved by the Research Ethics Committee of the School of Social Science at Cardiff University. The content of the interviews has been anonymised as far is possible in this report in accordance with the University's ethics procedures.

The interviews sought to elicit further information concerning the activities of the representatives such as those outlined in Table 4.3. That is, for both the ISHRs and the SSHRs, they aimed to achieve a sense of:

1. the different ways in which the SSHRs conducted their OHS activities;
2. what they spent most of their time doing (and how much of their time they spent doing it);
3. the extent to which they were doing what the legislation prescribed they should do (and the extent to which they do something else), and how they situated their activities in relation to the legislation, what they perceived to represent 'best practice' and how they went about meeting this standard;
4. whether representatives brought a particular skill set to their role on health and safety in mines;
5. how they perceived themselves to be supported by the inspectorate, the union, and their relationship with management (levels of co-operation they experienced, what they regarded as barriers to their activities etc.);
6. the constraints and obstacles they faced in carrying out their roles; and
7. what they thought would improve their effectiveness and the support for it in the mines.

We were also interested in exploring how the two types of representatives saw the nature of the relationship between each other — how SSHRs perceived the role of the ISHR in relation to themselves, the kinds of support they received, how they valued and used this support, and how important they believed it to be in achieving the effective delivery of their own roles. In turn, in the interviews with the ISHRs, as well as inquiring about the ways in which they undertook the activities identified in Table 4.3 and their responses to the questions in 1 to 7 above, we were also interested in how they prioritised and undertook supporting the work of the SSHRs, how they deployed their rights and functions under the regulatory provisions in their own inspection and investigative work in relation to the mines they covered and the extent to which they engaged with wider consultative activities in OHS regulation in coal mining in Queensland. In both cases we were further interested in how the representatives defined what constituted health and safety issues on which they could legitimately represent miners' interests, how they perceived the boundaries of such issues in relation to more general labour relations matters and what, if any, were the strategies they adopted for resolving any conflicts that might arise in these matters.

Transcripts of the interviews allowed identification and exploration of themes reflecting the above. Themes for both ISHRs and SSHRs included: their perceptions of their role in injury and ill-health prevention; activities, perceived outcomes,

balance of activities (i.e. relations with workers and managers, support for SSHRs, relations with sub-contractors, work with the industry more generally, input to government policy and liaison with inspectorate); the role of the regulatory provisions in determining activities — using statutory powers as the basis for representation; safety versus industrial issues; supports and constraints; challenges, perceived needs (what would make things better); how SSHRs valued support from ISHRs (and other sources of support – from the union, inspectorate, employer and elsewhere) and vice versa; time off for SSHRs to undertake functions, receive training etc., the role of training; facilities for representatives that were available at mines; and relations with the inspectorate. Copies of the interview schedules, participant information sheets, consent forms etc. can be found in the Annexe.

The interview with the senior mines inspector essentially followed the same structure and was based on a dialogue on the same issues as those with the representatives – with the difference that it was the perspectives of this individual concerning the activities of representatives, their rights and functions and the contexts in which they operated that were its main focus.

5 The practice of worker representation on health and safety in Queensland coal mines: OHS management systems, communications and supports

In this and the following chapter we consider the main activities of ISHRs and SSHRs based on analysis of both documentary evidence from nearly half of the coal mines in Queensland and interviews with a sample of the representatives themselves. We explore what they do, their perceptions of their effectiveness and the supports and barriers to its achievement. We also examine the relationship between the two types of representatives, between them and the workers they represent and with the managers, mines' inspectors and others with whom they interact in undertaking their representative roles. As well as the positive aspects of their role and the supports for it, we discuss some problematic issues in the current construction of the activities and relations of worker representation on health and safety in the context of Queensland coal mines and the wider environment in which they are set. We look at the role, activities and relations of the ISHRs by considering their own testimony alongside that of the SSHRs for whom they provide support. In this chapter we begin with a brief profile of the representatives themselves, both SSHRs and ISHRs, which conveys a sense of who they are and what are their motivations for undertaking the role. In the light of the statutory provisions, we then turn to the involvement of the representatives in the overall system for safety and health management in coal mines. We then examine communications between the representatives and workers, managers and inspectors during inspections. Finally, we examine the support the representatives feel they receive from each other, from workers, the trade union, management and the Inspectorate.

5.1 Who are the worker representatives?

The 18 SSHRs interviewed in the present study were all men, the majority were between the ages of 35 and 45, and all were experienced miners. A number of the representatives currently working in open cut mines had also gained previous experience in underground mines, as had all of the ISHRs. Most of the SSHRs interviewed were well-established in this position and had been in the post for several years already. A few had been SSHRs for considerably longer, five having been in the position for more than ten years. Five were relatively new to the role, having been elected within the previous two years. By far the majority had not held other trade union representative positions prior to becoming SSHRs. Of the few who had, only one seemed to have continued with any of these previous roles. Some had held other positions in the mines relevant to health and safety, mostly having been involved with mines' rescue teams. They were drawn from a mixture of trades and a minority of them were qualified as deputies. Some of them had volunteered themselves for the election to become SSHR, often because they wanted to contribute to the prevention of the accidents and incidents of which they had become aware as a result of their role in mines rescue.

> Interviewer: *So what prompted you to take on the role [of SSHR]?*
> Respondent: *I basically thought we can improve things … 'cos we're reactive as rescue. We turn up and fix the situation somebody had a broken leg, a heart attack or an injury of some sort. And I thought maybe we can look at … well look at doing something better and helping people out before they get hurt.*
> (7120040 - SSHR)

> *I've taken on the role because safety is pretty important in our industry and yeah I just enjoy doing it.*
> (7120017 - SSHR)

The majority, however, had been nominated for their election to the position. They offered various reasons why they had been the subject of such nomination, generally a combination of being

already known to be interested in health and safety issues and being seen to be able to speak up and willing to engage with supervisors and managers concerning such matters.

> *… with being a Deputy and helping out the blokes, like blokes come said to me, you're a good candidate to do this job. So sat back and had a think about it and said, yeah, I'll do it.*
> (7120041 - SSHR)

> *… well the man who was doing the role for a number of years he resigned … and I actually hadn't really paid much thought to it but then a couple of guys … approached me about maybe they thought I'd be good for the role … in the position then I went out and thought about it for a while and had a yarn to couple of friends about it and … I thought I'd be able to.*
> (7120016 - SSHR)

The general impression was that representatives believed that the position as a SSHR was likely to be a fairly long-term one and indeed this was confirmed by the considerable length of time for which many of those we interviewed had already held it. They also believed it took them some time to become well acquainted with the legal provisions and procedures applying to health and safety in the mines, but the majority, having by now acquired such knowledge, felt they were trusted by their colleagues to represent their health and safety interests.

> Interviewer 2*: Do you feel that you have the support of your members?*
> Respondent*: Oh yeah, yeah. Well probably too much at times. They think I can wave the wand and make things appear and vanish and sort out and I'll have a real good go but I'm battling.*
> (7120040 - SSHR)

Training experience prior to becoming SSHRs varied according to the extent to which the representatives had been previously involved with safety-related responsibilities such as mines rescue. Subsequent to their election all the SSHRs had attended the one-week long training conferences organised annually by the trade union and continued to attend them each year while in the post. As we will discuss in more detail later, they all placed considerable value on this experience of training, which they regarded as by far the main form of training they received. A few individuals had sought further technical training in their own time – exploring issues in which they were particularly interested. Most said they had received little if any training support from their employers beyond the statutory minimum.

> *Only training provided by the union, which is these week-long safety conferences. That's the only training. … They're good, they're valuable … some of the information that comes out of it is really helpful.*
> (7120017 - SSHR)

The representatives not only took their role at the workplace very seriously, but they also invested a substantial amount of their free time in developing and carrying it out. Such off-site activity concerned not only making themselves better acquainted with regulatory and technical issues, but also communicating with fellow workers about health and safety issues on which their input was sought. Often such off-site communication occurred because either the workers concerned felt unable to raise such issues at the workplace, or because the SSHR believed it necessary to treat their concerns confidentially. On other occasions off-site communications related to being informed about incidents occurring at the mine during the SSHR's free time, often resulting in their returning to the mine to investigate or assist. When the travelling time involved in such responses is taken into account the extent of the SSHRs' commitment to their role is further apparent. Indeed overall, the sense of commitment to their role evident among all of the SSHRs was one of the more striking aspects of the interviews.

> *Because I'm on shift and there's four shifts, I've also got to do my job as a diesel fitter. … And then this role. So this role to me is a fulltime gig. Like I got operated on yesterday and as soon as I got out of thing I got about 20 calls. So you just don't get any time to*

> *yourself. It's very hard for the family at present … Like if there's an incident, they can ring me up one o'clock in the morning and I'm on dayshift, and notify me.*
> (7120040 - SSHR)

> Interviewer*: And then you're dealing with issues that people are raising …*
> Respondent*: They take up, they take up a lot of time, lot of time of my time off, which I don't mind doing. … But yeah, like I, you know, I've got to go through and chase them up, chase procedures up and all that sort of stuff so.*
> (7120017 - SSHR)

All three current ISHRs were experienced miners, had all been deputies and met the necessary criteria formally qualifying them for their position as an ISHR. They had held their positions for varying lengths of time. One was considerably experienced, while two were relatively new to the role. The two former ISHRs we interviewed both currently held senior positions in the trade union. Both had been SSHRs before becoming ISHRs. Perhaps not surprisingly given the nature of their role, all the ISHRs, present and past, conveyed a very strong sense of commitment to the position

> *To try and find someone in this role here. … it's a huge drop in wages. And you've just doubled your hours of work to do the role! So it's not something you do for … you do it for the love and passion. … And then you might get weekends off every sixth weekend, 'cos you're on call …*
> (7120033 – Former ISHR)

They were especially clear concerning their contribution to supporting the activities of the SSHRs:

> *The good part of the job is probably going and talking to the local checkies and the local checkies training we run …*
> (7120037 - ISHR)

At the same time there was awareness that there was a broader remit and the activities in which they engaged in support of the SSHRs also had a wider effect:

> *Well there's a few answers to it … One would be that you are continually educating those in the SSHR roles, those that's been elected in. So assisting them in their role. The other side of it is that you are assisting management at the same time … three legs of the same stool — I'm helping and assisting our people, doing the same with management and working in conjunction with the Mines Inspectorate.*
> (7120033 – Former ISHR)

The three ISHRs shared the burden of their responsibilities for representing mine workers and supporting the SSHRs between them. They were well acquainted with each other's work through personal meetings and telephone exchanges. They all undertook both reactive and proactive work, responding to requests and notifications from both SSHRs and individual workers as well as to information concerning incidents in the mines. A substantial amount of time was spent engaged in mine inspections, both proactive and reactive according to need. They kept track of their activities and made a collective effort to ensure that the SSHRs and mine workers in all the mines in their jurisdiction received their support, while at the same time recognising that some mines and SSHRs required greater attention than others. We look in detail at how they conducted these activities in the following sections.

In short, the SSHRs were a group of experienced miners, with considerable knowledge of regulatory, technical and managerial issues relevant to health and safety in mines. They all shared a strong commitment to their representative role in health and safety on behalf of their fellow workers and trade union. They believed it to be important to act within what they perceived to be the regulatory framework governing their role. They did this as much for their own protection against the possibility that their employer would try to discipline or dismiss them for their actions as for clarity in the pursuit

of their health and safety objectives. The same was true for the ISHRs — arguably more so — for these representatives were already qualified deputies, had all previously held representative roles in health and safety as SSHRs, as well as sometimes in other trade union lay positions and had thereby gained considerable knowledge and experience as a result. They put this experience to use across the full spectrum coal mines in Queensland, interfacing not only with the SSHRs they supported but also with senior mines managers and inspectors as well as with other actors and institutions involved in health and safety issues in coal mines such as company lawyers, and mining and health and safety specialists, as well as with the courts and specialist mining and health and safety institutions. Such a high profile and variety of engagement with the industry, its regulators, advisors and institutions at numerous levels served to further ensure they took pains to act within the limits of what they understood to be their statutory remit.

This leads us to consider some of the activities of both kinds of representatives in a little more detail. We begin with their role in relation to risk management and the systems in place for managing health and safety risks in coal mines.

5.2 Worker representation and the system for managing OHS in Queensland coal mines

The introduction of the Coal Mining Safety and Health Act 1999 (Qld) (CMSH Act) emphasised the adoption of a risk management approach to regulating OHS in Queensland coal mines and, as we described in Chapter 2, mining companies operating mines in Queensland have in place both architecture and procedures to meet these requirements. Recent research into the operation of these systems, however, has argued that in terms of effective operation they have a number of limitations (see, for example, Gunningham and Sinclair, 2012).

Amongst the powers of both SSHRs and ISHRs are included processes to enforce safety and health management systems established under the Act. Subsections 99(5) and (6) require SSHRs to inform the site senior executive if they believe the safety and health management system at the mine to be ineffective. SSHRs are further required to advise an inspector if they feel the action taken by the SSE to remedy this is not satisfactory. Similar requirements are placed on ISHRs under section 121. It is therefore instructive to consider the extent to which both types of representative address themselves to the risk management systems in place in the mines, the extent to which they find them wanting and the kinds of actions they have undertaken to contribute to their improvement.

The SSHRs made frequent references to their contribution to various elements of the safety and health management system, such as risk assessments and hazard management plans. They played a role in both the synthesis of these risk management instruments and in keeping them under review:

> *… a lot of our time has been on risk assessments, reviewing principal hazard management plans, basically updating everything …*
> (7120015 - SSHR)

> *I do all — inspect, detect, investigate, review. I get the whole lot. Mostly its review at the moment.*
> (7120015 - SSHR)

The mine safety and health management system itself was also frequently mentioned as a focus for activity:

> *Also involved with reviewing the safety management system and reviewing or auditing the emergency response exercises they have.*
> (7120023 - SSHR)

SSHRs spoke of spending time reviewing documentation, by which they usually meant procedures and other written outputs such as principal hazard management plans associated with the safety and health management system in the mine. Many felt the facilities they were given to undertake such tasks were limited. There was a clear preference among the SSHRs for dealing with health and safety issues on site rather than in the form of paperwork — talking with fellow

workers, with supervisors and managers and 'hands on' engagement with the physical operation of the mine and mining were seen as the 'real' business of representation on health and safety.

> *Well basically if I go out and do the inspection of the mine site physically. If you see something there, then you check to see if, it's wrong so you check to see if the paperwork's right, and if it's not right, you know the reason why it's wrong. So in other words, you see the physical side before you do the paperwork. A lot of people like to do the paperwork, I'm sort of an on hands sort of person and I always have been, so yes.*
> (7120020 - SSHR)

> Interviewer: *... do you spend more time on the management system or do you spend more time looking at the physical hazards?*
> Respondent: *I probably spend more time with the physical hazards because we are part of the crew we're not based in an office upstairs, but that would be at work. Spend more time looking at the principle hazard management system back at your camp or at home.*
> (7120015 - SSHR)

The ISHRs also spoke of reviewing the safety and health management systems in the mines they visited and the analysis of documented inspections shows that such review featured prominently amongst their recorded activities during site visits with a little over half of the inspections recorded (54%) referring to the inspection of documentary material (risk assessments, records etc.). As Figure 5.1 shows, reference only to documentary inspection was rare (2% of ISHR records of site visits). It also shows that the ISHRs and the Mines Inspectorate (MI) focus more on the documentation of the safety and health management system than the SSHRs do (as might be anticipated from the interviews). Patterns of documentary inspection between ISHRs and MI inspectors were similar. As can be seen from the detail in Table 5.1, the main differences between the approaches of ISHRs and MI inspectors were that more ISHR reports referred to the inspection of documents relating to emergency response, training, representatives, records/monitoring, the match between documentation and practice, and the effectiveness of the safety and health management system.

Figure 5.1: Relative levels of physical and documentary inspection for ISHRs, SSHRs and MI inspectors

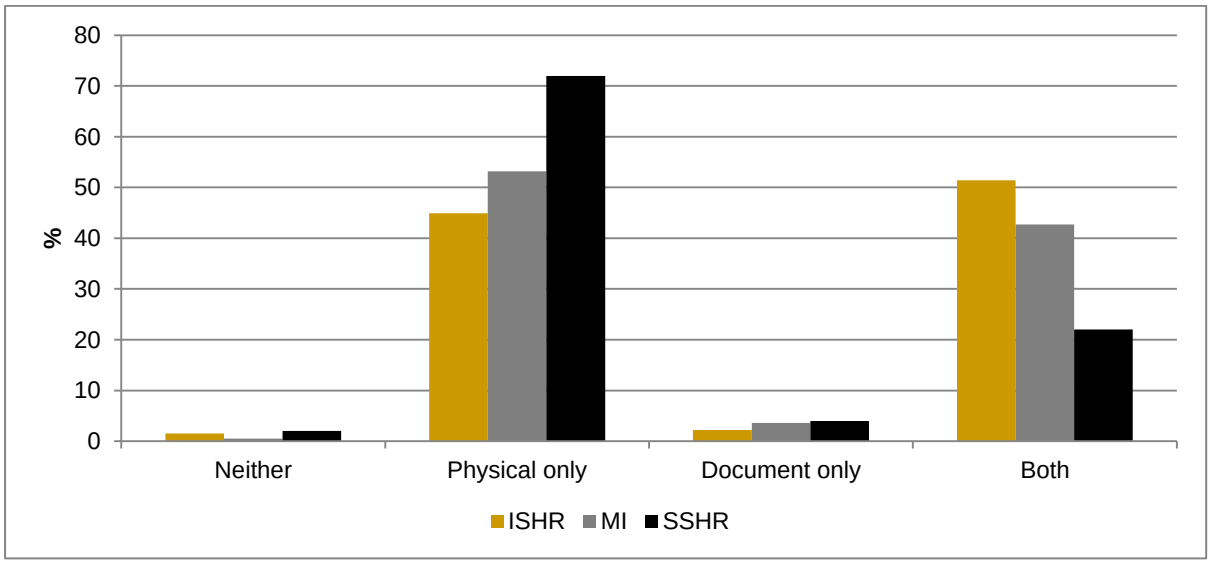


Table 5.1: Documentary inspection during site visits

		TOTAL		ISHR		MI		SSHR	
		No.	%	No.	%	No.	%	No.	%
Safety and health management system (i.e. inspection of part of the documented SHMS)		157	16	59	15	94	17	4	8
Principal hazard management plan		123	12	53	13	69	12	1	2
Risk assessment		108	11	51	13	55	10	2	4
Standard operating procedure		160	16	60	15	95	17	5	10
Policy	Fitness for work	37	4	19	5	18	3	0	0
	Working hours	14	1	8	2	6	1	0	0
	Fatigue	21	2	10	3	10	2	1	2
	Stress	5	1	2	1	2	<1	1	2
	Bullying	2	<1	1	<1	1	<1	0	0
Contractors	Owner's policies on contractors	41	4	12	3	29	5	0	0
	Contractors' documentation	21	2	13	3	8	1	0	0
Emergency response		37	4	23	6	14	3	0	0
Training		75	7	43	11	31	6	1	2
Incidents		74	7	27	7	47	9	0	0
Representation	Communication	8	1	5	1	3	1	0	0
	Consultation	8	1	4	1	4	1	0	0
	Representatives	6	1	6	2	0	0	0	0
Records		156	16	82	20	72	13	2	4
Match (between documentation and practice)		71	7	50	12	20	4	1	2
Effectiveness (how well SHMS deals with problems)		36	4	21	5	15	3	0	0
Other (e.g. statutory reports, presentations by managers, safety meeting minutes)		163	16	76	19	82	15	5	10

Almost all of the mines inspection reports of site visits in our sample (96%) referred to the inspection of something physical (work areas, equipment etc.), but reference ***only*** to physical inspection was made in half (51%) of them. This was most common amongst the SSHR reports, reflecting the preference, clearly demonstrated in the interviews with them, that these representatives have for a 'hands on' health and safety role within coal mines.

> Interviewer: *And what sort of routine would you have in inspecting?*
> Respondent: *Well normally you do an inspection and you take notes and then if you find that something has caught your eye or ear, that looks out of place or not quite right, well you go back after your inspection and you do a revision of what procedures are in place for that area, whether it's to do with traffic control or what jobs guys are doing or conditions, lighting, all that sort of thing.*
> (7120035 - SSHR)

Focusing only on physical inspection was least common amongst ISHR reports. This is perhaps best explained by the wider role played by ISHRs in relation to reviewing OHS management in the coal mines within their jurisdiction, and their position external to the mines they visit. As the interviews with both them and the SSHRs make clear, ISHRs often visited mines either in response to requests for support from the mine SSHR or as part of proactive mines inspection visits. As one SSHR said in answer to a question on his impressions of how the ISHRs operate when they visit a mine:

> Respondent: *They bounce off us a lot for the best places to go and look at, the high-risk areas. So they will come up to us and say, where is your problems? And I will say, well the long wall at the moment is shitty and the standards…*
> Interviewer: *So they would start by looking at the physical issues?*
> Respondent: *They will come and talk to us first and they will ask us what has been happening? Where is your problem? And we will say oh well we have been having a bit of an issue down at development. Well we will go and have a look*
> (7120014 - SSHR)

In both cases it might be anticipated that to carry out these tasks adequately, the ISHR would need to undertake some documentary inspections alongside the physical inspections made and that the two would be related to one another. Again this is borne out by the interview data.

> Respondent *(ISHR): Okay, what I do, if I'm going to a mine, I'll bring up their last six months, or since I've last been there, of high potential incidents.*
> Interviewer: *And you'll do that from your desk before you go?*
> Respondent: *Yes, I plan obviously, I ring up and I send a notification that I'm coming on this day at this time, and I'll be there for whatever period. Then I print out HPIs, I'll print out inspectors' reports, and I'll print out MREs that I've sent to the mine or that the SSHRs have sent to the mine. Okay, then I'll simply take a few notes, of what I've got, you know what I mean? Okay, has this been done? You know what I mean? If I haven't been in touch and there's nothing to say, if SSHR raises an issue about, let's say, this procedure not meeting standard requirements, I'll go and ask about this procedure, and that'll be done in the first instance when I have a meeting with the company, I'll go, I'll arrive on site, on arrival I'll go to meet with the SSE normally or if he's unavailable, he'll normally send someone to get me, or to be with me, we go and, we undertake a meeting, and they'll ask what I'm there for, I'll explain the issues or what I've got and what I want to look at, and then generally we'll do a, we'll have a meeting about that and they'll provide some documents or answers …*
> Interviewer: *So while you're in the office, you're trying to find out what their process is to address these issues?*
> Respondent: *Yes, and what they've done about it … And then I'll come, after that we'll do a general drive round inspection, where I get to see the physical workings of the mine they'll take me and give me an overview and in the first twelve months, this is our first visit to all these mines, generally we went and sat up at the thing, this is what we do here, this is the type of mining we do, they're the machines we have this is what we have here, this is our drug and alcohol, this is, so we've got a general overview of the mine, you know what I mean? And some of the mines that we went five times, so I've got more of a general overview, and then, so then I'll do a drive round, we'll go to the wash plant, we'll do certain parts of the mine, and in particular if there's any areas that the SSHR, I'll meet with the SSHRs …*
> (7120027 - ISHR)

Further support for this is found in Figure 5.2, which shows that the balance of the inspections referring to physical features, documents or both has changed significantly over time. In both ISHR and MI inspectors' reports, reference to both physical and documentary inspection increased from 1999 to 2008. We think it is reasonable to conclude that this reflects the effects on practice of the introduction of statutory requirements for safety and health management systems in 1999. Again this is to some extent supported by the responses of the interviewees:

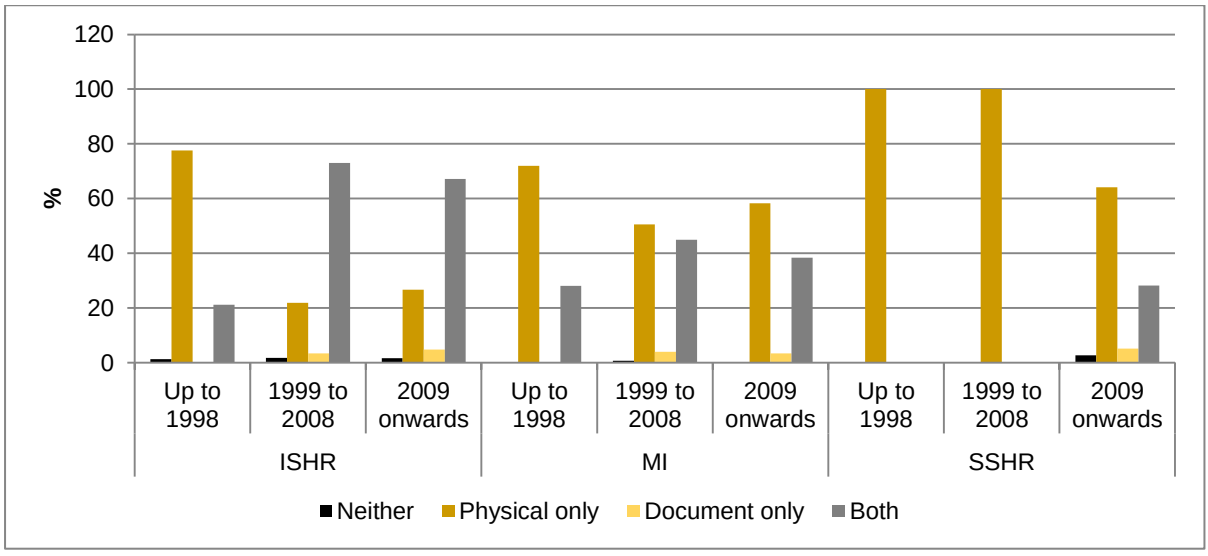
> *I think things have changed… you know, our Check Inspectors to me appear to be tied up a lot now with the*

legislation and procedures and that type of stuff. … When I first come into the role, I used to inspect every underground mine twice a year and every open cut once a year. … I… personally I like the hands-on approach. I loved inspecting coal mines. I loved going… I'd go out and do a midnight inspection. These guys [current ISHRs] are probably snowed under. A lot of it now is about risk assessments and reviewing risk assessments and doing that.
(7120038/9 – Former ISHR)

Interviewer: *Has your role changed over time, you've been doing for 13, 14 years so.*
Respondent: *Yes, it's, legislation just changed a bit … legislation before it was very prescriptive, and I tend to find that probably a lot easier in my job when it was prescriptive, because when you had quite a few contractors coming through at least it was the same at every mine and now they've gone to this risk, risk management where, mines have got all different policies and procedures here …*
(7120023 - SSHR)

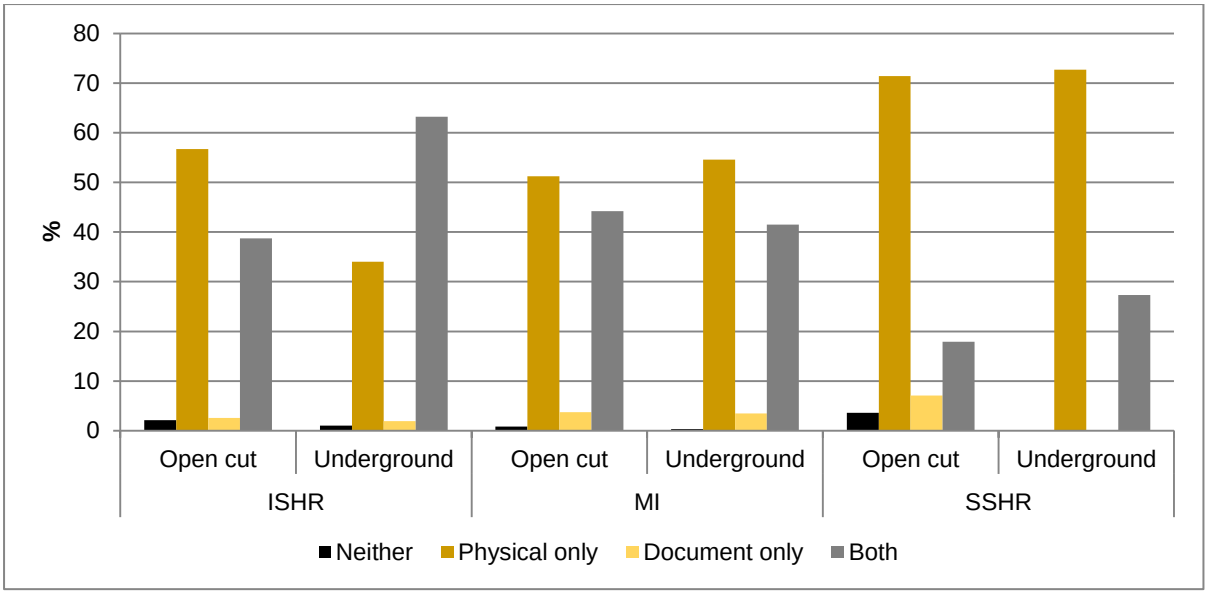
More difficult to explain, however, is that Figure 5.2 also demonstrates that reference to both types of indicators of OHS management performance during their visits to coal mines has fallen back in the last five years (Figure 5.2). As we will see several times again in the findings presented in this chapter, this slowing down or reversed trend was also observed in relation to several other aspects of the operation of arrangements for health and safety management in recent years.

Figure 5.2: 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, between 1999 and 2008, and in the last five years



Considering relative levels of physical and documentary inspection by mine type suggested more of the reports on open cut mines referred only to physical inspections, while more of those on underground mines referred to both physical and documentary inspections, in particular among ISHR reports of site visits (Figure 5.3). This may be a reflection of the general feeling among the representatives interviewed that more elaborate and complicated arrangements for health and safety management occurred in underground mines because of the greater and more complex risks there and there were more documented procedures to manage them as a result. Consequently an inspection visit by an ISHR, whether prospective or to support the SSHR, would be likely to involve more scrutiny of documented procedures in underground mines simply because there were more there to scrutinise.

Figure 5.3: Comparing relative levels of physical and documentary inspection among ISHRs, SSHRs and MI inspectors by mine type: open cut and underground



Overall, it is abundantly clear from documentary analysis that the ISHRs and SSHRs have engaged appropriately with the safety and health management systems adopted by mining companies in the mines studied. This finding is further corroborated by the interviews with the worker representatives themselves, which show how the hands-on experiences of safety and health issues are used by the representatives to help identify, understand and remedy weaknesses in the safety management systems and procedures in place.

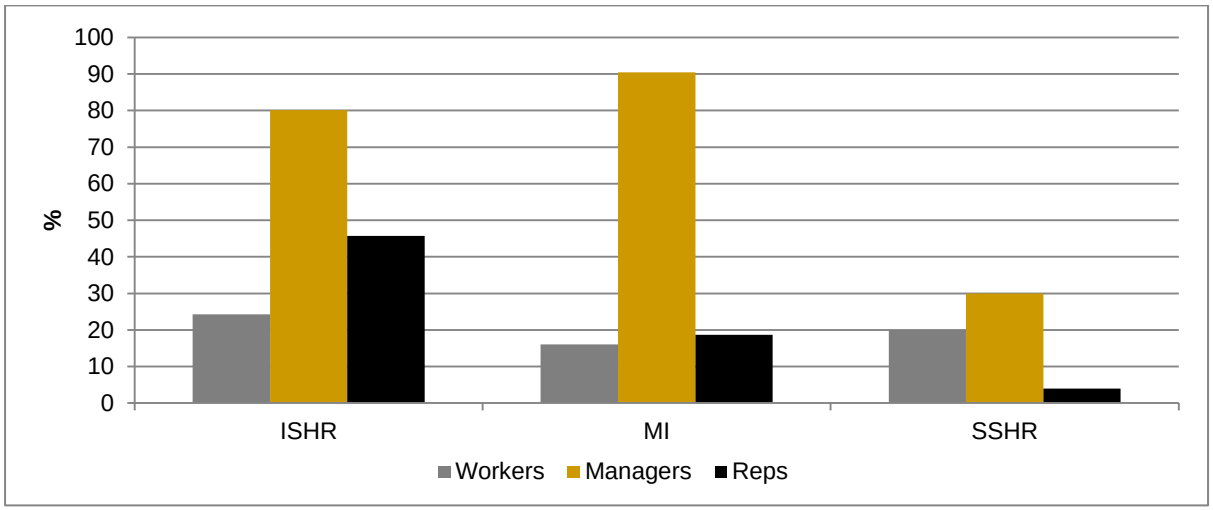
Sometimes problems are identified which require attention to be drawn to the safety and health management system and under the 1999 Act the representatives have a role in reviewing such situations and bringing them to the attention of the SSE in a formal procedure. Cases in which the safety and health management system was found be inadequate and which had led to the ISHR serving a formal notice to this effect featured in 5% of the ISHR inspection documents reviewed, applying at various times to around half of the mines covered. These findings are discussed in Section 6.5, in which we examine the use of the representatives' statutory powers to serve notices requiring mining company management to take action on different aspects of OHS.

5.3 Communications between representatives, workers, managers and inspectors during inspections

It is interesting to compare with whom the representatives and inspectors held discussions during their inspections. As can be seen in Figure 5.4, our analysis of the documentary material shows that the most frequent exchanges took place with a mine manager, which might be anticipated given that managers were responsible for health and safety matters at the inspected mines. More than 90 per cent of the inspections undertaken by the mines inspectors involved discussions with management and 80 per cent of those undertaken by ISHRs did too, while the SSHRs' documented engagement with managers was some way less, featuring in only 30 per cent of their inspections. This is understandable, because SSHRs were working within the mine that they were inspecting, and could undertake routine inspections of the mine, or parts of the mine, without needing to contact management. ISHRs and SSHRs spoke to workers more frequently than did the mines inspectors, as might also be anticipated given that they are tasked with representing their interests. ISHRs engaged with other representatives (almost always SSHRs) considerably more frequently than

the mines inspectors. Again this might be anticipated given that the ISHRs were generally visiting the mines in support of the activities of the SSHRs who were working there, but communication with worker representatives is supposed to be an important element of the mines inspectors' visit, so the seemingly very low proportion of their inspections in which this occurred needs further comment. We return to this issue when we consider the support available to representatives in Section 5.4.

Figure 5.4: Differences in discussion during site visits among ISHRs, SSHRs and MI inspectors



References to discussion with workers, managers and reps also show changes over time (Figures 5.5 to 5.7). In terms of discussion with workers, more ISHR reports refer to such discussion in the period following the introduction of the legislation (1999 onwards), but over the last five years these have fallen back again (Figure 5.5). However, ISHR discussion with both SSHRs and managers has increased over time (Figures 5.6 and 5.7). Among MI inspector reports, however, references to discussion with workers fell and then levelled out (Figure 5.5) while those to discussion with SSHRs and managers rose (Figures 5.6 and 5.7).

Figure 5.5: Differences in discussion with workers among ISHRs, SSHRs and MI inspectors over time

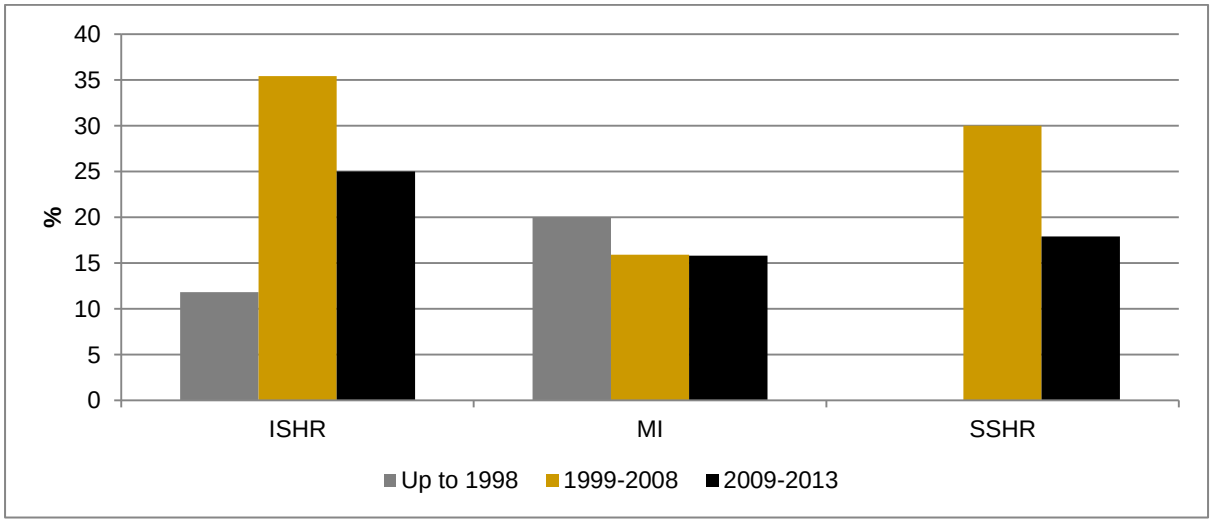


Figure 5.6: Differences in discussion with managers among ISHRs, SSHRs and MI inspectors over time

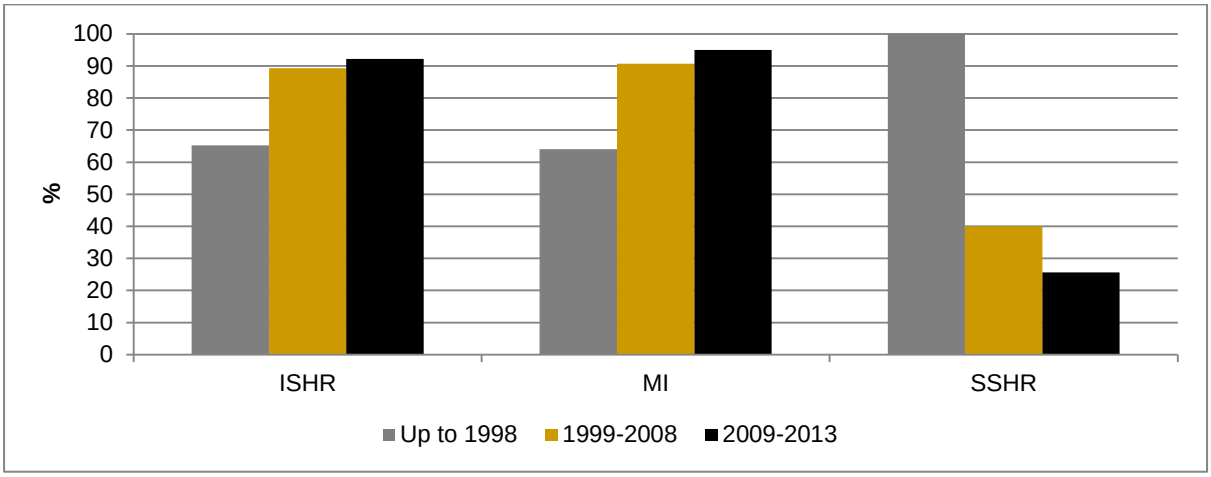
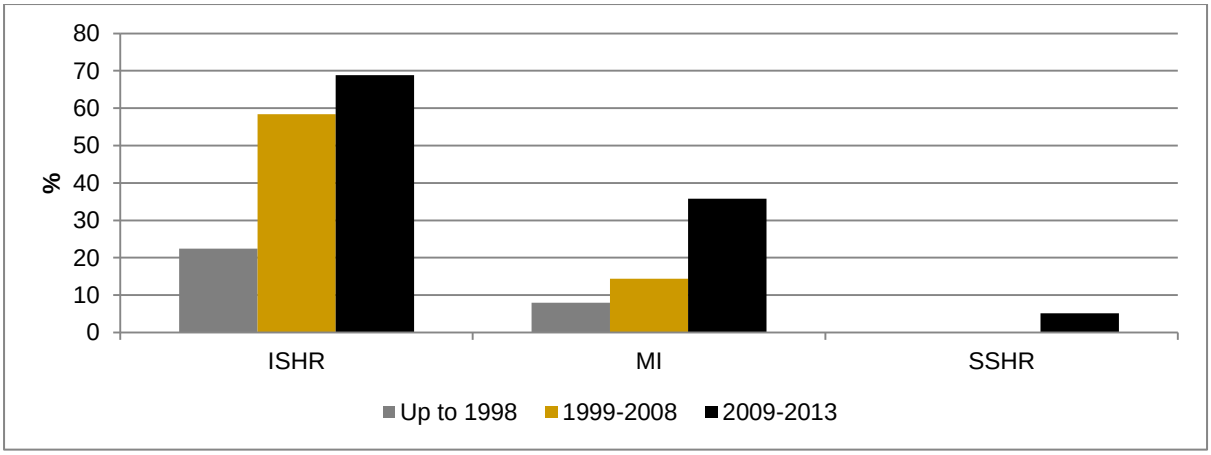


Figure 5.7: Differences in discussion with representatives among ISHRs, SSHRs and MI inspectors over time



It seems most likely that differences in the extent of the engagement between those inspecting the mines and mine workers, their representatives and managers over time may to some extent reflect regulatory changes. Thus, with one or two exceptions (MI inspectors and workers, and SSHRs and managers), the 'risk-based' provisions of the 1999 Act seem to have stimulated greater engagement between inspectors, representatives, management and workers. It may be that subsequent instruction to inspectors to be more active in seeking out representatives may have aided sustaining the communications between these two groups. However, the explanation for the observed reduction in engagement between both ISHRs and SSHRs and workers and between SSHRs and managers since 2009 cannot be explained by legislative changes.

As well as being to some extent driven by legislative requirements, the nature of relations between the mines inspectorate and both types of worker representative are important in determining the form and extent of support the representatives' experience in relation to their activities. We will explore these relations in greater detail in the following section (5.4).

5.4 Support for worker representation in health and safety arrangements on site

Many of the studies of health and safety representatives reviewed in Chapter 3 identify provision of support for their role as a strong determinant of their effectiveness (for example, see Walters and Nichols, 2007, for a review of this

research). In particular, research in other sectors identifies trades unions, employers and the regulatory inspectorate as the key institutional players in the provision of support. Additionally, virtually all studies agree that there is a strong link between training and the effectiveness of health and safety representatives, with better trained representatives being found to be considerably more effective than poorly trained representatives in almost all aspects of their activity. Moreover, studies of worker representation in health and safety also identify support for representatives from the workers in their constituencies as important factors influencing both their confidence and behaviour. Although very little of this research has concerned the mining industry, there is no reason to suppose the situation would be any different here. We have, therefore, examined the experience of the provision of support for the SSHRs and ISHRs from these sources as well as considered their experience of training. We begin with the role of the trade union and in particular the ISHRs in providing support for the SSHRs.

5.4.1 Support from trades unions and the ISHRs

The legislative framework for worker representation in Queensland coal mines is unusual in that it provides for a two tier system, consisting of work health and safety representatives (SSHRs) elected from among the mine workers of specific mines, that are supported in their role by full-time trade union health and safety officers (ISHRs) appointed and paid by the main miners' trade union. This approach is not unique in mining. As we have discussed earlier in this report, it has developed from long-standing regulatory provisions originally introduced in the UK towards the end of the 19th century — but it is different from legislative arrangements applying more generally in other sectors. It is, therefore, important to ask what value the difference adds to the operation of the system. While policy advisers and regulators have generally found the Queensland framework a useful approach, and have on occasion suggested it should serve as a model for mining elsewhere (for example the recent Royal Commission inquiry into the Pike River tragedy recommended such a course), mining companies have been more critical and have suggested that at best its requirements are over-elaborate, and at worst they may serve to hinder productivity without adding anything to improve OHS outcomes. The main focus of disagreement about the system is concerned with the role of the ISHRs. However, neither the positive nor the negative views of the system have been supported with robust research evidence for their assertions. Therefore, the present inquiry considers the evidence of what the position of ISHR adds to more conventional approaches to worker representation on health and safety. As we have recounted already, there is compelling evidence to suggest that through exercising their regulatory functions, powers of review and direct intervention, ISHRs play a positive role in improving the operation of arrangements for managing OHS. Equally important is the extent of the additional, albeit indirect, role they play in achieving improvement through providing counsel, advice, information, and training support for the activities of the SSHRs. It is with these activities that we are concerned in this section.

A strong theme running through all of the interviews we conducted with the SSHRs was the extent to which they valued the support they received from the ISHRs:

> *Like always … no matter what time of day or night we ring up, leave a message or something, they'll always get back to us and always good for advice. People have some issues — might've been to do with an injury they got from work or something like that. We can point them in that direction. They've never ever let us down. And they're always there and I guess it's just like a family, once every twelve months you all get together and everyone telling everyone what goes on in their mine and they're trying to tell us, — hey, we need to get better at this, or this view and that, sort of thing. They're … look, without them we can't survive.*
> (7120036 - SSHR)

There are several elements of this support captured in the above quote, which was typical of many such responses from the SSHRs. First, there

was the sense of the availability of the ISHRs. Again this availability and willingness to respond was often repeated in the interviews:

> *Any time I have had any concerns … I'd just ring them and if I couldn't get a hold of them, they'd all ring back.*
> (7120042 - SSHR)

> *… like when you first take on this role, it's a bit daunting, but as you find your feet, become more confident with what you're doing, you probably have less coaching and more guidance. That's probably the best way to describe it. You only probably ring them once a week at the start, because you don't know whether you're really going about it the right way or whatever, yeah, after a while, with the coaching they give you, then it's just down to guidance.*
> (7120015 - SSHR)

Second, there is their reliability. For example, they could be relied upon to provide information and advice:

> *If you couldn't find out information yourself, they'd be the first point of call. And if you weren't sure about which way to go on a decision, ring them.*
> (7120035 - SSHR)

But they provided more than advice and information. Third, there was a strong feeling among the SSHRs that the ISHRs understood the difficult situations in which the SSHRs found themselves – perhaps not least because they knew that the ISHRs had themselves been SSHRs in the past. They could be relied upon to give counsel and help to maintain the morale of the SSHRs, both when they were new and feeling overwhelmed by their tasks, as well as when they were dealing with difficult issues.

> *… no I have never had any issues with any of the industry safety and health reps, they have always been more than helpful and, you know, steer you on the right path, yeah. And like I said, when I was new on the role, in [mine name], I was always ringing them up and, you know, they never said, not this prick again…*
> (7120013 - SSHR)

> *I just run by him what we're doing … what action we need to take and they might give us another avenue that we can follow or whatever, but they'll normally back us up and say, you're doing it right, you're doing it right … or you're doing it wrong — this is what you should be doing. But most times they'll be backing us up and that's what we're looking for, that's where the situation is now.*
> (0650032 - SSHR)

There was also a sense of the way in which the expertise of the ISHRs was valued, but also of the continuity of the support that the trade union had established through the ISHRs and of the expertise they brought to their role:

> Interviewer*: So, how would, overall, how would you describe the support that you get from the ISHRs?*
> Respondent*: You couldn't describe it. It's a wealth of knowledge that you couldn't put in a book. A database couldn't do it, it's just, the experience that they've got. … and that knowledge seems to get passed on to the next people that get elected in that position, these three boys aren't the first three industry reps I've worked with. It does seem to get passed on, I don't know what you'd do without them.*
> (7120015 - SSHR)

There was a further strong sense of the authority carried by the ISHRs. If necessary, they could be called upon to intervene and their intervention would carry weight beyond that which the SSHRs were able to command. This was seen as indispensable in enabling the SSHRs to be effective:

> Interviewer*: … if they got rid of the industry reps, how would that affect your work?*
> Respondent*: No well it would just make it bloody twice as hard trying to*

> *get anything done because it does help to have those blokes to come out and give you some back up and they can bloody put some weight in it too, you know … they can steer you in the right direction if you are not sure of anything. Like I said, most of the time we can fix things on our own but if you need those guys well they will come in and bloody help you out you know … Yeah, because they are a critical role to me. We can't do without them.*
> (7120013 - SSHR)

These sentiments were corroborated by the ISHRs' own descriptions of what they did and how they saw their role, in which both their support for the SSHRs and their role as external back-up were prominent themes:

> *Like they'll ring up for — I got this issue, I need some advice — and that's more what our role should be for them, to help advise them, not saying we know everything either but if they ring up and they got an issue, say, well, have you thought about attacking it this way? Or going that way? Or, have a look at … or I'm not sure about this, I'll have to do some homework and I'll get back to you. We should be helping them to run the ball up at first and if they hit trouble or something we can come in and take the ball off them and run it up for them.*
> (7120034 - ISHR)

Although a major element of the work of the ISHRs involved planned inspections of coal mines, which were prioritised according to conditions of work in the mines across the Queensland coalfield, they also regarded themselves as part of a system in which mine workers' health and safety were protected through the implementation of statutory requirements for on-site safety and health management systems and procedures. They were aware that mine workers' participation in these procedures was provided for both directly through statutory requirements for their direct engagement in the development of the procedures, and indirectly, through the activities of the on-site SSHRs. As the above quote makes clear, the ISHRs saw themselves as supporting the role of the latter by giving advice, information and building confidence to enable the SSHRs to act on their own in relation to mine management, as well as being there at the mines when needed. In addition, in their mine visits they sought time with ordinary mine workers to seek their views on OHS issues and to gauge the extent to which they participated directly in the risk management procedures as required under the law.

There was also a strong sense in the responses from the ISHRs that not only were they trying to encourage the SSHRs to act more independently in relation to the management of the mines, but also to be more strategic in building consultative relations with managers in order to obtain better outcomes. They were aware that this required skills that would take time and support for the SSHRs to perfect. As one ISHR said of his interaction with a SSHR:

> *I told him, I said, don't ring me … Go through the process and try to get the company to come round so they can show that you're trying to be consultative. "Cos, you know, you're going to have to hopefully work there for another five years as a checkie. Don't go and belt them first off and then keep getting a flogging every time."*
> (7120037 - ISHR)

In addition they used their position to encourage mine managers to take consultation with the SSHRs more seriously, so when in conversation with mine managers they would often stress the idea that listening to the SSHRs could help the mine managers in ensuring that the mine was kept safe and within the requirements of the law:

> *So we all go and talk, yes, yes, here look, this bloke's actually here to keep you out of jail. That's how I sell them. He's your eyes and ears. He's the voice of your workforce that either don't want to or are afraid to put their hands up.*
> (7120033 – Former ISHR)

As well as their every-day support for the SSHRs in their activities and relations with management, the other major form of trade union mediated support in which the ISHRs were centrally involved was the annual training conference for the SSHRs, which they played a major part in organising and which they also used as an informal way of better getting to know the SSHRs and their issues. There were two training conferences each year, run separately for underground and open-cast mines and each held over the course of a week. All the SSHRs interviewed regarded these training conferences positively. They spoke warmly about how attending the conference as newly elected SSHRs had helped them:

> *It was very helpful for me when I started, as the site safety health rep, 'cos I knew jack about legislation, I knew jack you know … you know you could stand up for yourself and that's the stuff but it come to the legislation and I had no clue and that's what the conference does … then enlightens you as the role of the site safety and health representative and the whole, this is what you do, this is how it's done and this is through the legislation, … , they used to give you a little book … and these are where your involvement is in the legislation and what you may have to use. That's what you learn. And also it's not just that, it's that you have, we get a lot of inspectors come there and so you get access to them and you get a lot of conversations with explosives about fumes and stuff but they're there you know … the different inspectors that come there you got access to those people.*
> (0650032 - SSHR)

They said the conferences provided a continuing source of help, even for the more experienced representatives. As well as training them to better understand and use the legislation and regulations, and hearing from inspectors and other experts on technical and other matters, they also valued the conferences for the opportunity they offered to learn from each other and about the experiences of SSHRs in other mines:

> *Yeah, just hearing how the other pits are going as well. What struggles some of the other checkies have from other pits with companies and stuff.*
> (7120035 - SSHR)

There were several examples given of practical innovations on safety in other mines that SSHRs had learned about from their colleagues while attending the conference which they felt could usefully applied to their own situations:

> *Like, you know, there's probably mines out there that are using… like (names a mine) for instance, with the shuttle cars, they had a thing on the back when they pick up the cables and stuff like that, which I thought was a great idea 'cos we're introducing these shuttle cars …*
> *… Gives you email address, gives you all these photos and stuff like that you know … somewhere along the line somebody out there's got something somebody else is going to need to use one day. So if you can get all the information off all them people it's great.*
> (7120041 - SSHR)

> *I had an issue with the bathhouse, another bloke down south had an issue and we were flicking emails backwards and forwards and one had machinery fires, we just had … so, and they'd flick it out to everyone, hey, this is what's happened. So, yeah, no, it's good, good like that.*
> (7120042 - SSHR)

Indeed the experience of the training conference was so positive the SSHRs were frequently vocal in expressing a wish for more of the same kind of training to be provided:

> *Oh I reckon it was great. I reckon there should be more of them personally, like one a year for me is not enough. I*

reckon there should be two, at least two, because things change.
(7120041 - SSHR)

And:

Training wise, I'm pretty sure we could do some more training.
(7120017 - SSHR)

Further endorsement of the value of the ISHR role in supporting the SSHRs was provided by the senior representative of the Mines Inspectorate interviewed who said:

...look, the relationship of the Industry Safety and Health Representatives with the workforce is excellent. I believe the workforce views them as a party that they can take their concerns to if they hit a brick wall trying to deal with management.
(7120032 – Senior Mines Inspector)

On their achievement in this capacity he went on to say:

Oh look they've achieved a great deal. There's absolutely no doubt about it. So if there's any question mark about is it a role that shouldn't exist. Bullshit. It's a role that needs to exist.
(7120032 – Senior Mines Inspector)

In summary then, the SSHRs were unanimous in their view of the added value provided by the ISHRs in enabling them to undertake their functions effectively and use their powers appropriately. There was no dissent concerning the crucial nature of the support they provided in this respect, through training, mentoring, advising and informing the representatives, as well as none concerning the various aspects of their role outlined previously in which they engaged more directly with management or with coal workers. This was a view that was given some substance by the accounts of their activities provided by the ISHRs themselves, and it was further corroborated from the perspective of the Mines Inspectorate.

5.4.2 Support from workers

The SSHRs were also positive about support they felt they received from their fellow workers. Most were unequivocal concerning this:

Oh yeah, yeah. No they're really good....yeah I think we have got full support from them.
(0650032 - SSHR)

And:

Oh yeah, yeah. Well probably too much at times. They think I can wave the wand and make things appear and vanish!
(7120040 - SSHR)

Occasionally some SSHRs were somewhat more reflective, especially concerning their feelings of isolation and responsibility:

Interviewer*: And do you feel you have the support of your fellow workers?*
Respondent*: Sometimes yeah. It's a pretty lonely job at times ... People are funny, they will soon bag us, but like I said at the start, occasionally some bugger will walk past us and say you guys are doing a good job ... So yeah they are pretty supportive.*
(7120014 - SSHR)

Indeed, in a few cases this support extended to situations in which SSHRs had been involved in difficult confrontations with management and had drawn some confidence from the knowledge that their actions had the confidence of their fellow workers:

... they were told to go back to work and they refused to go back until I gave them direction. That sits very highly in my book — that they had management telling them to do something and they wouldn't do it. They were waiting for my instruction. That tells me that they believe in what I am doing.
(7120021 - SSHR)

However, interviewees were somewhat less unequivocal about the support for representation on health and safety that was provided from other sources — as we discuss in the following sub-sections.

5.4.3 Support for representation provided by mining company management

Studies of the operation of regulatory arrangements on worker representation make it clear that the positive support for such arrangements from the leadership and management of the organisations to which they apply is a major factor influencing their effectiveness (Walters and Nichols, 2007; Walters et al, 2012). There are many ways in which such positive support can be provided. They include: sufficient time to undertake functions provided for under the legislation; facilities to enable these functions to be undertaken efficiently, such as telephone, report writing, information retrieval and storage support; as well as the provision of training on health and safety matters and release from work without loss of pay to attend this training or that provided by others; and also more generally in terms of the responsiveness of managers to the concerns of the representatives. Experience of the extent of the formal provision of support in terms to time and facilities varied considerably among the SSHRs. When asked about the time they were allowed to undertake their functions, some were clearly happy with the arrangements:

> *No, that's where [name of fellow SSHR] are lucky I suppose 'cos we're not in panels all the time, like we are stuck outbye for that reason. So if something happens they can just call us up or whatever and get us to fix that sort of stuff.*
> (7120041 - SSHR)

> *… if I need, or something was to come up, I just tell the manager I'm going for inspection and I just do it.*
> (7120042 - SSHR)

In other situations, however, there were restrictions on the time allowed and a strong feeling among the SSHRs that it was not sufficient to enable them to perform their tasks:

> Interviewer*: Is there anything that can be done to improve your role?*
> Respondent*: Yes, give us more time to fulfil our obligations under the legislation, one day a month, as far as I'm concerned, is nowhere near enough.*
> Interviewer*: Is that effectively how much time you're given?*
> Respondent*: It's not under legislation. It's all the mine will give me. … we don't get time, we don't get time.*
> (7120021 - SSHR)

The same representative echoed the sentiments of several others when he explained that they were obliged to undertake many tasks in their own time:

> Respondent*: … I'll be honest I put on average five to ten hours a week of my own time into this now, you've got to have a personal life. I do it when my wife is at work, so my wife doesn't know what I'm doing.*
> Interviewer*: I see.*
> Respondent*: It's like having the mistress, you know, my wife doesn't need to know 'cos it eats into your private life. And I'll be honest, it affects your private life. It's affected mine.*
> (7120021 - SSHR)

While some of the SSHRs complained of the formal restrictions placed on the time available to undertake their safety tasks, a more subtle constraint commonly experienced was that of feeling unable to attend to many immediate health and safety issues because the crews in which the SSHRs worked would have to cover their work for them or may even be unable to complete their allocated tasks without them:

> Interviewer*: Are there any particular obstacles … to you performing your role?*
> Respondent*: Time … since August last year, we're no longer extra to the crew, we are part of the crew, so if I don't go*

> *down and drive the miner, my crew is short, if they're short, they can't cut … So we're not extra like we used to be, … an extra person would fit in where we could, but if we had a role to do, which we're supposed to be able to do, it's go and do that role. But now we've got to balance. Is that important enough to warrant us not doing our job? Whereas before we could go upstairs and sort it out.*
> (7120015 - SSHR)

And:

> Interviewer*: That's a big thing. I mean you can point to the legal powers as much as you like, but if you're working with a group*
> Respondent*: it lets them down. And the boys want you there, but the thing is it puts more pressure on them.*
> (7120020 - SSHR)

As these quotes show, the extent to which the SSHRs were able to find time to undertake their functions was dependent on a combination of factors. They included: the kind of tasks their mining job entailed and how much they were involved in working in teams or with machinery for which their continued presence was necessary to maintain production; the ease or appropriateness of their replacement to enable them to undertake their functions; and the attitudes of supervisors, middle and senior managers towards prioritising the health and safety activities of the SSHRs in relation to the routines of their normal job. The result of this combination was that it was relatively rare for the SSHRs we interviewed to suggest that they were able to get on with their health and safety related activities unfettered by concerns about their work tasks. Most sought to find an acceptable balance between the two and this was facilitated or frustrated by the attitude of managers and supervisors. All had at times had been frustrated by constraints on their health and safety activities as a result. Most of them also said that a further consequence of the need to achieve this balance was that they undertook a variety of health and safety related tasks in their own time.

When asked what could be done to improve the situation many of the SSHRs talked about being provided with designated time away from their normal job to carry out their health and safety tasks. Some had achieved this already, but all agreed that designated time would not address the all problems they faced — such as needing to react to incidents or concerns at short notice. Some SSHRs had found the intervention of the ISHRs useful in supporting their need for such time and the ISHRs also commented that they not infrequently were required to intercede with managers concerning the importance of allowing the SSHRs time and facilities to undertake their tasks. Moreover, as one SSHR previously quoted typically indicated, some SSHRs had noticed the provision of time to undertake their health and safety activities had lessened as the result of relatively recent managerial decisions — '…since August last year we are no longer extra to the crew…'. Changes in management personnel and different management attitudes and approaches that resulted from them were seen as partially responsible for this situation:

> *It depends who the management is at the time. Previous management knew that if we stopped something it was to help them out because we knew if they kept going they would get someone hurt and they would be in the shit … and the SSE we have got now, well he has got a different opinion.*
> (7120014 - SSHR)

Another aspect of the mixed experiences reported concerning support that was provided by employers was found in the extent of the dedicated facilities that were available to SSHRs:

> *At the mine yeah. So we have got our own room. We have got our own office where we have got a computer; we have got access to a safety health management system and all that sort of stuff … So anybody knows where we are if they want to come and see us and the management is the same because they use us as well to help them.*
> (7120014 - SSHR)

I think … if you're going to do the job properly we should have all the same computers, somewhere to put everything, phones. Mate, we struggle, we do, we struggle. So I used to do it, I used to pay my own phone, and everything like that sort of thing, then the union paid it, that's it. Now the company … they want to control it. Take it off us … it's not good.'
(712020 - SSHR)

Interviewer*: Do you have a room that you can use …?*
Respondent*: Oh we got one little computer room that all the Deputies share. So there's just … it's like going to Woollies, take a number until you get in there and start and use it. Yeah, it's not too bad.*
Interviewer*: But there's no dedicated space?*
Respondent*: No, [name of fellow SSHR] and I are trying to sort that out at the moment, sort of get our own little office so we can stick stuff in there.*
Interviewer 2*: Is that essential do you think for the role?*
Respondent*: I think it is. Because, you know, if you want something… especially if you've got filing cabinets, you already got stuff in there and stuff like that, you can just walk in there and grab whatever you need and say, okay, here it is. But you've got to try and find a computer that no-one's using and sit down and, you know … take longer.*
Interviewer*: And how supportive do you think the SSE is in terms of giving you that kind of space?*
Respondent*: I think it's going to be hard.*
(7120041 - SSHR)

These issues of SSHRs not having enough time, or sufficient facilities, to carry out their SSHR role point to gaps in the Coal Mine Safety and Health Act 1999, which does not specifically require mine operators or SSEs to ensure that SSHs have the time and facilities necessary for them to perform their SSHR role. By way of contrast, the harmonised Work Health and Acts place obligations on all persons conducting a business or undertaking to provide any resources, facilities and assistance to a HSR that are reasonably necessary to enable the representative to exercise her or his powers or perform her functions (section 70(1)(f)), and must allow a HSR to spend such time (with the pay that the HSR would be entitled to if performing his or her normal duties) as is reasonably necessary to exercise his or her powers and perform his or her functions under the Act (sub-sections 70(2) and (3)).

On the provision by employers of training on health and safety, the majority of SSHRs acknowledged that their employers allowed them to attend the annual training conference run by the trade union, but added their employers provided little or nothing at all themselves in the way of dedicated training for SSHRs:

Well what I'm saying is, at the moment, the only ones that train us is the union. The company should be training us, at least something you know.
(7120020 - SSHR)

Several pointed out that training from the company would be extremely useful, especially that covering the risks associated with new machinery or processes, as well as technical training on known risks such as those arising from the use of hazardous chemicals, explosives or dangerous machinery and company procedures for their assessment and management:

… yeah, training on the company side thing, there's no training from the company. Yeah, we probably go to the conference. See you later. That's about it. They don't … you got to always ask and follow up, you know, can I get involved in ICAM? Can I get ICAM training? Can I get this? Can I get that? You're never approached to say, hey, you're an SSHR, we have a responsibility to assist and help you conduct your role as best as possible. How about you come do some ICAM training? No, I've got to go and ask for that. Whether they feel I require it or not, you know, just … so I understand their process. So I think on the

company's behalf, I'd get the training but I've got to keep asking, I've got to follow it up and all that. And it just seems to take forever.
(7120042 - SSHR)

Experience of support more generally for their role from the management of the companies for which they worked was also mixed. Some SSHRs spoke of having good relations with the company management and especially with the SSE, which meant they felt they were listened to and were able to get things done. Others spoke of SSEs who were dismissive of their concerns, who were not willing to meet with them and who themselves were often recent appointments and whose knowledge of the legislative requirements applying at the mine was limited. They spoke of bureaucratic systems and procedures in place which sometimes made it difficult for them to respond swiftly to issues raised by fellow workers or to incidents when they were located at places in the mine at some distance from where the SSHR was working. They also suggested that the safety managers employed by the company were mostly concerned with following paper trails in the safety management system:

Respondent*: The safety department I should say, they don't do safety, all they control is the safety management scheme, the paperwork, they look after it, make sure it's right, and they don't even go out and wander round the mine site, the only safety officer you've got out there is the open cut examiners, I suppose they class their foremans as safety officers, but they're not, they're production, and the checkies, the site safety health reps.*
Interviewer*: Are you saying that the consequence of that is that the safety department is really just caught up with that paperwork?*
Respondent*: Yes, that's all they do.*
Interviewer*: So it's the paper system that they spend all their time with?*
Respondent*: That's right, that's exactly right. Well see, they don't even go out and ask the workers are they alright, you know, can we help you, can we do it, they don't even talk to them. And they've moved them, (names company) they've moved most of them to Brisbane.*
(7120020 - SSHR)

Where limitations in the support offered to the activities of the SSHRs by the mine management were perceived, they were usually understood and characterised by the representatives as resulting from three main trends in the way in which work in the mines was currently managed. First, as the above quote illustrates, an over-reliance on the existence of documented safety and health management systems and procedures was felt to obscure or reduce the responsiveness to the more hands-on safety concerns held by the workers' representatives. Linked to this was a second concern about the rapid turnover among senior mine management, which was regarded as having increased considerably in recent years, leading to dependence on these management systems replacing intimate first-hand knowledge of safety in the mines for which they were responsible being held by senior managers. Representatives often felt strongly that managers were not in post long enough to gain really useful experience of the way these issues could be most usefully addressed or of the role of the SSHR as their 'eyes and ears' in this respect. The short-term duration of their stay was also frustrating for some of the more experienced representatives who felt they had invested considerable time and effort in building good relations with particular senior managers only to find them replaced just when this time and effort were beginning to pay off. Furthermore, the effects of such turnover were seen to extend to middle and supervisory management, causing them to become more dependent on the documented safety and health management system and 'perform' according to its bureaucratic requirements, rather than to be more responsive to the practical health and safety observations of the workers' representatives. This created a feeling among the representatives that if issues of concern to them were not 'in the system' then it could be difficult to get them addressed.

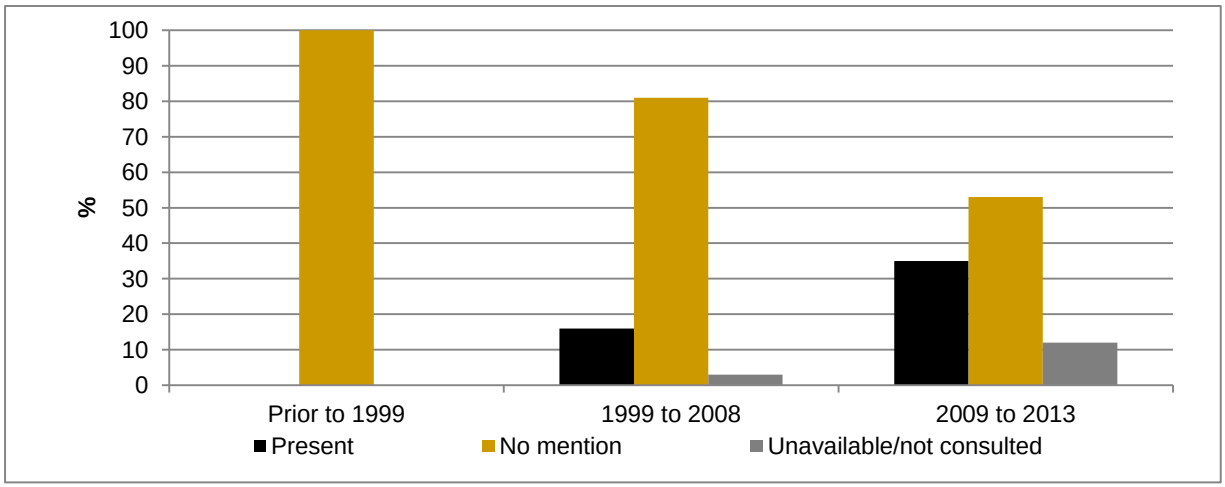
5.4.4 Support from the inspectorate

The Mines Inspectorate is committed to sustaining dialogue with health and safety representatives both during the visits of inspectors to the mines and through engagement with both the ISHRs and SSHRs off-site. The senior mines inspector we interviewed made this commitment clear during his interview:

> *… whenever we go to the site we want to be able to meet with these guys. We want to have open communication channels with them. … They are seen as a key part of managing safety.*
> (7120032 – Senior Mines Inspector)

However, as section 5.3 makes clear, although the proportion of mines inspectorate visits in which SSHRs were present has increased in recent years, it remains the case that by no means all the records of such inspections include mention of the presence of the SSHR. Indeed, even among the more recent records in which such a presence is mentioned more than twice as frequently than previously, it still occurred in only one third of the total number of inspection reports analysed. Of the 605 reports from Mines Inspectors that we included in our analysis of documentation, 555 (92%) referred to an inspectorate visit to the mine (the remainder referred to, postal entries and meetings at inspectorate headquarters). Figure 5.8 summarises these data, which were also elaborated in section 5.3.

Figure 5.8: Reference to SSHR presence during inspectorate mine visits over time



The interpretation of these data is perhaps best aided by the remarks of the senior inspector we interviewed. When asked how inspectors actually go about interacting with SSHRs when they are at the coal mine, he explained:

> *… they advise the mine they're coming. The SSE is obligated to tell the Site Safety and Health rep that an Inspector is going to be on site … in advance of the inspection. That advice might actually say to the SSE as a reminder, make sure you let the SSHRs know we coming. Now having said that, the absence of that advice doesn't give the SSE the option not to tell the SSHR. So I'm a little bit wary about that advice because I don't want it to come back as if it's the Inspector's obligation. It's actually the SSE's obligation. So when the Inspector actually arrives on the site, he will ask is the SSHR available? Then, given him being available or not available, he will, when he fills out his mine record entry he will actually make a note of whether the SSHR was made available. So they're the three checks. What should happen is that the SSHR should be able to accompany the Inspector on his inspection. That's what should happen.*
> (7120032 – Senior Mines Inspector)

But this is clearly not what happened in just over half of the records that we analysed of such inspections undertaken between 2009 and 2013. They made no mention of whether or not a SSHR had been present during the inspection. Therefore, despite the senior inspector's remarks, in the largest proportion of the most recent records we analysed there was no note of whether or not the SSHR had been made available. It would seem that the most likely inference from this is that the SSHRs remain excluded from a substantial proportion of visits by mines inspectors. The representatives themselves reported a mixed experience concerning notification of the visits of inspectors. Some told us they believed they were always informed of these visits in advance, and they generally accompanied the inspector during the inspection, while others were more unsure of how systematically they were informed of inspectors' visits and some felt that their management were less than helpful with such information — if they informed them at all, it was frequently telling them that the inspector was there at times when they were unavailable:

> Interviewer*: So are you're saying … they don't visit the mine very much or when they do visit the mine, you're either not there or don't…?*
> Respondent*: Yeah, I'm not there or … but it's strange because they're supposed to notify me. They always notify me when I'm on days off, they'll say, oh we've got the Inspector here, they have the obligation, they notify me. …. So I don't know. I've never had a conversation with a Mines Inspector on site in twelve months.*
> (7120040 - SSHR)

This was confirmed by the documentary evidence, as the following extracts from an MI mine record entry and an ISHR report, both written relatively recently (2007 and 2012 respectively), illustrate:

> *Unfortunately the Site Safety Health Representative had not been informed of the visit and therefore not available to accompany the Inspectorate.*
> (MI mine record entry)

> *I was met by [name of Pre-Strip Manager] at the security gate. As we proceeded through the security gate and to [name of Pre-Strip Manager] office I asked where the SSHR [name of SSHR] was. [Name of Pre-Strip Manager] informed me that he wasn't on site. I advised [name of Pre-Strip Manager] that I had been in contact with [name of SSHR] and knew he was on site. [Name of Pre-Strip Manager] advised me that he would contact his supervisor and to see if he can be released. Must I remind the Site Senior Executive (SSE) of section 118 (2) (b) of the Coal Mining Safety and health Act 1999 (CMSHA)*
> (ISHR report)

One ISHR pointed out that the legislation did not require the Inspector to make contact with the Site Safety and Health Representatives:

> *But it's not actually in the legislation, it's not up the inspectors to notify the local checkies, the SSEs supposed to do that.*
> (7120034 - ISHR)

Despite this, in his view whether the SSHRs were likely to meet inspectors during their inspection could still be strongly influenced by the attitude of the inspectors themselves:

> *Depends on the Inspector. Some inspectors are pretty proactive about that and some aren't.*
> (7120034 - ISHR)

On the whole, the representatives had also had a rather mixed experience of interactions with inspectors, some finding them helpful, especially in relation to technical or legal issues:

> *I'll even go to say that some of the Mine Inspectors at times are very helpful. …. Yeah, yeah. You use them for what they're there for, you know.*
> (7120036 - SSHR)

This seemed to be especially the case among the more experienced representatives, perhaps

because they had had greater opportunity to get to know the inspectors:

> Respondent: *I know a few of them as well, back in the 90s, they were probably working next to me, not where they are now, when you see them, they're friendly, which is all right. A few of them are probably better than others, some of them are very good at their job you're just not sure what job they're doing. Normally I'll get an email telling me they're coming. I've been fortunate the last couple of years with the amount of trouble we've had at work with the oxidation and everything else, they're up there nearly every month, it wasn't hard to build a relationship with them, and now you've got all their numbers and you can ring them if you need them.*
> Interviewer: *And do you do that now?*
> Respondent: *Occasionally I've had to, that's something that they've suggested …*
> Interviewer: *So would you say they're a useful resource and a useful form of support to you?*
> Respondent: *They are to me, I know they're not to everybody, they are to me.*
> (7120015 - SSHR)

Mines inspectors are very often mining professionals who have previously worked in the mines as engineers and managers themselves. Indeed, it was frequently pointed out by workers' representatives and the senior mine inspector that this employment history, as well as the practice in some cases of continuing to move back and forth between management positions in the industry and employment as inspectors, led workers' representatives to question their impartiality.

Among the ISHRs – who probably had even greater opportunities to get to know inspectors —engagement with inspectors took place in relation to the formal use of their powers as well as through their presence at Technical Advisory Committees. One long-standing ISHR who was active in this committee had also been active in various other policy forums and was regarded by the other ISHRs and the senior representative of the Inspectorate interviewed as having a key role in this respect. Other relations with between the two groups took place informally but there were regular exchanges. Talking about these types of relations, the senior Inspector interviewed said:

> *A real life example would be that [name of ISHR] might leave a message for me. It might take me a couple of days to get back to him, but I'll get back to him. But it's not the sort of dialogue that happens every day. It might be a couple of weeks, once every couple of weeks I have a chat with him. And he'll come and see me and we'll have just a general shoot the breeze …*
> (7120032 – Senior Mines Inspector)

The ISHRs had also sought support from the Inspectorate for the Training Conference they organised each year, frequently asking inspectors to speak at these events. The SSHRs generally commented favourably about this practice, as did the senior representative of the Mines Inspectorate, with all regarding it as a useful way of gaining a better understanding of each other.

5.5 Conclusion

SSHRs were appointed from among experienced mine workers. Most were persuaded to stand for election by fellow workers. ISHRs, who had served as SSHRs, had even greater experience.

Both SSHRs and ISHRS engaged with safety and health management systems as a core part of their activity, using both the informal and formal procedures available to them in the legislation. SSHRs never lost their focus on physical hazards, but both they and the ISHRs were able to use the identification of such issues to help remedy defects in the safety and health management systems.

The most important form of support for the SSHRs was provided by the ISHRs, who made themselves available at all times to provide mentoring, advice and moral support. The principal form of training for SSHRs was the

annual week long training organised and delivered by the ISHRs. This was greatly valued by the SSHRs. There was little, if any, training by mine management.

SSHRs reported strong support from fellow mine workers, and a relatively positive relationship with the mines inspectorate, although there were some concerns about the frequency of contact. SSHRs experience with mine management was mixed, with many expressing concern at the level of support.

The next chapter examines the activities of the representatives in relation to serious risks, and the use of their powers.

6 The practice of worker representation on health and safety in Queensland coal mines: serious risks, incidents and the use of statutory powers

In this chapter, we consider the ways in which representatives carry out their detailed statutory functions of inspecting and investigating incidents, following up complaints and making representations of members' interests on health and safety. Given current policy interest in the statutory powers of these representatives, we pay particular attention to evidence of the ways in which they use such powers.

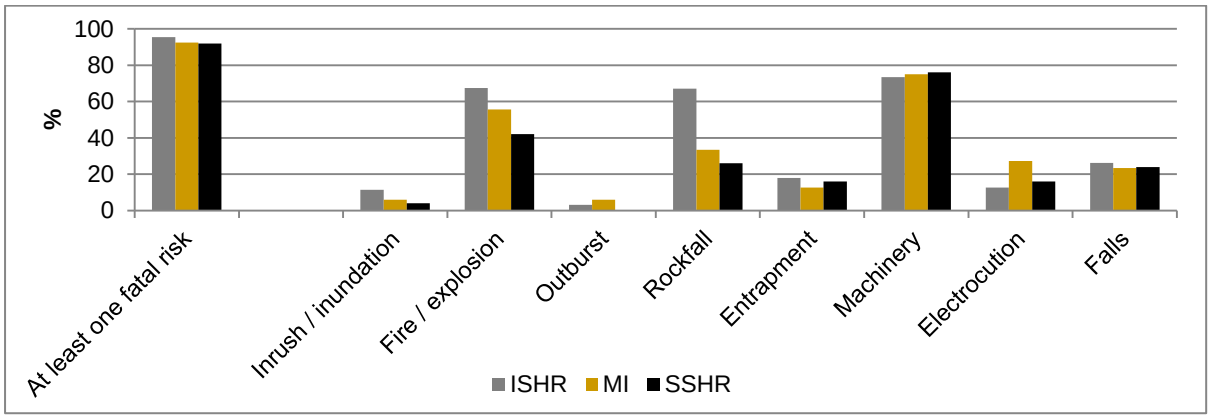
We also pay attention to the labour relations contexts in which they operate in Queensland coal mines and discuss what elements of these wider contexts they see as supporting or posing limitations on their effectiveness.

6.1 Serious risks and the role of the worker representatives in prevention

An issue that is often of some concern in participative approaches to health and safety management in which workers' representatives have statutory powers and functions is whether they use their powers and functions responsibly and in ways that are proportional to the risks involved. To obtain some sense of this in relation to coal mining, as explained in detail in Chapter 4, we identified the most frequent fatal risks in coal mining as evidenced by the international literature and then analysed the documented records of the activities of the representatives in relation to these risks. As a further comparative measure we also analysed the reports of the Mines Inspectorate in the same way.

Most reports of site visits, regardless of whether they were those of the ISHRs, SSHRs or the Mines Inspectors referred to the inspection of at least one fatal risk (94%). Machinery, fire or explosion and rock fall were the fatal risks that were most commonly reported (Figure 6.1). 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 of the fatal risks 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 6.1: Inspection of fatal risks



The representatives themselves were aware of the potentially serious nature of the outcomes they saw themselves as being there to prevent:

> *Oh there was one time I had to stop work because I found something unsafe. So there was … we weren't doing production at the time but it was leading up to production, install the long wall, passing underneath an overcast that wasn't properly secured. So it was left like that, in that condition, so that's when I had to stop, pull up proceedings, we don't go through until all that's fixed and made safe.*
> (7120035 - SSHR)

> *… the mines inspector just talked about, radar systems … He just brought up an issue back on * day this year, at a, I think he said it was, I'm not too sure what pit he said it was now, * it was I think. They actually removed a radar, a radar system was there, only protection, an early warning system for * failure, right? Now they removed that for maintenance, over a three, two or three day period I think. So on the second the third day after they moved it, the high wall collapsed. Now that could have caused, extremely, and it's an extremely hazardous area and that could have caused deaths or permanent injuries or, it's unimaginable what it could have done, but I had a similar thing, number of years ago, where I refused to allow people to go into that pit because the centrepiece of our risk assessment and this was the same with this one, was the radar early warning system. So it'll give you, as soon as that wall moves a couple of millimetres, it'll start to alarm, and those alarms will go from green, through the ambers up to red. Even when they hit red you've still got time to get out, without it, you don't really have much indication you know and it can start to trickle a little, but unless you're right on it and you're actually watching all the time, so it's ironic that, and to me it justifies my thoughts as if we take a centrepiece of a risk assessment away, that risk assessment is null and void, and if it's null and void, the risk is unacceptable, we just don't go there.*
> (7120025 - SSHR)

And:

> *Because it frightens you at 2 o'clock in the morning when you get a call, you think what's going on, this is bad. And to wake up out of a sleep, you know, my worst fear is a fatality, you know, and that's, I'm very very, I don't want that to occur, you know what I mean? And that to me is a failure, you know what I mean? Where I've failed, in the role, because I haven't been able to stop it. So, and that's, no one wants to see that happen, and that's where we want to be is a fatality free and hopefully injury free industry but it is inherently dangerous and we understand that when everyone goes out there, we all understand that, and the hope that we've got is that we can make a difference and that's all we hope.'*
> (7120027 - ISHR)

6.2 Investigating accidents

The functions of the ISHRs under the Coal Mining Safety and Health Act 1999 enable them 'to participate in investigations into serious accidents and high potential incidents' (section 118(d)). The same Act also gives them powers 'to examine any documents relevant to safety and health …' (section 119(c)). SSHRs do not have a specific function under the Act to participate in accident investigations although they have the same powers to examine relevant documents as the ISHRs. Under section 106(1)(a), the SSE must tell a SSHR at the mine about 'an injury or illness to a person from coal mining operations that causes an absence from work of the person'. In addition, the same section requires that they do so 'as soon as is practicable after the thing comes to the SSE's knowledge'. In practice, usually both types of representatives are informed of the

occurrence of serious accidents and they review the reports of the investigations of such occurrences that have been undertaken by the company. In total 85 (16%) of the ISHR and SSHR reports we analysed in the present study referred to representatives assisting with investigations into serious accidents, High Potential Incidents and other matters (78 (16%) of ISHR and seven (14%) of SSHR reports). Many of these reports referred to more than one incident, in some instances there was more than one report relating to a single incident, and in some cases the details of the incident were not clear. However, 12 (14%) of the reports referred explicitly to injuries to workers, and all of them referred to at least one of the more serious risks included in our category of 'fatal risks'. Incidents involving vehicles were most common among them (27, 32%), followed by fire/explosion (22, 26%) and rock fall (18, 21%).

While the ISHRs were sometimes involved in the investigation of an accident, they were mainly informed of their occurrence and the reports of investigations undertaken on behalf of the company:

> *So they ring up … this is what's occurred, okay, you may ask a few questions, what have you done to stop it from reoccurring, how bad is the injury, where has he gone to hospital, that sort of stuff, then at some stage they have to send a form 1A it's called, they send it to the inspectors and to us.*
> (7120027 - ISHR)

In the interviews, SSHRs indicated that they were sometimes involved in accident investigation, but more commonly they were kept informed of investigations undertaken by the company into accidents:

> *Yeah so and if there is an accident or incident they do an investigation and they send the investigation report to us and we have a look at it and see if we are happy with what has happened and the outcomes and stuff like that.*
> (7120014 - SSHR)

For the SSHRs, involvement in the investigation of accidents was uncertain, and often depended on mine management:

> Interviewer*: And of course there would be incidents where you would have to get involved. Does that happen a lot?*
> Respondent*: Well, like I said, depends who the management are. If there is a … like a major incident, then sometimes we go and investigate it as well but it depends who it is. Sometimes we don't get invited and sometimes we don't get told about it.*
> (7120013 - SSHR)

Representation of the interests of the victims of accidents was not something that fell within the remit of the SSHRs. The 'industrial' side of representation in the coal mines addressed this, while both types of safety and health representatives were concerned only with prevention. Generally the SSHRs and ISHRs were quite clear about the separate nature of these roles and were at pains not to confuse them.

> *Well there is the industrial side there to help as well. But you have got to understand our job is safety. So we can't cross the line into industrial because it just gets messy. So safety is safety.*
> (7120014 - SSHR)

They frequently spoke about their priorities being concerned with the prevention of harm. When they became involved in investigating serious accidents, their primary motivation was to prevent a reoccurrence. However, investigating incidents in which injuries or fatalities have occurred, for which legal responsibilities may apply for the company concerned, also sometimes led to perceptions of conflicts of interest and representatives commented on the difficulties of performing their preventive roles in such situations:

> *… but the thing is, SSE's have got their own different ways. Some are good, because I've been involved in, what four deaths, on a mine site. And out of three, out of three of them it was good,*

> *the fourth one was sort of, you're not allowed there, don't do this, don't do that … I've done what, three investigations courses with the police. So in other words I know what I'm doing when I go on to a scene. But they don't want that. They just do their own thing because they think we're going to blame them.*
> (7120020 - SSHR)

Many of the incidents that were reported to the representatives as well as the subsequent investigations they reviewed and sometimes assisted with were classified as High Potential Incidents, not all of which resulted in serious injury (but which had the potential to do so). Distinction between these and other accidents that resulted in investigations was often blurred, both in the formal reports and in the interviews with representatives. We turn to these incidents next.

6.3 Investigating high potential incidents

High Potential Incidents (HPIs) represent a category of OHS outcomes that has taken on increasing importance in health and safety practice in recent years — especially in high-risk industries. They include the kinds of incidents that are judged to have a high potential to lead to serious harm, regardless of whether such harm has actually occurred. The risk-based regulation implemented in Queensland by the Coal Mining Safety and Health Act 1999 and subsequently, reflects this increased significance given to the reporting and investigation of HPIs within the arrangements and procedures for managing OHS in high risk work such as coal mining. Not surprisingly, therefore, HPIs were a recurring theme among ISHR reports, particularly those from later years. Under the legislation, which defines a HPI as 'an event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person', mines are required to report HPIs to SSHRs, ISHRs and to the Inspectorate. As would be expected, therefore, many of the ISHR reports referring to HPIs were written following such notification by the mine and show ISHRs' involvement in and support for the investigation and subsequent learning processes.[10] This extract from an underground mine is typical:

> *Prior to going underground discussions were had [with managers and the SSHR] … in relation to what has been occurring at the mine with the recent HPI's [SIC] and the proposed process the mine is considering with review of HPI's and SHMS. There has been a number of HPI's [SIC] on site in recent times and some of these have caused concerns to the coal mine workers at the mine and management. With the employment of [a Safety Superintendent] one of his main focuses at this time is working thru [SIC] a process in relation to the HPI's. There has been a flow chart developed to assist with this process and it is hoped that by applying a process like this is it will look at the main contributing factors involved. The following are the main factors to consider in this review: look at the control measures both what are currently in place and also long term controls and strategy for these with the aim being effectiveness of them; the current SSHR will be taken off the current shift roster to be involved in the process with [the Safety Superintendent]; the review is to break the areas down looking at operational, technical and maintenance related issues. Included in this would also be the equipment, training, processes and people factors; remind all coal mine workers of their obligations under the Coal Mining Safety & Health Act 1999 and in particular S39 requirements; remind all coal mine workers of their roles & responsibilities under the CMSHA 1999 and in particular Explosion Risk Zone Controllers (ERZC) who needs to understand that their first responsibility is the health & safety matters prescribed under the Coal*

[10] These reports are not always the result of a site visit.

> *Mining Legislation; going to reinforce the importance of the CMSH legislation and the mines Safety & Health Management System to all workers; carry out weekly reviews of the HPI's that may occur at the mine; a meeting has been held with senior management & workers representatives on a way forward to correct the problems at the mine. These discussions looked at the critical issues and a strategy to move forward with all involved; I look forward to the outcomes of this process and the implementation of the action plan to move forward to assist in controlling the issues on site. The importance of this process is the involvement of the work force and all CMW understanding their roles & responsibilities in this. In my view it applies to all people at the mine from the SSE down to worker at the coal face.*
> (ISHR report)

Several ISHR reports also indicated that they were passing on details of HPIs elsewhere to mines they were inspecting – the following extract is from an open cut mine:

> *Informed those present of the HPI incident which had occurred at [another] open cut coal mine involving a sling breaking while being used to tow another dozer out which become stuck which resulted in a flying metal object going through the back window of a D11Dozer just missing the operator.*
> (ISHR report)

However, a number of the ISHR reports refer to disagreement between a mine manager and the representative about whether or not an incident should be classified as an HPI. As this extract from an ISHR report on an open cut mine shows, this was also an area of concern among the mines inspectorate and the views of the ISHR and MI inspector were usually in agreement:

> *Discussions were held over a HPI incident that occurred at the mine on the 8th of June which involved a light vehicle rolling over on the back access road. I was informed by those present that the SSE at the time did not believe that this light vehicle roll over was reportable HPI. The SSE at the mine had put out a document titled "[Mine] HPI Guideline" the purpose of this document was to provide a consistent interpretation of what is a HPI. I was provided with a copy of this document and after viewing it find that it actually is a cut and paste of the legislation requirements but has not included the full abstract of S 17 of Coal Mining Safety and Health Act 1999 which defines what HPI is as defined below. After some discussion between those present on this particular incident, we could not agree and in the absence of the SSE it would be easier to discuss the issue with the SSE.*
> (ISHR report)

HPIs were also often ongoing issues at particular mines which had very frequently also been flagged up by SSHRs, as is clear from this ISHR report extract from an underground mine:

> *The reason for the inspection was twofold, firstly to inspect the site of the latest HPI at the mine and secondly to raise question with the mine's Site Senior Executive (SSE) as to the mine's Safety and Health Management System being adequate and effective. On traveling to the mine, I received a phone call from the mine's SSHR to inform me that there had been yet another incident at the mine. This latest incident … [resulted] in the injured coal mine worker being sent to hospital to receive stitches to his head. Once again, the mine failed to inform the Site Safety and Health Representatives, Industry Safety and Health Representative (ISHR) and the DNRM Inspectorate as per Queensland Coal Mining Safety and Health Act 1999 – Sections 106 & 198. This issue of not informing the relevant people was raised on my last visit to the mine and assurances were then given by the*

> *mine to ensure that compliance to the mines procedure and legislation was adhered to. A mine record entry was also made by the mine's SSHR's regarding same, prior to my last visit. Discussion was held regarding the unremitting failure to adequately inform the mines SSHR's and Inspectors of High Potential Incidents. The Health and Safety Manager assented that once again there had been a failure in the mine's Safety and Health Management System. I enquired as to the information of the latest incident and was informed that there had been two incidents on the same shift. With this information presented to me, the extremely high frequency of HPI's and Serious Incidents, and the mines inability to curb the rising amount of incidents, the non-compliance with legislation regarding notification and also the UMM statement that the majority of incidents occurring where related to contractors it is my belief that the Safety Health Management System … is inadequate and ineffective.*
> (ISHR report)

The focus of ISHR references to HPIs in their reports was predominantly on fatal risks. For example, after visiting an underground mine following an HPI in which a continuous miner unexpectedly intersected a methane drainage bore hole, the ISHR includes mention in his report of a similar event in his report which was not classified as a HPI and so had not previously been reported:

> *It was also raised that a similar issue had previously occurred in this panel with the ERZ Controller and the shift supervisor not classing the incident as a HPI … above 5% CH4 was released in an uncontrolled and unexpected manner definitely classes as a HPI. If this had been then an investigation would have been investigated and implemented controls that may have prevented this reoccurrence …*
> (ISHR report)

Similar accounts of involvement in the investigation of HPIs were given in interviews with both the SSHRs and ISHRs.

> *Yes and also you take the HPI notifications at 2 o'clock in the morning at 3 o'clock in the morning, coming from a mine that, you'll be woken up out of sleep and you'll have to take that call, you know what I mean, it's just part of the role, we understand that, we understand that before we took the role up.*
> (7120027 - ISHR)

> *… when they have a HPI they do an investigation, it's to prevent it from happening again, that's the idea of the investigation process to prevent reoccurrence okay, so I'll ask them what they've done and if there's anything in particular like four electric shocks in a period then obviously there's a problem, you know what I mean? And we need to work together to have a look at what we're doing to stop them from occurring, do you understand what I mean? And that's the process that I take.*
> (7120027 - ISHR)

> *… if an incident happens, we're the first ones they call, and that's management calling us. Not because they want to tell us, but because they want us to go and investigate it and fix it for them.*
> (7120015 - SSHR)

It is also worth noting that the failure to report HPIs was a serious issue for the Mines Inspectorate. For example, the inspection records examined included a number of instances where the management of a particular mine was called to attend a compulsory conference with the Chief Inspector of Mines, amongst others, in response to failure to report HPIs. At these meetings the seriousness of failure to report was emphasised as was the potential for further action.

6.4 Dealing with complaints

Both the ISHRs and SSHRs undertook further reactive work by investigating complaints they received from mine workers. In the documentary analysis 17% (88) of the ISHR and SSHR reports analysed made reference to representatives investigating complaints from workers (79 (17%) ISHR and 9 (18%) SSHR reports). They often referred to more than one complaint, while in some cases a single complaint was referred to in more than one report, and in some the details of complaints were not given in full. Allowing for these limitations, the reports suggest that complaints most often centred around: failure to follow a policy or SOP (19, 22%), problems with equipment (15, 17%) and intimidation, harassment, bullying or assault in relation to reporting a safety concern (13, 15%, and many of the latter complaints came from workers at a single mine). Other complaints concerned dangerous working conditions (10, 11%), work rosters and/or fitness for work arrangements, emergency procedures and welfare facilities (9, 10% each).

It seems likely that, in the case of the SSHRs, simply counting the complaints that were formally documented seriously underestimates the proportion of their activities that result from being made aware of health and safety issues as a result of such 'complaints' being raised by fellow mine workers. In the interviews with the representatives, they frequently cited examples of such notifications and how they responded to them. While it is difficult to be precise concerning the exact balance of their work that is in this sense reactive, and a response to complaints concerning health and safety matters (as opposed to being proactive inspection undertaken on the initiative of the SSHR and not a response to concerns expressed by fellow mine workers), the impression gained from the interviews is that the proportion time spent on such reactive matters is greater than that indicated by the documentary analysis. For example, during interviews once it was clear what we meant when we asked how frequently they responded to 'complaints' it was evident that such responses took up a significant proportion of the time of the SSHRs:

> Interviewer: *How many complaints would you receive? And I probably shouldn't say complaints. Other workers raising issues with you about health and safety*
> Respondent: *Every day, every day. They have a doubt every day. And if we don't know the answer then we will find the answer out. We will go and talk to people or look it up on the system. They might come up and say look, has there been a risk assessment done on this? And I will say look I wasn't involved in it but I will find out and get back to you. …or they might come up and say what was the investigation outcome of such and such hurting his finger and I will say yeah I have got that through, will give you a copy of that, or that was in a toolbox talk or…Yeah every day, without a doubt.*
> (7120014 - SSHR)

It was also clear that the boundaries between reactive work involved in responding to complaints and that of more proactive work were themselves often blurred and one would often lead to the other:

> Interviewer: *So routine inspections and complaints are the main part of your role?*
> *Yes… A lot of those complaints can involve the review process so going back and reviewing procedure and then coming with some information and saying to them well look this is how I interpret this or whatever you know*
> Interviewer: *So we are really talking about what triggers things you do …, so you would have a routine inspection and then you would have complaints. Or issues raised, I mean probably complaints is too grand a term isn't it?*
> Respondent: *… Yes well as I say, a lot of the time we review procedures and things like that and also give advice on what to do. If something is really sticking in their neck like a panel or something, then I will say well I will come down and have a look. And that*

> *will be another inspection or investigation on my part.*
> (7120013 - SSHR)

There was also evidence that bringing issues to the attention of the SSHRs did not only occur at work, but also encroached into their time outside of the workplace:

> *Oh look, I don't finish work when everyone else finishes work, I go home, I have a meal at night, you go and sit down for dinner, I get three, four people sometimes, I've had them stand in line, to talk to me. They all come to me with an issue, this happened today, this. I say well, what you really need to do is rather than wait until now to tell me about it, talk to your supervisor, yes I did, but that supervisor doesn't want to know about it, alright, well leave it to me, I'll go and speak to your supervisor, and I do, and the next morning, first up, I'll be over, they have their pre-starts, I'll go and have a talk to the supervisor, get him away, say listen, yesterday this happened, how did, why, and why did that happen, did anybody mention anything to you, oh yes, but you know, so I can have a talk to them, I can sort it out that way.*
> (7120025 - SSHR)

Sometimes this was a reflection of the number of issues that the representatives needed to deal with or, as in the quote above, it was a result of the affected worker feeling that the supervisor or manager at work had not properly addressed a matter that the affected worker had brought to their attention. On other occasions, however, complaints came to the SSHRs outside of work time and off-site because the workers concerned were afraid of the repercussions that might arise if they were observed by their supervisors or managers to be raising these matters (as is reflected in some of the documentary data referred to above):

> *… you've got this massive culture of people that are scared or intimidated to raise concerns … Contractors and permanents as well. There's the culture if you speak up you'll be, you'll be given crap jobs or you know, you'll be put in the corner…. Yeah so it's only those that are willing to speak up sort of, and the others that don't speak up, some of them come up and see you, you know, or I'll hear it second or third hand and you've got to get back to the source and investigate it, so. But yeah, it's just, you know, a lot of people are intimidated to speak up, and that's the culture that (names a mining company) has created.*
> (7120022 - SSHR)

Although, as the above quote makes clear, in some coal mines these fears were shared by permanent and contract workers alike, in most cases, for contract workers, the insecurity of their work arrangements made it less likely that they would raise complaints about health and safety issues. However, if they did, there was a greater likelihood that the complainant would wish to remain anonymous. Experiences of such complaints were recounted by the ISHRs, especially in relation to their dealings with contract workers. Safeguarding the anonymity of the complainants could present problems when it came to effectively addressing the matters that were causing the concern:

> Respondent*: He's made a call to you, and he's saying, our mate he's working 80 hours a week, he's on the road, 7 days a week, he's been instructed to do this by his company. Okay, what's the company? Oh no, I can't … So you're a bit tied, and you might put an hour's worth of work into this bloke and he's not going to give you the information you need to act, and if he got killed the next night, I'd be devastated because I couldn't help him, do you understand what I mean?*
> Interviewer*: You can't help him if you don't know where to look?*
> Respondent*: That's right, … and I've had one by email, a 'concerned coal mine worker' and he'll go into explain that he doesn't believe that the electrical issues are being looked at certain underground mines and people*

are meeting compliance on these strange standards, and so you'll look at this strange thing and you'll do some work on it, and then you'll put an email back to, reply, to concerned coal mine worker, and say mate, please give me a call, because I can't help you, I haven't got the evidence, about which mine you're talking, because there will be no mine, it'll be at general underground coal mines, and like I said there's ten, there's twelve of them, they could be anywhere.
(7120027 - ISHR)

6.5 Using statutory powers

As well as the rights to undertake the various functions discussed in the previous sections, both SSHRs and ISHRs have statutory powers to order work to be suspended if they believe there to be serious risks of injury or ill-health involved. The legislative provisions that apply were outlined in Chapter 3. In brief, the Coal Mine Safety and Health Act 1999 gives SSHRs authority to order the suspension of all mining operations or to stop specific operations or require supervisors to stop them if they reasonably believe there is an immediate danger. Similar powers are given to ISHRs in the form of a directive under section 167. In addition, representatives have statutory powers to order mine management to undertake certain actions, for example, in relation to the review of the safety and health management system in place in the mine, they must advise the SSE if they believe the system to be inadequate and inform a mines inspector if they are not satisfied that appropriate action is taken as the result of such advice. The mines inspector is obliged to investigate and report this in the mines record. Not surprisingly, these powers and the way they are used are the subject of long-standing debate between the industry and the miners' trade union. For this reason we have looked at the documentary evidence of their use as well as questioning all of our interviewees concerning their experiences in relation to using these powers. We report our findings in this section.

The documentary analysis[11] showed that ISHRs rarely stop work at mines: only 24 (5%) of reports referred to the suspension of operations. These related to eleven mines, with numbers of suspensions varying from one to five per mine. On four occasions operation of particular plant in specified areas was suspended as a result of faulty equipment causing an incident at another mine – which, of course, also led to similar restrictions at the mine where the original incident occurred; in another mine two reports, made on consecutive days, refer to the same incident (in this case risk of in-rush); and for two mines identical suspension notices, issued within days of each other, referred to a fume incident but it was not clear which of the mines that incident took place at.

Suspension of all operations at a mine, as opposed to operations in particular areas and/or using specific equipment, was even rarer: there were six such suspensions (26% of the 24 reports referring to the suspension of operations, and 1% of all ISHR reports). In suspending operations either completely or partially, all but one of the reports referred to at least one of the fatal risks identified as being most commonly linked to mining as the reason for stopping work. The one that does *not* referred to the mine's Fitness for Work policy, which should cover fatigue, drug and alcohol and other physical or psychological impairment. This is an area that is increasingly recognised as critical for workers' safety, health and well-being both within mining and more widely in other high-risk sectors. It is also noteworthy that two of the reports referred explicitly to the ISHR supporting an earlier decision by the SSHR to suspend operations. Of course, this should not be taken to mean that this was not the case for any of the other reports, rather that this was not mentioned in those reports.

The CFMEU's own analysis of all suspension notices for all Queensland coal mines identifies 80 such notices being served since the 1999Act was introduced (CFMEU, 2013). Our data is far less complete, since it is drawn from mines

[11] Including reports following a site visit and other reports.

records in a sample of less than half of the coal mines and in some cases for a period that is shorter than the approximately twelve years covered by the CFMEU compilation. Taking this into account, the number of suspension notices we have identified is broadly the proportion of the total that would be anticipated in our sample of mines records. The reasons for and extent of suspensions of operations are summarised in Text box 6.1.

Text box 6.1: Reasons for and extent of suspensions of operations by ISHRs

	REASON	EXTENT	REASON	EXTENT
OPEN CUT MINES	Suspension of all blasting activities following a review of all information relating to a recent fume event.	*Suspension of all blasting activities***	Preparation plant is not to restart until issues are dealt with (trip and fall hazards).	*Suspension of work in particular area*
	Suspension as emergency response requirements of the mine's SHMS are not being met (not enough ERT [Emergency Rescue Team] members trained in breathing apparatus and conduct fire operations.	*All work suspended*	Suspension of a particular operation until risk assessment is complete and identified controls are implemented following an inspection (prompted by incidents at 2 other mines) to establish the risk of interaction between the dragline bucket and jewellery and the dozer at boom point.	*Suspension of dragline / dozer assist mining*
UNDERGROUND MINES	ISHR supports SSHR's 'no roading' of an area because of poor ventilation and consequent problems with diesel vehicles.	*Use of vehicles in a particular section*	Suspension of coal mining with any continuous miner with a failed methane sensor following reported concerns.	*Suspension of work with particular equipment*
	ISHR supports SSHR's suspension of operations in a section of the mine stating "*the conditions and standards in this section were very poor and some of the worse that I have encountered while in this position of Industry Safety and Health Representative*". Safety issues included lack of stone dusting, inadequate ventilation, poor roadways and lack of portable methane detectors on diesel ram cars.	*All operations in a particular section*	Suspension because, when the active longwall panel TARPs [Trigger Action Response Plans] were exceeded, the workforce was taken through a new TARP developed that morning that altered the evacuation triggers, but the ISHR reviewed documentations and felt that there was an unacceptable level of risk (because the original TARP levels (CO and H2 levels) were being exceeded).	*All people withdrawn from the mine*
	Suspension of operations as goaf management systems are ineffective (gas monitoring system does not automatically shut down equipment, no provision for withdrawal of miners prior to the explosive range being reached, no boiler maintenance regime etc.).	*All operations*	CV005 submerged in water from 10 to 14 c/t is not to be restarted until it can be inspected (i.e. the belt must be clear from hazards and the belt and return rollers must be visible - this includes at least not being submerged in water).	*Operation of particular equipment*

	REASON	EXTENT	REASON	EXTENT
UNDERGROUND MINES	Suspension until the advanced heating or fire and the possibility of explosive atmosphere with Number 3 Longwall goaf are made safe.	*No people permitted underground*	Suspension until the boiler exhausting which is ineffective in its current location is rectified.	*All people withdrawn from the mine*
	Suspensions as a result of an inspection following a complaint water accumulation in the Longwall 9 goaf.	*Suspension of work in particular areas*	Further inspection (see above) and continued work suspension as a result of excess water behind goaf seals in LW 9 block.	*Suspension of work in particular area*
	Suspension of operations because the two entrances from the surface of the mine are not escapeways within the meaning of and for the purposes of s 296(1) of the Coal Mining Safety and Health Regulation 2001, because they are not separated in a way that prevents a reasonably foreseeable event happening in one of the entrances affecting the ability of persons to escape through the other entrance.	*All underground operations*	Suspension of operations inbye of the main intake shaft collar because of the potential for a fire in the intake shaft causing smoke or other contaminants to affect escape through the other escapeway.	*All underground operations in a particular section*
			Suspension of all operations affected by the Fitness for Work Procedure following the inspection of its implementation and review.	*Suspension of particular operations*

*Issued to 5 underground mines following an incident at a mine not included in the study
**Issued to 2 open cut mines – not clear if the event was at either of these mines or elsewhere

Similarly, only three (6%) and 10 (2%) of the SSHR and MI reports respectively referred to suspending operations (Text box 6.2). All three SSHR reports were from the same mine, while the MI reports related to four mines. All the SSHR and MI reports suspending operations referred to at least one of the fatal risks.

Text box 6.2: Reasons for and extent of suspensions of operations by SSHRs and MI inspectors

	REASON	EXTENT	REASON	EXTENT
SSHR REPORTS				
OPEN CUT MINES	Following a complaint by workers about mines rescue members being brought to the mine from other mines when the required numbers aren't available and not being inducted and site familiarised.	*Practice of bringing in rescue personnel from other mines*	Lack of identification of vehicles permitted to tow plant; lack of operational brakes on trailers and towing equipment and six-monthly servicing / maintenance of brakes; lack of twin safety chains on towing equipment.	*All towing operations*
	Non-compliance with seat belt regulations	*All mobile equipment*		

	REASON	EXTENT	REASON	EXTENT
MI REPORTS				
UNDERGROUND MINES	Elevated methane in general body caused by ingress from SIS borehole.	*Cutting activity*	The implementation of controls regarding explosions zones had not commenced.	*All operations*
	The absence of a documented procedure or process for conducting brake testing of a shuttle car, the absence of a documented procedure or process for conducting maintenance and fault finding on mobile plant and equipment under power, the issue of maintenance personal working on equipment in no go zones.	*Operations at parts of the mine*	Detection of serious regulatory breaches in relation to management/measurement of methane and methane layering at the workface.	*All operations*
OPEN CUT MINES	Notified that an explosive fume cloud travelled outside the fume management zone and that this was not reported by the mine to either the explosives or mines inspectors. As a result 8 coal mine workers at an adjacent mine were taken to hospital.	*All activities involving explosives*	Working below tipping trucks - SSHR was concerned about any vehicle working at the base of a live tip and was not satisfied with the manager's explanation that he was 50 metres away from where the loads were being tipped.	*Operations on the shovel circuit*
	Trip hazards on walkways and inadequate access on scaffold. Also inadequate recognition of hazards in JSA's [Job Safety Analysis] involved in the erection of dragline.	*Operations in some areas*	Following notification of a collision between a service truck and a light vehicle, and given the seriousness and similarity to a previous incident, SSHR feels the SHMS [Safety and Health Management System] is ineffective.	*Light / heavy vehicle interaction*
	Following notification from drill and blast superintendent that a shot had damaged a dozer and rocks had piled up around a digger when both machines were in the exclusion zone, SSHR was concerned about the controls for a PHMP [Principal Hazard Management Plan] not being effective.	*Blasting operations*	The mine reported an incident involving explosives which resulted in fly-rock causing significant damage to a dragline that was parked 396 metres away from the shot face, outside the 300 metre exclusion zone for machinery. This was the second significant event resulting in damage to equipment at the mine in six months.	*All drill and blast activities*

There were too few directives to suspend operations issued under section 167 in our data for us to be able to draw reliable inferences concerning patterns in what they addressed or trends in these matters over time. However the CFMEU submissions based on their records of all such Directives issued since the 1999 Act came into force indicate that these directives have been increasingly used by ISHRs at the management systems level (CFMEU, 2013). The submission also notes that only one of the major coal operators significantly questions their content and that until relatively recently such objections were relatively rare. Mostly the actions of the ISHRs have been

upheld following these appeals, or the Mines Inspectorate has issued a Directive under section 166 in their place which requires remedial action but allows the process in question to continue while such action is taken. As the CFMEU has pointed out, in most cases the Inspectorate and the ISHR have been in agreement over this action, pointing out that had the ISHRs had the power to issue a section 166 Directive, they would have done so themselves.

In addition to suspensions and stoppage of work, other formal notifications by ISHRs were also rare (37, 8%). However, most of the mines had been issued with such a notification (15, 79%), with the numbers issued to each mine varying from one to nine. In two cases the notifications were related to, and issued at the same time as, a suspension of operations. Again, four (11%) of the reports make explicit reference to and are supportive of the SSHR. Many of these formal notifications identified weaknesses and required corrections to the health and safety management systems in place in the mines. A further 11 (2%) of the ISHR reports make some other kind of 'formal' requirement. These included: requirements to supply the ISHR with documentation; requirements for corrective action plans; requirements to apply interim procedures; and referrals to the inspectorate. It was also rare to find these types of formal notifications in the reports of the SSHRs (3, 6%). They were, however, more frequent among the reports of the MI inspectors (145, 24%). A further five (10%) of the SSHR reports and 28 (5%) of the MI reports make some other kind of 'formal' requirement. Text box 6.3 presents a summary of the reasons for each of these notices in which weaknesses in the safety management systems are identified.

Text box 6.3: Reasons for formal notifications by ISHRs in which inadequate SHMS or related matters are mentioned

	REASON	REASON
UNDERGROUND MINES	Following an incident in which a miner was serious injured the mine is found to have an ineffective and inadequate SHMS in relation to: defining management roles and responsibilities and training workers in the management structure of those responsibilities; and managing emergencies.	Mine could not supply relevant documents from a risk assessment or a timeline for events leading up to the return to work following an evacuation for TARPS being exceeded. ISHRs believe the standard elements of the mine's gas monitoring system is not reliable or comprehensive enough to make quality decisions. They give notice that the mine's SHMS relating to document control and availability are inadequate or ineffective make certain requirements and require certain documents to be forward to them before proposed actions can proceed. Related to a simultaneously served suspension of work order.
	Inadequate or ineffective SHMS with regard to training of rescue team members, housekeeping, ventilation standard for standing places in the change panel, unbolted roadways, strata support, block side ribs, ventilation of stubs, hygiene at underground crib camps and no road barricading standards.	
	Inadequate or ineffective SHMS identified as ISHR has examined the recent non-compliance with regards to senior management reviewing and changing a procedure at the mine with no consultation with affected coal mine workers. ISHR refers to and supports the SSHR's view that the SHMS has an ineffective and inadequate system with regards to fitness for work section. ISHR refers to SSE's last 'derisory correspondence' to indicate that he does not believe that the SSE is taking the necessary action to make the SHMS adequate and effective and so sends the mine record entry to the regional senior mines inspector for his attention.	Under section 121: due to the importance and number of Principal Hazard Management Plans (PHMPs) that require a review and since numerous workers say this has been raised before to no avail, ISHR believes that there is an inadequate and ineffective SHMS with respect to the listed PHMPs (i.e. strata management, spontaneous combustion management, mine evacuation, emergency procedure, fire management and water management) - response requested detailing the corrective action to be taken with 2 weeks of action will be taken
		SHMS is inadequate or ineffective regarding the tag board and fire equipment checks.

	REASON	REASON
UNDERGROUND MINES	Following concerns raised by miners on the use of foam resin, polyurethane and seal component, ISHR issues a directive that miners are not to be or work within the 300 meter exclusion zone on the return side of where these substances are being pumped or injected.	Following a review of emergency response procedures, the ISHR is of the belief that the mine's emergency response procedures and failure to validate the procedures using good risk management has resulted in the mine having an ineffective and inadequate SHMS in relation to emergency response.
	Ineffective and inadequate contractor management, supervision and inspections, notification and communication and strata control. ISHR also requests the DNRM Mines Inspector investigates. ISHR believes that the SSE has failed to ensure an adequate and effective SHMS. This follows 2 incidents in which miners were injured and, to validate his reasoning, the ISHR quotes extensively from the SSHR's most recent mine record entry.	Mines incident reporting and notification system is ineffective and inadequate; systems for ERZ Controllers to fulfil their obligations is inadequate and ineffective; ISHR requires SSE to respond with 2 weeks stating the actions taken to rectify the lack of segregation devices in parts of the mine where the conveyor intersects the primary escapeway and the other issues highlighted in the report - failure will lead to ISHR forwarding request to mines inspector to investigate.
	SHMS is inadequate or ineffective regarding mucking operations in the shaft due to the potential for interaction of workers and machinery.	Inadequate or ineffective SHMS relating to the control of diesel emissions and the Mine Training Scheme regarding documenting the progress of trainees.
	SHMS is inadequate or ineffective regarding the monitoring of CO and diesel engine pollutants exposure, the application of stone dust and in controlling workers' exposure to respirable dust (due to the 80% failure rate that the non-use of an equivalent dosage level of dust exposure for shifts greater than 8 hours in length)	Ineffective and inadequate SHMS in relation to monitoring and recording diesel emissions and ventilation quality.
		Inadequate or ineffective SHMS relating to the Frictional Ignition Risk Management – Single pass Development Mining Standard Operating Procedure dated 30th of September 2004.
	Notice under section 121: OSHMS is inadequate or ineffective as evidenced by the deficiencies regarding compliance with the regulation on action to be taken if methane detector activates or is non-operational - require written notification on actions planned to take in response; This was related to and at the same time as a suspension of operations	Notification 121 inadequate or ineffective SHMS: that the management structure documents and the roles and responsibilities documents in the SHMS are inadequate (i.e. generic statement about compliance with SHMS rather than listing relevant documents the individual has roles and responsibilities for under the SHMS – ISHR comments that this is 'like most of similar documents in the industry').
	Following a review of SHMS documents (RA of maingate and tailgate development), the SHMS both ineffective and inadequate.	
OPEN CUT MINES	Following a review of the documents the mine is found to have an ineffective and inadequate SHMS in relation to emergency response, with ineffective and inadequate risk management processes used in its development.	Following a review of the emergency / crisis management procedure, the emergency response procedure and the ineffective and inadequate risk assessment has resulted in the mine having an ineffective and inadequate SHMS in relation to emergency response
	Ineffective and inadequate SHMS concerning the training of (contractor's) workers for confined space rescue in the dragline erection site.	SHMS is inadequate and ineffective with regard to issue over PPE SOPs for contractor and mine

	SHMS is inadequate and ineffective due to the allowance of separate SHMS procedures at the mine and the differentiation between permanent and contract workers by contract workers operating under contractor's procedures - SSE has 1 month to take action to address this; road widths, grades, cross-grades and dust were less than good mining practice on the ramp – ISHR requests that all operations cease so that these issues can be discussed and grades surveyed - otherwise the ISHR will issue a directive suspending operations - manager opts for former; the SHMS is inadequate and ineffective due to non-compliances with adequate supervision, adherence to mine standards surrounding haul roads, ramps and grades and dust suppression - SSE has 1 month to respond	Following an incident management manual review, the mine's emergency response procedures and failure to validate procedures using risk management has resulted in the mine having an ineffective and inadequate SHMS in relation to emergency response
		Requirements (7 days) that documentation is sent to inspection: fatigue policy (RA and SOPs for regulation 41 and 42); and documentation in place for regulation 15 and 16 (accidents and incidents)
		Requirements (5 days): Contractor to draw up a corrective action plan for its currently inadequate braking systems part of its SHMS; Contractor to provide ISHR with documentation on their systems for Regulation 98 (reporting and rectifying defects); and also Requirement: contractor to supply ISHR with SOP on checking mobile plant (Regulation 73)

There are several points that emerge from these data. Firstly, as is the case with the suspension notices previously, it is apparent that the orders made by the ISHRs in relation to inadequate safety and health management systems account for a very small proportion of the outcomes from their inspection activities overall. Secondly, and for the most part, they have been used to address what appear to be significant health or safety risks, including inadequacies in emergency response procedures and equipment, ventilation, gas monitoring, machinery hazards and so on. Further, they are generally used to identify the link between the risks posed by these failings and the safety and health management system required to be in place to reduce this risk to acceptable levels. That is, they use identification of specific risks as symptomatic evidence of inadequacies in the management systems that should be in place to ameliorate and control them. This kind of feedback constitutes a procedure that is widely accepted as good practice in OHS management and risk prevention. It seems, therefore, that the documentary evidence supports the conclusion that ISHRs are using their powers to order the suspension of work responsibly and in relation to identifying serious failings of the safety and health management systems they are also acting entirely appropriately. Moreover, there is no evidence in the documentation that referral of any of these matters to Mines Department Inspectors has resulted in them being deemed to have been issued inappropriately or irresponsibly. Rather, as the following lengthy MI mine record entry made by a very senior inspector indicates, inspectors often went to considerable lengths to make their support of ISHRs known:

> *On Wednesday, 9 February 2011 ISHR [name of ISHR] issued a s167 directive stating:*
>
> *"CV 005 is not to be restarted until such time as it can be inspected in accordance with the SHMS. For this inspection to be undertaken to achieve an acceptable risk the belt must be clear from hazards and able to be visually inspect the belt and return rollers. This would include at least not being submerged in water."*
>
> *The issuance of the directive is one with which I agree. I am also informed that Inspector [name of inspector] held similar concerns on his inspection of the operation on Tuesday 8 February and indeed placed specific requirements on the mine regarding the operation of this conveyor. His reluctant agreement to permit continued operation of the conveyor was based on concerns that a higher*

level of risk would present due to the longwall being in a "weighting" period.

During ISHR [name of ISHR] inspection the longwall was stood, undergoing maintenance and no issue of weighting was evident. Since ISHR [name of ISHR] issuance of the directive it has been reported that the longwall has been weighting up and that areas of the face are nearing full yield, because of that weight concerns are held for the integrity of the face strata conditions.

SSE [name of SSE] contacted me [name and title of inspector] to request that I lift ISHR [name of ISHR] directive. SSE [name of SSE] was informed that he was required as per the Coal Mining Safety and Health Act 1999 to make application as required under s175 and to ensure the requirements under s176(1) were met before I could review. It should be noted by the SSE that the directive issued was under s 167 and not as indicated in his application letter s 168 of the Coal Mining Safety and Health Act 1999.

At this time I wish to make it clear that the variance or setting aside of a directive is not something that is lightly undertaken by this office and indeed it is the reason the applicable sections of the Coal Mining Safety and Health Act 1999 are so detailed, to ensure a thorough review. The application of effective mine planning and operation would have prevented the issue from occurring in the first instance and had those elementary standards been met then the issuance of the s 167 would not have been necessary or an application to review required.

I have reservations in dealing with a directive unless I have sufficient time to thoroughly review and consider all aspects of the issuance and specifically the safety and health implications. That said, in this instance I have reluctantly made a decision based on the evidence to hand.

Under s176(5) of the Coal Mining Safety and Health Act 1999 I am confirming that I have just sufficient information required under s176(1)(b) of that Act to make a determination.

Under s177 of the Coal Mining Safety and Health Act 1999 I inform the SSE that I have made a decision in this matter and that decision is I vary the ISHR's directive to permit CV005 to operate until such time as the longwall mines in to a stable geological area. When that stable ground is reached and weight lifts from the shields conveyor CV005 must be stopped and isolated until such time as the ISHR's directive is complied with.

My decision, as required under s177(4) Coal Mining Safety and Health Act 1999 was based on the fact that I consider that the risk posed to mineworkers by preventing operation of Longwall 805 is greater than that posed by allowing operation of CV005 under increased controls.

As stated above, the variation to the directive is only applicable whilst Longwall 805 is subject to 'weighting' problems which may create 'iron-bound' conditions described in the application to review.

The conditions on the operation of CV005 are as required by Inspector [name of inspector]; in that whilst in operation there must be in attendance one person on the immediate outbye side of the water and one person on the immediate inbye side of the water to monitor the conveyor and having access to stop the belt should a hazardous condition arise. Further, all of the conditions contained in the email forwarded by the UMM, [name of underground mine manager (UMM)] to [title of inspector] of this date, detailing

> *the risk management to be adopted during the operation of the conveyor is to be fully complied with.*
>
> *Once the weighting eases on the face and it is considered safe to "park up", CV005 must immediately be stopped and isolated until such time as the requirements of IHSR [name of ISHR] directive is complied with.*
> (MI mine record entry)

It is clear from the interview data that both the ISHRs and the SSHRs were aware of the significance of these powers to stop work and they used them sparingly as a result.

> *I know I very, very rarely have to wave a big stick just shutting the pit down, having said that I have at times had to say I'm sorry but until you do this correctly your pit's closed and let me tell you every time it's been fixed within the hour.*
> (0650033 - SSHR)

> *… we're pretty careful how we issue a 167. So it's like … it's your final power.*
> (7120037 - ISHR)

Generally, they used them when they felt there was no other recourse — often in situations in which they had previously engaged with the mine management concerning risks associated with particular operations but found the action taken as a result to have failed to reduce the seriousness of the risk concerned.

> *Well look in the whole 8 years I am happy to say I have only had to do it about 4 times. But a lot of times, if something is not an immediate danger then I will try and give people the opportunity to fix it. I try to be a bit diplomatic … But most times people have taken on board what I have said and said well ok we will do this to fix the problem, you know.*
> (7120013 - SSHR)

> *Look, as our powers and functions to stop stuff, we will give the mine the option to first. So we will go up and say we believe this is unacceptable, you need to do this, this and that and then we will go and see them or document it, send them an e-mail and then they usually, 99.9% of the time, say yeah we will fix this or give me an action plan of what you gonna do, we will be happy with that and we will check up on them and see that they are doing it or if they don't then we will just stop it.*
> (7120014 - SSHR)

On other occasions they were used when they felt there was an immediate risk of serious harm occurring if the process or operation continued.

> *… you issue that obviously if there's what I say is a dangerous situation or unacceptable level of risk is a problem … let's say, like the explosive range. I issued a 167, get everyone out of the mine. And that was warranted … on that occasion, because I wanted everyone out the mine, out of the explosive range then we'll have the discussion.*
> (7120038/9 – Former ISHR)

> *Yes, we don't take it lightly … It has got to be a high-risk area and a high-risk task, like if it is strata. If you are working a high risk area, if you are going backwards and forwards, if you are going past something like a rib that is not bolted well, you get clobbered with it and that is the end of you, you know, so that is high risk.*
> (7120014 - SSHR)

It was further clear from the interviews that both the SSHRs and the ISHRs were very aware of the strictures placed on their freedom to serve such notices to suspend work or stop particular operations by the regulatory requirements on them not to 'perform a function or exercise a power … for a purpose other than a safety or health purpose' or 'unnecessarily impede production at a coal mine'.

> *I'm not out there just to try and stop people from working or disrupt*

> *anything that's going on, that's not the name of the game.*
> (7120025 - SSHR)

In short, there was no evidence to suggest that either the SSHRs or the ISHRs were using their powers to suspend operations irresponsibly or that they were using them inappropriately or immoderately. Indeed the gist of our findings is that both the SSHRs and the ISHRs are well aware of the regulatory strictures on their actions, both in terms of them being restricted to health and safety purposes and in not unnecessarily impeding production and that they go to some lengths to ensure they act within these limits. At the same time the fact that they possessed such powers considerably strengthened their own perception of their legitimacy, a perception that was reinforced in part by the positive feedback they received from work colleagues.

> *I see the work force gains a fair bit of confidence from what we do, if we're happy or if we consider it safe, they accept, that yeah, we've got the risk as low as is reasonably achievable, if we're not, confident or happy with, what's been decided or the controls, they know we've got the power to go further, so if we stop fighting, it means, that we think, that with what we've got, the resources, the people and the job, we've got risk as low as is reasonably achievable, and that's, if the workforce is confident, the workforce performs, and that's what everyone wants to do. So, I just, it's a confidence thing, from the workforce, we get used as much as we work, I wish I had a dollar for every time I overheard a manager say, your SSHR said, or he was involved, or he did that, and that's a way for them to tell the workforce it's above board, we've done this, we've done that.*
> (7120015 - SSHR)

It also went some way to encourage their confidence that they would be taken seriously by senior managers in their pursuit of actions that are in the main consultative and co-operative, involving the improvement of arrangements for prevention of work injuries and ill-health among the workers in these mines, but where they are treated with respect precisely because they have the potential to use powers that would be, at the very least, of serious inconvenience to the senior management of the mine. There are strong parallels between these findings and those in studies in which the powers of health and safety representatives to stop dangerous work have been examined in other industries and countries. For example, in Sweden where both workplace and regional[12] health and safety representatives have a similar power, researchers have found that it is used very sparingly indeed, but that it is greatly valued by representatives, both for the legitimacy and for the respect for their role that it confers (Frick and Walters, 1998; Walters and Frick, 2000; Frick, 2009). Similarly, in Australia an ACTU (2005) survey of health and safety representatives (HSRs) reported that 11 per cent of HSRs had said that they had issued a provisional improvement notice (PIN) or default notice, and that 91 per cent of these said it was effective in resolving the OHS issue. Given that HSRs in New South Wales and Queensland, would not have the power to issue a PIN, one would expect the usage of PINs to be more extensive than the ACTU survey suggested. Consistent with this, Victorian Trades Hall survey (VTHC, 2004 and 2006) survey found that 25 per cent of respondent HSRs in Victoria had issued PINs, and the 2003 survey found that of the 25 per cent of HSRs issuing PINs, 45 per cent had only issued one PIN. There is also little Australian evidence that HSRs' powers to direct that dangerous work cease have been overused (but see Maxwell, 2004:192-3). The ACTU (2005) survey reported that 21 per cent of HRSs said they had directed that unsafe work cease or stopped work for OHS, and 88 per cent said that the direction had been effective in resolving issue.

[12] Statutory provisions in Sweden allow for the appointment of peripatetic 'regional health and safety representatives' to represent workers in small firms in a particular region and sector. They are in some ways analogous to the ISHRs, but are present in most sectors of employment in Sweden (see Frick and Walters, 1998; and Frick, 2009).

6.6 Conclusions

In short, both the documentary evidence resulting from the formal actions of workers' representatives during the previous fifteen years or more in Queensland coal mines, along with the testimony of a sample of these representatives, demonstrate that they make a substantial contribution to the operation of arrangements for OHS management in the mines.

The evidence indicates that the representatives are a group of committed, highly motivated and active change agents in OHS who deliver the functions required of them and use the powers available to them both diligently and responsibly. They operate within a framework well-established by successive rounds of regulation, but which under the Coal Mining Safety and Health Act 1999 provides for a modern, risk-based, systematic approach to regulating health and safety management in which arrangements for the representative participation of workers are both well-adapted and closely integrated. Within this system, the two tiered approach in which three Industry Safety and Health Representatives have a state wide remit and support the activities of locally operating Site Safety and Health Representatives in each coal mine is both well organised and well-adapted to enable representative worker participation in systematic approaches to the management of health and safety risks. It provides a structured approach to the support of the SSHRs in representing workers' interests in health and safety in coal mines and in co-operating with managers to ensure the latter deliver their responsibilities for managing OHS effectively. At the same time the system provides considerable added value in the shape of three knowledgeable, experienced and active representatives who are able to operate not only in support of the SSHRs but also at the industry level themselves and in direct interactions with managers and regulatory inspectors alike. They are highly regarded by the SSHRs and generally appear to also enjoy the respect of workers, inspectors and most mine managers. Indeed, if the system has a weakness at all, it would seem to lie in the fact that there are only three such representatives for the whole of the Queensland coal mining industry. They are considerably overworked as a result, despite their best efforts to organise and manage their workload and there would seem to be a strong case for the appointment of a further ISHR to support them.

The ISHRs also play a very important role in training the SSHRs; indeed this is by far the main form of training received by the SSHRs. They also have supportive dealings with individual mine workers on a regular basis and provide a means to bring issues to the attention of mines managers or regulatory inspectors that for whatever reason mine workers feel unable to raise directly themselves. In terms of the use of their powers, we have found no evidence to suggest that either the SSHRs or the ISHRs are in any way abusing the powers they have to suspend operations or that they are using them inappropriately or immoderately. Indeed the gist of our findings is that the ISHRs are well aware of the regulatory strictures on their actions, both in terms of them being restricted to health and safety purposes and in not unnecessarily impeding production. They go to some lengths to ensure they act within these limits. Moreover they convey this ethos to the SSHRs through training and personal interactions with them. At the same time, the fact that they possess such powers considerably strengthens the perception of their legitimacy, both amongst themselves and among their work colleagues (including the SSHRs). It also goes some way to encourage confidence that they will be taken seriously by the senior managers in the mines they visit, where they pursue of actions that are in the main consultative and co-operative, involving the improvement of arrangements for prevention of work injuries and ill-health among the workers in these mines. In short, we have not found any evidence to support diminishing or removing the existing powers of ISHRs or of the SSHRs they support.

This said, there are several areas where there are some causes for concern and where the operation of the system for worker representation in health and safety arrangements in coal mines might be further improved. We discuss these in the final chapter of this report.

7 Conclusions

The first and most obvious conclusion that emerges from the evidence collected in this preliminary study is that the regulatory system for representative participation in health and safety management in Queensland coal mines has been largely successful. Its elements combine to enhance approaches to managing health and safety in ways that are likely to lead to improved health and safety outcomes. The role, commitment and activities of both the ISHRs and the SSHRs are major elements in determining this success.

Broadly speaking, our findings lend weight to the conclusion that measures providing for a dual level of worker representation, in the form of both SSHRs at the workplace level and ISHRs at the industry level, are beneficial. The latter work effectively in support of the former, and add considerable value to the system overall. They are aided in this support by the enhanced functions and powers given to them by regulation and, as we have pointed out in the previous chapter, we have found no significant evidence to indicate that they mis-use or abuse these powers or are over-zealous in their use. Indeed the strong evidence gathered from both documentary sources and the verbal testimony of workers' representatives and regulators is that the ISHRs are well aware of the regulatory strictures on their actions, they go to some lengths to ensure they act within these limits and they influence less experienced SSHRs to do likewise. It was further apparent from the interviews with both types of representative that, far from finding such regulatory strictures confining, they perceive working within them as a means of aiding their legitimacy and that of their actions. Moreover there is strong evidence from the mines records we have analysed and the interviews we have conducted that worker representatives devote a substantial part of their OHS activity to addressing serious risks of mining such as those most associated with fatalities in the industry.

This said, the system is not perfect and the second main conclusion to emerge from this preliminary study is that there are several areas in which it could be made to work more effectively. In these Conclusions, therefore, we first outline why we think the Queensland system for worker representation is broadly successful. We then consider some of its apparent limitations and the reasons for them. In our discussion of both its success and its limitations we try to understand what occurs in Queensland coal mines in the context of wider research findings on worker representation in health and safety in other industries and in other countries.

7.1 Measures of success

The present study did not attempt to undertake a detailed exploration of the link between representative participation in health and safety arrangements and coal mine health and safety outcomes as measured by work injuries or ill-health because the available data did not allow robust exploration of that issue. However, as others have pointed out, the well-documented trends in these data over the past two decades can be broadly divided into three phases. Pre-1999 there were relatively poor health and safety outcomes as measured by injuries and fatalities, post-1999 saw a marked improvement, which slowed and plateaued after several years to the present levels. Attributing causation to regulatory intervention is notoriously uncertain; nevertheless, the changes of approach in the 1999 Act were towards a more systematised form of health and safety management in which strong participative rights for workers and their representatives match those in other industries and in other countries over recent decades. Such regulatory changes are widely held to bear at least some responsibility for improved health and safety outcomes in many of the other situations in which they have occurred. Researchers who have examined OHS management in Queensland coal mines have argued that a similar link exists between the development of the process-based provisions to manage health and safety risks in the 1999 Act and improved outcomes in injuries and fatalities. They point to the significant improvement observed in the second, post-1999

phase of the trends in injury and fatality data as evidence of this (see, for example, Gunningham and Sinclair, 2012; Yang, 2012).

In the absence of sufficiently detailed empirical data, it is difficult to establish what proportion of the responsibility for this improvement could be attributed to the role of representative participation within the more general measures on OHS management. Nevertheless, there is a wealth of evidence from other sources that suggests the likelihood of a connection and we can find strong indications of its effects by drawing on inferences from several related observations.

First, as we have made clear in Chapter 3, there is a body of evidence that indicates that the presence of trade union organisation in coal mines is associated with better OHS outcomes. Second, research shows that the mechanisms with which such outcomes are achieved vary but worker representation is usually a key feature. As we also detail in Chapter 3, two quite substantial bodies of research evidence indicate this and show that joint arrangements for health and safety management in which trade union representatives participate lead to better health and safety outcomes than do arrangements in which there is no such representative participation. The first of these bodies of research has measured the relationship between arrangements for representation and outcomes in the form of trailing indicators such as injury and fatality rates. The second measures outcomes in relation to leading indicators such as the implementation and operation of good practice in OHS management arrangements. Both point to improved outcomes in the presence of trade union supported worker health and safety representatives than occurs in their absence. This evidence comes in the main from industries other than coal mining, but it concerns similar kinds of arrangements to those we have studied in mining in Queensland.

Third, there is further support for supposing that the Queensland arrangements for worker representation on health and safety in coal mines have positive effects on outcomes that is to be found in what is known about the determinants of these effects. Again in Chapter 3, we presented an overview of research on such determinants. These studies have shown that for worker representation to have a significant impact on either trailing or leading indicators of health and safety outcomes, some combination of supportive preconditions need to be in place in the organisations concerned. These include many of the supports we have seen in operation in the coal mines in the present study. For example, research elsewhere identifies the presence of a strong legislative steer — such as is clearly provided by the provisions of the 1999 Act — to be an important precondition of effectiveness. Commitment to supporting a participative approach to OHS management on the part of the regulatory agency and active engagement with representative arrangements by regulatory inspectors is a second well-established precondition for effectiveness. In the coal mines we studied we found representatives had a somewhat mixed experience of such commitment among Queensland mines inspectors. But, while there were indications that it could be improved in some cases, in the main it was nevertheless a positive experience and such a commitment was also strongly articulated in the policies espoused by senior inspectors.

Well-trained workplace representatives and substantial trade union support for them is a further precondition for success that is well-established in research findings. In Queensland this precondition is amply provided for by the ISHRs and the efforts they make to support the SSHRs, especially with training and advice. The existence of the ISHRs also provides an indication of the commitment of the trade union to resourcing and supporting workplace representation on health and safety since it devotes substantial resources to funding these positions and providing the necessary support infrastructure to enable them to operate. Also in terms of support, the ISHRs collectively constitute a substantial body of experience and expertise on OHS which is utilised not only as back-up for the front-line activities of the SSHRs, but also in direct engagement with inspectors, employers and senior managers. Thus, this level of trade union support represents an important resource for representative participation and our evidence suggests it is a strong determinant of the

effectiveness of the Queensland system in coal mining.

A further important precondition for the success of participative approaches to OHS management demonstrated in other research concerns the commitment of the management to such approaches. The testimony of the representatives who participated in the present study, as well as the documentary evidence it examined, indicate that there was a mixed experience concerning the delivery of this precondition. For some representatives a positive experience of support from senior management in the coal mines in which they worked meant they felt managers regarded their role as legitimate and useful. They received time and facilities to undertake their functions on health and safety, there were appropriate channels through which they were able to raise issues and their concerns were both listened to and responded to by the managers involved. There were a number of cases where this relationship had taken time to build but the representatives were satisfied that with experience; SSEs and other senior mine managers had come to respond positively to them and clearly saw them as contributing to helping them to deliver their own responsibilities for mine safety. In all these cases the SSHRs interviewed gave a strong impression of feeling that supportive relations with senior management in the mines in which they worked, even though in some cases such relations were hard won and had taken time to develop, helped lead to positive outcomes for the actions of the SSHRs on health and safety matters. Similar sentiments were expressed by the ISHRs.

For other site representatives the experience was a lot less positive. The ISHRs themselves also pointed out that there was considerable variation in the quality of support they felt was available from managers to the SSHRs across the range of the mines in their jurisdiction. Furthermore, in their own direct dealings with mine managers ISHRs made it clear that the attitudes towards the role of worker representation that they encountered varied considerably. We return to the possible reasons for such inconsistency of support from mine managers and its consequences in the following section.

For present purposes, the conclusion that we draw from the our study is that the same preconditions noted in other studies as helping to determine the effectiveness of worker representation in improving health and safety outcomes elsewhere exist in at least some Queensland mines. Moreover, in relation to some of these determinants, such as statutory powers, well-trained, competent and experienced representatives and strong support from trades unions, particularly in the form of the ISHRs, workplace representation is well provided for in unionised mines in Queensland. In combination, therefore, these observations suggest it is more likely than not that worker representation on OHS will have played a significant role in achieving the improved OHS outcomes observed in the early years of the millennium.

However, it is also possibly the case that the limited articulation of the thinking behind the current regulatory system for managing health and safety risks in mining in Queensland (of which the provisions for worker representation on health and safety are an integral part) with health and safety management strategies adopted by some of the mining companies in the state, may be a reason for the plateau observed in OHS outcomes in more recent years. There are several aspects of disconnect between these two approaches. They include the behaviour-based models of health and safety management adopted by these companies, the hostile labour relations climate in their mines and in the industry more generally in the state, along with the rapid turnover of senior positions in mine management and the widespread use of contractors. Both singly and in combination these may all have contributed to an organisational environment in which the presence of preconditions for the effectiveness of arrangements for representative participation in OHS might be lessened. We explore the evidence for this and its consequences in the following section.

7.2 Some challenges and contexts for worker representation on health and safety

While our overall findings suggest that the statutory system for worker representation on

health and safety in Queensland coal mines makes a positive contribution to improved outcomes, there are several contextual features that provide challenges to its effectiveness. We examine some of these challenges in the following sub-sections and discuss their implications.

7.2.1 Representative participation and styles of OHS management

The mixed experiences of the responsiveness of mine managers to their statutory obligations in relation to representative participation reported in our preliminary study suggests that, at least in some mines in Queensland, there is room for a closer alignment between approaches to managing safety adopted by the mining companies and those framed by regulation.

In the case of the latter, the regulatory framework applying in the state is an attempt to integrate long-standing requirements on worker representation (provisions for check inspectors have featured in Queensland mining legislation since the early 20th century) with those for risk-based systemic approaches to managing health and safety in mines. They do so by giving representatives functions in relation to inspection and investigation of health and safety matters generally and also by making specific provision for them to review 'procedures in place at the coal mine to control the risk to coal mine workers' and to inform senior management if they believe the safety management system to be ineffective. As we made clear in Chapters 2 and 3, this integration of representational rights and requirements on systematic approaches to OHS management is not unique to mining, but is widely found in regulatory provisions on health and safety management generally across a range of countries and sectors. Such measures attempt to ensure that 'regulated self-regulation' of OHS management is truly self-regulation in as much as it includes the workers' voice as well as that of management in the arrangements it requires. What is special about the Queensland provisions is their level of detail and the extent of the explicit functions and powers they grant to worker representatives to achieve such involvement.

In the case of the former, other researchers have argued that the predominant style of OHS management adopted by the large mining companies in Queensland is a behaviour-based model (see, for example, Gunningham and Sinclair, 2012). As we noted in Chapter 2, such an approach can make representative participation more difficult.

As we reported in Chapter 5, in some mines the senior management discharged their statutory responsibility under section 99 of the 1999 Act and gave 'reasonable help to a site safety and health representative in carrying out the representative's functions', while in others it seems a similar degree of support was not forthcoming and representatives experienced conflict with managers and supervisors when pursuing their statutory functions. In particular, they reported limited facilities, problems with securing reasonable time to undertake investigations and inspections, poor responsiveness from managers to remedying issues they identified and hostility to their role generally. Similarly, in relation to the review of systems and procedures for the management of health and safety risks, while some representatives clearly had positive experiences, others reported a lack of consultation on these matters and even the existence of a parallel system in which managers chose the coal mine workers they wished to include in consultation on the development of procedures and excluded the representatives.

> *But you sometimes find that the company will select people to do those risk analysis and they're not always people on the job, fully relevant to what's going on*
> (7120035 – SSHR)

The ISHRs also spoke about the range of managerial attitudes experienced by site representatives in different mines and how this affected their own roles in relation to the support they were able to offer. As some of quotes included in section 5.4.1 make clear, they frequently gauged their approach to helping the SSHRs in accordance with the responsiveness of managers in the mines concerned and they also went to some lengths to persuade senior site

management of the value that they could obtain from proper consultation and use of the SSHRs.

Both the ethos and procedures of behaviour-based approaches to managing health and safety are sometimes argued to be unsupportive of representative participation because they focus on practices and procedures in which the direct engagement of workers is sought in preference to their representation (Frick and Kempa, 2011). In such scenarios it is difficult for worker representatives to gain a purchase in participative approaches to health and safety management and the only alternative course of action for representation is primarily a reactive means of defending what the representatives regard as workers' interests in the face of a perception of poor OHS management. That is, rather than operating proactively and initiating changes from within arrangements for OHS management, they are obliged to act outside of the management system from which managers have effectively excluded them. This seems to have been what took place in some of the mines in our study.

This is not to suggest that the two approaches are necessarily always mutually exclusive. Rather, it is to argue that where they operate together some thought needs to be given to ways in which they can relate in order that the benefits of both can be maximised. Research in the UK has suggested some ways in which this might be achieved (Lunt et al 2008). There would seem to be a clear onus here on the management of mines that adopt such behaviour-based approaches to ensure that they are compatible with and make the most effective use of the arrangements for worker representation in the mine which are present by virtue of statutory obligation. However, fundamental to such approaches is the presence of a high degree of trust and co-operation between employers, their managers and the trades unions representing workers on site. From our interviews with the representatives it seems that such trust and co-operation was not a feature of the mines in which difficulties were experienced in carrying out representative functions. This was also a finding that emerged in the study of health and safety management in coal mines undertaken by Gunningham and Sinclair (2012). Clearly, such trust and co-operation are more likely to be present where the climate of labour relations is supportive. Unfortunately this experience is not widespread in Queensland mines as we explore further in the following section.

7.2.2 Labour relations climate

Although it is often claimed that in order for them to work effectively arrangements for worker participation on health and safety should be quite separate from those for labour relations more generally within organisations, the reality is that health and safety issues are inseparable from those surrounding the relations of production more generally. Therefore, while it may be possible to create separate institutional arrangements to address health and safety within organisations, for them to remain unaffected by wider labour relations issues is in practice as unlikely as them remaining unaffected by work organisational issues or, indeed, the business practices of an organisation. The effects of these wider contexts are evident in the findings of the present study.

It is widely acknowledged that, as elsewhere, traditionally strong trade union organisation in mines has been substantially weakened by a combination of changes in legislation and the labour relations strategies of the major mining companies in Australia in recent decades. These changes have occurred at the same time as the shift to risk-based regulation has taken place. They have involved moves away from collective agreements determining pay and conditions of work to more individualised agreements and have been peppered with many examples of job losses, work restructuring and reorganisation, mine closures and re-openings with (re-)hiring of non-union workers, use of contract labour and so on, as mining companies have sought ways to release themselves from what they regard as the constraints of unionised labour. These changes have not gone uncontested. As a result there have been many cases of industrial dispute and the labour relations climate in the industry generally has been, and continues to be, a hostile one.

It would be surprising indeed if worker representation on health and safety — like that on representation on all other aspects of work

and working conditions — were not affected by the prevailing ethos of workplace labour relations. While previous research points towards better health and safety outcomes for representative participation in health and safety arrangements where workplace labour relations are co-operative, this does not necessarily mean that in situations where they are more hostile, worker representation has no useful role. Indeed, common sense would suggest the opposite to be more likely. That is, in situations where there are high risks and poor labour relations workers seek to represent their interests on matters such as health and safety by organising collectively in order to resist their exploitation by their employers. Arguably, this has frequently occurred during the history of labour relations in coal mining. What is significant for our purposes, however, is the way in which union representatives operate in such hostile scenarios. Other researchers have suggested that worker representation on health and safety is relatively ineffective in 'cold industrial relations climates' in Australian coal mines (Gunningham, 2008). They have argued that the lack of 'trust' in employers and managers held by workers' representatives and their trade unions seriously undermines the likelihood of positive outcomes for health and safety management (Gunningham and Sinclair, 2012). They further suggest that this continuing situation helps explain why the progress observed in improved health and safety outcomes around the time of the 1999 Act has not been sustained to the present time.

However, while it may be true that progress on OHS outcomes has slowed and that there was indeed an absence of trust in the motives of management often evident in the testimony of our respondents, the same testimony shows how union health and safety representatives nevertheless do their best to represent workers' interests in health and safety in such situations and, importantly, how they deploy strategies to achieve this through offsetting the effects of managerial hostility.

For example, as in all modern workplaces, the structural and organisational changes that have taken place in work in coal mines sometimes blur the boundaries between traditional health and safety issues and those that involve conditions of work and labour standards. The health and safety representatives' statutory mandate explicitly covered the first of these but arguably not the others. Rather than seek to achieve a wider understanding of the work environment as the basis for their role in the modern workplace, however, the ISHRs and the SSHRs with more experience sought to maintain this separation of 'health and safety' issues from 'industrial' issues.[13] According to them, this was because they needed to carefully maintain such a separation in order retain the legitimacy of their positions in negotiating with managers. They were aware of their vulnerability to reprisals from the mining companies if they strayed across this boundary as health and safety representatives, so where issues came up that appeared to contain 'health and safety' *and* 'industrial' elements, they worked on them with the wider trade union organisation at the mines to ensure that there was a co-ordinated approach with an appropriate division of tasks between the health and safety representatives and other union representatives. Regular featuring of health and safety issues and reports from SSHRs at union lodge meetings were further ways of ensuring such integration.

> Respondent: *Our on-site lodge structure supports, supports me you know like, if they've got an issue, you know, I'll find the information, they also, they're willing to bat for me if I do, not something wrong, but get into that area where, I'm tiptoeing on the industrial relation side of it. Safety side, but if I think it's grey, I sort of step back because I'm just a bit wary that I don't want to get into that arena that's going to get myself into trouble. Not that I'm scared.*
> Interviewer: *You're just being careful.*
> Respondent: *Yes because all I need to give my management an excuse to get*

[13] It is important to acknowledge that the approach is different in other sectors, where there has been a long-standing trade union discourse concerning the broadening of the concept of work environment to include work organisation and production organisation issues, and hence to broaden the remit and role of health and safety representatives to cover these too.

rid of me from where I am, and they'll jump on it.
(7120026 – SSHR)

Respondent*: … there's safety, there's industrial. You get pulled into it, you end up getting shot in… you're unlucky you'll probably get bloody prosecuted. So it's a matter of just reinforcing that. And the same … if you're an industrial bloke at the pit, you can come into the safety arena, no worries at all. But if you're the safety rep, you can't…*
… There's Health and Safety legislation and there's Industrial legislation. So that's why I said that it's been said to me, I say it to the blokes, if it's not in there, you don't deal with it.
Interviewer 1*: But do you not find that that limits the sort of issues that can be dealt with?*
Respondent: *No, I think it aids in clarity. Cos most of the mines will have a lodge or some form of executive that's been elected up. So they're there industrial representatives. The Site Safety and Health Reps are their Safety and Health representatives. … They're elected by everyone in that room, they're elected everyone in the mine. They need to be seeing you work in with them and vice versa. So if you are going to raise an issue over here, make sure you're not going to step on their toes by doing it. … I'm sure if you went and stopped a mine for a couple of days and was come out as an industrial matter, well you'd be in a bit of strife then.*
(7120033 – Former ISHR)

Similarly, they strove to ensure that their actions were not construed as impeding production, for this was another statutory stricture by which they were bound. Collective experience in a poor industrial relations climate had taught them that being accused of causing such impediment would lead to swift reprisal from their employers. Again, comments from the more experienced respondents showed that the strategies they adopted in these situations involved a division of task content between the health and safety representatives and other representatives in ways which ensured that the former were not accused of impeding production – but could nevertheless continue to act legitimately on health and safety issues, even to the extent of stopping operations if they believed the seriousness of the risks involved warranted such actions.

And I'm conscious from the point of in my former role like I had the likes of [Company Name] and some of the largest multinationals challenge me in particular to that, when I've shut their mines down, they're unsafe. And when they had me before the Department Inspectors would be … And each and every time there's nothing to answer. Cos the thing I looked at at the time as an ISHR was I was mindful of the Check Inspector. There's certain conditions and powers and function of the Act there about impeding production. So my focus was health and safety. If it was an industrial issue, they sort it out there.
(7120038/9 – Former ISHR)

Therefore, it was clear that in some mines (and in relation to some mining companies) the labour relations climate was no more conducive to participative approaches to health and safety management than it was to the effectiveness of the behaviour-based health and safety systems also used in these mines. In these situations representatives had developed strategies that were appropriate to operating as worker representatives in a relatively hostile climate. These strategies ensured they undertook actions that were within the statutory framework on worker representation and which thus were effective in allowing them to represent the interests of the coal mine workers on health and safety, despite the hostility of managers. In this way, as the mines records and interview transcripts attest, both ISHRs and SSHRs were able to identify and remedy a range of conditions which, if left unchecked, would have constituted fatal risks to mine workers; and they were able to do so even in mines where the climate of labour relations was hostile. There is little doubt that had the labour relations climates been friendlier in all the mines in Queensland, the representatives

would have achieved even greater successes in terms of positive health and safety outcomes. However, in scenarios in which they operated in a 'cold industrial relations climate,' the absence of trust between representatives and managers, although a feature, did not serve to incapacitate the representatives. Instead it meant they used tactics of health and safety activism that were more appropriate to the climate.

7.2.3 Organisational change

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. 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 were a deliberate strategy of mining companies to reduce the influence of trade unions. In combination, therefore, it might be anticipated that the increased use of contractors evident in Queensland coal mines would be particularly challenging for arrangements for worker representation in preventive health and safety arrangements. As the evidence presented in previous chapters makes clear, while there is little doubt concerning these additional challenges, it is equally clear that both the ISHRs and the SSHRs had found a variety of ways to address them. Again, this was also supported by the documentary analysis:

> *Maintenance manning and supervision were discussed in light of the recent restructuring at the mine. Supervision in the maintenance area covers the twenty four hour operation of the mine and includes a number of planning personnel. Contractors are more widely used for the 'out of the ordinary tasks'. Cranes are no longer owned by [name of mine] but are contracted to the mine, the positive aspect of this arrangement was observed at the Dragline 37 shutdown site, where a new crane was in use. Generally the cranes supplied to the mine have been of a better standard than previously used on this site.*
> (MI mine record entry)

> *The discussion regarding the retrenchment of ERZ controllers was conducted with the SSE [name of SSE] in his office. The SSE explained that the reduction of numbers of ERZ controllers was a business decision driven by production and economic circumstances at the mine. The SSE said that the development production at the mine had been reduced to a 5 panel roster from a 6 panel roster. The corresponding numbers of coal mine workers and ERZ controllers had been retrenched. The SSE determined that the risk to the mine and people as a result was insignificant. I explained to the SSE that my position was concerning the safety and health of people at the mine and the business decisions are not my concern. The fact that the number of supervisors at a mine had been reduced represents a significant change to both the management structure and the SHMS. I would expect that the risks of such a change would have been considered through the mines change management process in the same manner as any other change such as a ventilation change for example. I also expressed my concern to the SSE that UMM was apparently off site when the retrenchments were enacted upon. As the UMM is responsible for the control and management of the mine I would have thought that the reduction of ERZ controllers would be of major interest to him.*
> (ISHR report)

The other aspect of organisational change which was repeatedly the subject of comment from representatives concerned their relationships with senior mine managers. Modern management techniques in coal mining have led to a rapid turnover among senior mine management. The

consequences of this were felt by many of the representatives who took part in the study, as their comments in previous chapters make clear. They recognised that to be effective they needed to develop good working relationships with senior mine managers and this required significant investment of time and effort. They were frustrated by the lack of experience displayed by some new SSEs, both in relation to health and safety issues at their mines and in terms of the regulatory requirements concerning them. In this respect, while time and effort spent working on improving the knowledge and understanding of the SSE paid off, the short time they remained in this position meant that such organisational knowledge was not necessarily retained following their departure.

7.3 Ways forward

As we made clear at the outset of this chapter, our main conclusions in the present study concern the effective role played by worker representatives in improving health and safety in Queensland coal mines. Having undertaken a wide-ranging review of the research literature in this field we think our findings represent a new contribution to the literature on worker representation on health and safety in that they provide a detailed analysis of both the role of worker representatives and the statutory framework governing their activities on health and safety in coal mining — which is an important sector that has been neglected in previous work. The study is also unique in that it has used a combination of documentary records of the activities of the representatives (as well as, for comparison, those of mines inspectors) with that of transcripts of interviews held with the representatives in order to obtain a detailed and corroborated indication of their activities and effects.

This said, we are aware of several significant limitations which should be addressed in further work. In short, there is a need to expand the scope of study in several directions. Firstly in this respect it would be important to include both mine managers and coal mine workers as well as more mines inspectors as participants in future studies. We recognise that our work was commissioned by the CFMEU and has used data and accessed participants provided through the CFMEU. While we feel that such access was entirely appropriate for the purposes of the present study, and our findings are independent of any influence from such access, it is equally important that follow-up work is inclusive of a wider group of participants. Secondly, we have been unable to explore any possible correlation between OHS outcomes as measured by trailing indicators of outcomes such as injuries or HPIs and the role of arrangements for representation on health and safety. Nor have we been able to explore such matters in relation to the self-reported health or injury experiences of coal mine workers. While it is not entirely clear whether such data exist in sufficient, and sufficiently robust, detail to sustain such analysis, these are important issues that should be fully explored in future work.

We have found indications of several areas in which the involvement of both ISHRs and SSHRs could be better supported in order to make their contribution to preventing harm even more effective. Each of these areas requires further analysis. They include: the relationship between arrangements for representative participation and the nature of the approach to health and safety management adopted in different coal mines; the facilities available to deliver effective representative participation; the role of arrangements for the organisation of work and employment in the mines in determining the extent and effectiveness of those for representing workers' interests in health and safety; the role of labour relations issues in determining health and safety outcomes and the extent to which worker representatives are able to participate in their achievement; and the implications of the models adopted by mining companies to conduct both their work and business for systems for preventing injuries and ill-health in coal mines.

Finally, we have suggested that on the basis of our evidence the main elements of the statutory regime framing provisions for worker representation on health and safety in Queensland coal mines are adequate. However, there is room for further study concerning how these arrangements compare with experience of the operation of corresponding provisions in the

harmonised Work Health and Safety Acts where, as we have noted, health and safety representatives (HSRs) have a broader array of rights and powers, including the right to assistance from experts, the right to be present at interviews between workers and the employer or inspector, the right to information about the health and safety of workers and hazards affecting workers and the power to issue provisional improvement notices. Notably, the Work Health and Safety Acts also impose key obligations on persons conducting a business or undertaking (PCBUs) in relation to HSRs, and some of these rights directly address issues raised by SSHRs in this study. For example, the Work Health and Safety Acts (in section 70(1)) oblige PCBUs to provide resources, facilities and assistance to a HSR that are reasonably necessary to enable the representative to exercise his or her powers or perform his or her functions. They also oblige (sections 70(2) and (3)) PCBUs to allow a HSR to spend such time, on normal pay, as is reasonably necessary to exercise his or her powers and perform his or her functions under the Act.

It is arguably also the case that, under the same Acts, HSRs are better protected against victimisation and from disqualification. For example, under the Coal Mining Safety and Health Act 1999 the Minister may remove a SSHR from office by notice (which must contain the reasons) if the Minister considers the SSHR is not performing the SSHR's functions 'satisfactorily' – subject to an appeal to an Industrial Magistrate. The Minister has the same power to remove an ISHR (section 112(1)). The Work Health and Safety Act 2011 (Qld), by way of contrast, vests the disqualification power in the Industrial Relations Commission (rather than a member of the Executive) and specifies clearer grounds for disqualification: that the HSR has: (a) exercised a power or performed a function as a HSR for an improper purpose; or (b) used or disclosed any information he or she acquired as a HSR for a purpose other than in connection with the role of HSR (section 65(1)).

We have pointed out that the arrangements that apply to workers' representation in mining arose in response to the risks of a very differently organised and structured industry to the one that currently exists and it would seem sensible to undertake some further comparative inquiry to determine whether such measures could be made more fit for purpose in relation to the predominant features of the industry as it stands today. To reiterate, however, our main findings on the current system for worker representation demonstrate that both ISHRs and SSHRs make a significant contribution to the prevention of harm in Queensland mines. The point we are making here is that providing additional supports already found under other legislation could further enhance this contribution to the health and safety of coal miners.

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Annexe

ISHR interview schedule
SSHR interview schedule
Participant information sheet
Consent form
Non-participant observation plan

ISHR Interview Schedule

1. Information concerning their (i) background; age, mining experience, mining and OHS qualifications, previous experience as SSHR; (ii) when and why they became ISHRs; (iii) how long as a representative; (iv) their training and other union support?

2. What are the health and safety issues ISHRs most typically deal with?

3 How do ISHRs spend their time? What are their major activities?

(i) How do ISHRs use their various consultation, inspection, review of procedures, enforcement etc. powers;

(ii) To what extent do ISHRs focus on OHS management issues and processes and to what extent do ISHRs concern themselves with infrastructure issues (ie get at the balance between looking at how safety is managed (SMS, risk assessment, control procedures and processes etc.) and looking at the mine itself – the physical conditions - (1) methane and coal dust monitoring and levels; (2) spontaneous combustion/heatings; (3)bratticing/seals and ventilation systems; (4) ground conditions and ground support regimes; (4) water seepage and inundation; (5) stone dusting, fire suppression; (6) condition of roadways; and (7) mining equipment.)

(iii) Has the ISHR role changed over time?

(iv) Do ISHRs face obstacles of any kind when they exercise their powers?; and

(v) What are these obstacles (and which are the most significant)?

Checklist of functions/powers:

- inspecting a coal operation to assess the level of risk to which workers are exposed (can be accompanied by SSE and SSHR (Do they have a system of inspections on a regular basis through negotiation?; how often do they inspect? Why?);
- review procedures in place at the mine to control risks to workers;
- detect unsafe practices and conditions and to take action;
- participate in investigations into serious incidents and HPIs and other matters
- investigate complaints by coal mine workers;
- to help in initiatives to improve OHS at coal mines
- make inquiries about operation of mines relevant to OHS
- with reasonable notice to SSE, enter any part of coal mines to carry out functions
- copy safety and health management system documents;
- to require person in control of mine to give ISHR reasonable help (unless reasonable excuse) in exercise of powers
- If believes SHMS is inadequate/ineffective, must advise SSE – if SSE action inadequate, advise inspector (who must report results of investigation on mine record)
- Issue a directive under s 167

(vi) How do ISHRs deal with serious safety issues? Have ISHRs issued s 167 Directives?

4 (i) How do ISHR's consult with their fellow workers and represent their interests?
(ii) To what the extent do they feel supported by their colleagues?
(iii) How does the ISHR ensure they are accountable to members?
(iv) What would improve their consultation and representation role, and the support they receive from colleagues etc?

5 What sort of working relationship does the ISHR have with SSHRs?
(i) How does the ISHR see his role in relation to SSHRs?
(ii) How much time do ISHRs spend answering questions and queries from SSHRs?
(iii) Does the ISHR meet regularly with SSHR to ascertain whether there are OHS problems or issues on shifts?
(iv) What sort of training do ISHRs organise and present for SSHRs
- Aim of training
- Topics covered
- Presenters – how chosen, background etc
- Materials
- How successful is the training?
- Do ISHRs monitor competence of SSHRs?

(v) Does the ISHR provide general OHS information to SSHRs?
(vi) How do ISHRs find out about OHS issues and incidents at mines? Do SSHRs report all incidents likely to endanger workers to the ISHR (whether or not matter rectified)?
(vii) What do ISHRs do when they hear of a serious OHS issue at a mine?
(viii) What kind of support does the ISHR receive from SSHRs?
(ix) Has the relationship with SSHRs changed over time?

6 What is the ISHR's role in relation to the joint health and safety committees at each mine; and what is the ISHR's perception of the relationship?

7 ISHRs relationship with the union:
(i) discuss the union's role in training, resourcing and otherwise supporting ISHRs;
(ii) the ISHR's overall perception and judgment about the union's supportive role?
(iii) has the relationship with the union changed over time?

8 Discuss the structural and organizational changes (outsourcing, contracting, labour hire etc), government policies (including deregulatory strategies) leading different organizational and political settings in which representation on OHS occurs – as compared to those when the provisions for this type of representation were originally conceived.

(i) Have the ISHRs noticed any ways in which these changes affect (i) OHS in the mines, (ii) their roles and activities and (iii) their ability to undertake them?
(ii) Does the use of contractors present any challenges for ISHRs; do they bring issues to ISHRs?

9 What are the ISHR's perceptions of the broader industrial relations context within which they operate?

(i) How does it affect the way they carry out their roles?
(ii) Ask ISHR to reflect on their relations with the mine management and its commitment to OHS.
(iii) Seek ISHR's reflections of the extent of workers' participation in OHS in coal mines – (documentary evidence suggests that the ISHR feel it is rather low).

10 What is the ISHR's relationship with, and experience of working with, mines inspectors: (i) How often they see them, how is contact initiated?
(ii) What happens when they do see them?
(iii) How supportive are inspectors?
(v) How has the relationship changed over time?

11 What have ISHRs achieved with their powers?
- including good examples of the successful utilisation of their powers);
- examples of most important interventions/successes;
- how do their activities 'add value' (mentoring and supporting SSHRs, their role in reporting and disseminating information on serious incidents for example, eg high potential incidents (HPIs) etc).

12 What do ISHRs consider to be necessary to improve their role in Queensland mines?; What would most improve health and safety in mines?

SSHR Interview Schedule

1. Information concerning their (i) background; age, mining experience, mining and OHS qualifications; (ii) when and why they became reps; (iii) how long as a representative; (iv) their training and other union support?

2. What are the health and safety issues SSHRs most typically deal with?

3. (i) How do SSHRs use their various consultation, inspection, enforcement etc. powers;
   (i) To what extent do SSHRs focus on OHS management issues and processes and to what extent do SSHRs concern themselves with infrastructure issues (ie get at the balance between looking at how safety is managed (SMS, risk assessment, control procedures and processes etc.) and looking at the mine itself – the physical conditions - (1) methane and coal dust monitoring and levels; (2) spontaneous combustion/heatings; (3)bratticing/seals and ventilation systems; (4) ground conditions and ground support regimes; (4) water seepage and inundation; (5) stone dusting, fire suppression; (6) condition of roadways; and (7) mining equipment.)
   (ii) Has the SSHR role changed over time?
   (iii) Do SSHRs face obstacles of any kind when they exercise their powers?; and
   (iv) What are these obstacles (and which are the most significant)?

Checklist of powers/functions:

- inspecting a coal operation to assess the level of risk to which workers are exposed (Do they have a system of inspections on a regular basis through negotiation?);
- make a written report on the inspection (copy to SSE, notify SSE of possibility of danger/safety and health management system inadequate (inform inspector if SSE response inadequate); and copy to inspector);
- review procedures in place at the mine to control risks to workers;
- detect unsafe practices and conditions;
- investigate complaints by fellow workers;
- attempt to investigate and rectify problems encountered by fellow workers (and pass complex issues on to ISHR);
- inspecting documents and plans relating to health, safety and welfare that are required to be kept at the coal operation;
- observing any formal in-house investigation of an event or other occurrence that must be notified to the Chief Inspector;
- A site check inspector or electrical inspector who inspects any part of a coal operation must also make a record on the day of the inspection if they find any noxious or flammable gas, self-heating coal or other material, or any other dangerous conditions;
- Right to be informed by SSE of injury or illness to mine worker; high potential incident at the mine; any proposed change to coal mine, plant or substances that may affect OHS; presence of inspector and directive by inspector or ISHR;
- Power to stop dangerous operations (s 101).

(v) How do SSHRs deal with serious safety issues? Have SSHRs had to stop a work process on safety grounds (using s 101)?

4. What is the SSHR's role in relation to the joint health and safety committee; and what is the SSHR's perception of the relationship?

5. (i) How do SSHR's consult with their fellow workers and represent their interests?
   (vi) To what the extent do they feel supported by their colleagues?
   (vii) What would improve their consultation and representation role, and the support they receive from colleagues etc?

6. What sort of working relationship does the SSHR have with Industry Health and Safety Representatives?
   (x) Does the SSHR meet regularly with ISHR to ascertain whether there are OHS problems or issues on shifts?
   (xi) Does the SSHR report all incidents likely to endanger workers to the ISHR (whether or not matter rectified)?
   (xii) Our impression from our research so far is that ISHRs focus mainly on the infrastructure of mines (eg physical hazards) rather than on safety management systems and procedures – what is the SSHRs impression of this balance; and what balance do SSHRs themselves make? (ie compare their impression of ISHRs balance and their balance as stated in 3(ii) above).
   (xiii) What kind of support does the SSHR receive from ISHRs?
   (xiv) Has the relationship with ISHRs changed over time?

7. SSHRs relationship with the union:
   (i) discuss the union's role in the provision of training and information – relative to other sources of these things;
   (ii) what are the SSHRs' views and perceptions of training experience itself; what they value about it; and how much of it they have received?
   (iii) the SSHR's overall perception and judgment about the union's supportive role?
   (iv) has the relationship with the union changed over time?

8. Discuss the structural and organizational changes (outsourcing, contracting, labour hire etc), government policies (including deregulatory strategies) leading different organizational and political settings in which representation on OHS occurs – as compared to those when the provisions for this type of representation were originally conceived.

   (iii) Have the SSHRs noticed any ways in which these changes affect (i) OHS in the mines, (ii) their roles and activities and (iii) their ability to undertake them?
   (iv) Does the use of contractors present any challenges for SSHRs; do they bring issues to SSHRs?

9. What are the SSHR's perceptions of the broader industrial relations context within which they operate?
   (i) How does it affect the way they carry out their roles?

(iv) Ask SSHR to reflect on their relations with the mine management, its commitment to OHS and the support for SSHR/obstacles.

(v) Seek SSHR's reflections of the extent of fellow workers' participation in OHS in coal mines – (documentary evidence suggests that the ISHR feel it is rather low).

10. What is the SSHR's relationship with, and experience of working with, mines inspectors: (i) How often they see them, how is contact initiated?
(ii) What happens when they do see them?
(iii) How supportive are inspectors?
(viii) How has the relationship changed over time?

11. What have SSHRs achieved with their powers?
    - including good examples of the successful utilisation of their powers);
    - examples of most important interventions/successes;
    - how do their activities 'add value' (their role in reporting and disseminating information on serious incidents for example, eg high potential incidents (HPIs) etc).

12. What do SSHRs consider to be necessary to improve their role in Queensland mines?; What would most improve health and safety in mines?

Participant information sheet

The effectiveness of workers' inspectors: A study of the role of site and industry health and safety representatives in coal mines in Queensland

Participant Information Sheet

You are being invited to take part in a research study. Before you decide if you wish to take part it is important for you to understand what the research will involve and why it is being done. Please take time to read the following information carefully. Talk to others about the study if you wish.

What is the purpose of the study?

Unionised worker representation has been an established part of the statutory requirements covering health and safety in coal mining in a number of Australian states for many years. Evidence from other sectors of industry suggests that this kind of representation has a positive effect on occupational health and safety outcomes. At the moment, however, there is very little evidence on this issue relating directly to the coal mining industry. In order to begin to address this, we are now trying to find out more about the role and activities of Queensland mines' site and industry health and safety representatives and their effectiveness in relation to workers' health and safety by asking those involved about their experiences.

Who are the researchers and who is funding the research?

The researchers are based at the Cardiff Work Environment Research Centre (CWERC) which is part of the Cardiff University School of Social Sciences in the UK. You can find out more about CWERC and our work on our website:

www.cardiff.ac.uk/cwerc/index.html

The study is being led by Professor David Walters and Dr Emma Wadsworth with the assistance of other members of CWERC staff. The research is funded by the Construction, Forestry, Mining and Energy Union (CFMEU) Mining and Energy Division and has been approved by the Cardiff University School of Social Sciences Ethics Committee.

Who can take part?

We are inviting those connected to coal mining in Queensland in a number of ways to take part in the study by being interviewed for the research. This includes both site and industry health and safety representatives, mine inspectors, trade union leaders, regulatory policy makers and mine managers.

What do I have to do?

Taking part in the study involves being interviewed by the research team. The interview will cover a number of areas around your work and your experiences of the way in which safety and health are managed in coal mines in Queensland. It should take no more than about 40 minutes.

Will my taking part be confidential?

All interviews carried out during the project will be undertaken on a confidential basis and will be audio-recorded and subsequently transcribed. As far as possible all comments will be anonymised in any reports, papers or other publications that are produced as a result of the research. No individuals will be named in any publications about the study and its findings but there is a possibility that some may be identifiable through comments that are made.

What will happen to the information that I give?

All transcripts of recorded interviews will be stored anonymously on University password protected computers in strict accordance with the Data Protection Act. These will only be accessible to members of

the research team and will be kept securely. An analysis of the information will form part of our report at the end of the study which may be published on our own and/or the CFMEU website where anyone will be able to access it. At a later stage, the findings may also be reported to academic or professional audiences in journals, presentations or a book.

Do I have to take part?

Taking part in the study is **entirely voluntary**. You can decide whether you would like to be interviewed or not and you can choose to withdraw from the study at any time. You can also choose not to answer any questions asked at any time. You do not have to give a reason for any of your decisions.

Contact information

If you would like further information about the study please do not hesitate to contact:

Professor David Walters or Dr Emma Wadsworth

Tel: +44 (0) 29 2087 0013 OR +44 (0) 29 2087 5123

Email: waltersd@cardiff.ac.uk OR wadsworthej@cardiff.ac.uk

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Consent Form

The effectiveness of workers' inspectors: A study of the role of site and industry health and safety representatives in coal mines in Queensland

Professor David Walters & Dr Emma Wadsworth
Cardiff Work Environment Research Centre (CWERC), Cardiff University
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Consent Form

- I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- I am willing to take part in the interview for this study and for the interview to be audio-recorded.
- I understand that no-one will have access to the recording beyond the Cardiff University research team.
- I understand that as far as possible all comments will be anonymised in any reports, papers or other publications that are produced as a result of the research. Individuals' names will not be included in any publications, but I understand that there is a possibility that I may be identifiable through comments that I make.
- I understand that taking part in the research is voluntary and that I may withdraw at any time.

_____

Name of interviewee

_____ _____

Signature Date

_____

Name of interviewer

_____ _____

Signature Date

Non-participant observation plan

Observe :

(i) What SSHRs are trained in
(ii) Who delivers the training
(iii) The quality of the training
(iv) The training materials
(v) The interaction between SSHRs; between SSHRs and trainers; and between SSHRs and the union