

# The Impact of Disasters on Independent Contractors: Victims of Circumstances

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## Introduction

The year 2010-2011 will be known in New Zealand as *annus horribilis*. Within a period of five months New Zealand had not only experienced a major mining disaster but also two major earthquakes. All three disasters were located in the South Island of New Zealand. While remarkably in the first earthquake no one was killed, the second 6.3 magnitude earthquake centred in Canterbury's largest city Christchurch killed 185 people in February 2011. Three months earlier on the 19<sup>th</sup> November 2010 a series of methane explosions at the Pike River Coal Mine (PRCM), situated outside the small regional West Coast town of Greymouth, killed 29 workers. Thirteen of the dead were contracted workers. At the time of the Pike River Coal Mine explosion, out of a workforce of 200, over 80 independent contractors were employed at the mine. Most of the independent contractors operated local, small businesses, employing on average 10 people. Pike River Coal Mine Ltd not only subcontracted manual labour (skilled and unskilled) but the company also outsourced aspects of the mine design, financial and environmental risk assessments, and a great deal of the management of occupational health and safety (OHS), such as mine ventilation.

Shortly after the explosions at PRCM, the mine was closed and the company went into receivership. As most of the independent contractors were unsecured small creditors, neither they nor their workers nor their families received any money owed to them by Pike River Coal Mine Ltd (in receivership). It is estimated that unsecured creditors, including the independent contractors, are owed \$(NZ)31m, with another \$20.5m owed to Pike's major shareholder and secured creditor, New Zealand Oil and Gas. Unlike the full-time employees who are afforded some protection under New Zealand's employment law and ongoing employment from their organisation, these precariously employed independent contractors have been at the sharp-end of vulnerability since the aftermath of the PRCM disaster. In addition, the PRCM case demonstrates that independent contractors not only lost their lives and workmates but also have become *de facto*, often vulnerable employees without tenured work or cover by many of the protective employment regulations. The PRCM Disaster, therefore, is a useful case study and the starting point for an ongoing study in the area of the impact of disasters on vulnerable workers as it illustrates the fact that disasters can have immediate and long-term economic and social effects on independent contractors and their families.

Underpinning the PRCM case study is the realisation that there has been an exponential growth in outsourced work to independent contractors while at the same time there has been a parallel rise in workers employed in insecure work, including contracting work. It is estimated, for example, that 30 per cent of workers in New Zealand and 40 per cent of workers in Australia are employed in insecure work (NZ Council of Trade Unions (NZCTU), 2013).<sup>1</sup> Central to this increased use of independent contractors is the recognition that organisations are now constructed in such a way that the so-called peripheral labour constitutes a significant proportion of the workforce in contrast to the core workforce. While this relationship may suit both the principal organisation and its independent contracting workforce in times of certainty, the PRCM disaster shows that this relationship can rapidly turn toxic in catastrophic times, affecting more than just the independent contractors and their workforce but also the wider community.

However, before we proceed to examine the PRCM disaster in detail, we revisit the debates concerning the differences between “an independent contractor” *versus* “an employee” with the aim of shifting the focus from the employee and employment to the idea of working and the organisation of this work. While we acknowledge that debates on how “independent contractors” are defined have been “interminable” (Standing, 2011: 679), the question still remains: what is “an employee” and more importantly what is “an independent contractor”? Furthermore, in this paper, our focus is on “independent contractors” as single individuals who may or may not have a contractual relationship with others as employees or other dependent or independent contractors.

## The Employee versus the Independent Contractor

The post-war standard form of employment began to deteriorate in many of the OECD countries from the late 1980s onwards as a growing number of workers started to enter the labour market. Increasing globalisation, mounting competitive pressures, and the growth of the service industries also created the need for greater labour flexibility, further threatening the standard employment and the employment relationship. Moreover, the prevalence of reclassifying a “full-time, permanent employee” to “an independent contractor” or “casualised employee” has been a major feature of these changes and has significantly altered the employment relationship as the former status is often linked to employment benefits and entitlements not afforded to the latter (refer to Donahue, Lamare & Kotler, 2007).

In New Zealand and elsewhere, there is a key legal distinction between *contract of services* (i.e. hiring an employee) and *contract for services* (i.e. hiring an independent or self-employed contractor) (see table 1). On one hand, *contract of service* or employment contracts cover employees working for wages or salaries typically in standard work. The employee, like the pre-Industrial Revolution servant, is typically a subordinate charged with execution rather than conception of the job. *Contracts for services* cover self-employed contractors, such as tradespeople, taxi drivers, and many professionals (ie lawyers and doctors, etc.) who work for others under contract to provide distinct jobs or services. The contract of services is pursuant under employment law while contract for services is mainly pursuant under commercial law. Thus while in practice the independent

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<sup>1</sup> The standard labour force definition used by Statistics New Zealand includes employers. We discount employers for our current purposes because our focus is on control or dependency of work.

contractor may do the same tasks as an employee in law they are different.

While the traditional view of the *employee* is as integral part of the enterprise, this does not explain the independence enjoyed by the contractor. The independent contractor is ‘independent’ of the firm including the corporate structure in the sense that they are not bound to the job through economic necessity. Their work may be integrated into the firm, *but they are not*. At the same time their economic independence is limited in that the contract price is determined by supply and demand of the market. In theory, the employer seeks to integrate workers into the firm as employees if the costs of the independent contractor are greater than the costs of hiring an employee. The decision to hire employees or to contract workers *independently* is a management prerogative made on the basis of the organisational or corporate interests and not the interests of the worker. And the greatest interest is in reducing costs, that is, the financial interests of the firm determine whether workers are hired as employees or as independent contractors. Here the term ‘vertical integration’ can be seen as reflecting the line of command within large firms: as within the military the management structure of corporate firms is a pyramid and all workers needed for production are placed within this hierarchy. Only those workers with particular skills (or professional standing such as lawyers) traditionally remain outside the firm hierarchy as independent contractors.

In many respects, employment law was developed by governments to protect workers who toiled at the lower and less powerful levels of this hierarchy. And by hiring independent contractors the employer could reduce compliance costs imposed by employment law. However, the contractor, (as opposed to the employee), is viewed at law as an equal to the other contracting party and the contract is interpreted and enforced by the courts as written. The independent contractor was not, at law, seen as in need of the protections offered by employment law. The legal definition of a contractor is as a worker pursuant to a ‘contract for service’ in contrast to an employee who has a ‘contract of service’ is outlined in the table below.

**Table 1: Contract of and for services**

	<b>Contract OF Services</b>	<b>Contract FOR Services</b>
<b>Control &amp; management</b>	Employer has the right to control & manage work	Contractor controls & manages work
<b>Integration</b>	Employee is part of the principal organisation	Contractor is independent of the principal organisation
<b>Hours of work</b>	Set by employer	Contractors’ hours are determined by contract
<b>Tools &amp; equipment</b>	Provided by employer	Provided by contractor
<b>Form of Payment</b>	Wages paid by employer on regular basis	Contract price paid by principal contractor as agreed
<b>Profit &amp; Loss</b>	Borne by employer	Borne by the contractor
<b>Payment of tax, workers’ compensation, etc.</b>	Employer’s responsibility	Contractor’s responsibility
<b>Service</b>	Employee serves the employer	Contractor serves the client

*The independent contractor*, as the word suggests, has a contract – an agreement – with the hiring party (denoted in New Zealand law as “the principle”). The contract is

interpreted and enforced by the courts even if it is a contract for the provision of labour. The contractor, (as opposed to the employee), is viewed at law as an equal to the other contracting party and the contract is interpreted and enforced by the courts as written. The legal definition of a contractor is a worker pursuant to a ‘contract for service’, in contrast to an employee who has a ‘contract of service’. The contractor’s contract is, at times, referred to as a commercial contract as it is interpreted in much the same way as other contracts, such as those applying to the sale and purchase of goods. Although there are laws that apply to commercial contracts, such as rules for the sale of goods and other rules regulating businesses (eg, rules on restraint of trade), *the contract defines the relationship*.

In New Zealand independent contractors are not entitled to receive the so-called ‘minimum code’ statutory protections, such as holidays and other types of paid leave, minimum wages, or equal pay. Certain implied terms that are present in every New Zealand employment agreement by statute or common law are not present in ordinary contracts. The obligation of good faith under Section 4 of the Employment Relations Act 2000, for example, requires the parties to be open and communicative and not to do anything likely to mislead or deceive one another (NZCTU, 2013).<sup>2</sup> Nonetheless, independent contractors retain some rights (although they are excluded from others), including the right to a healthy workplace, some parental leave rights, and rights under the Fair Trading Act 1986 against misleading and deceptive conduct. They also retain rights and protections under general contract law.<sup>3</sup> These rights, however, are the poor substitutes compared to the detailed law built up to protect employees from what the Employment Relations Act 2000 calls “the inherent inequality of bargaining power in employment relationships”.<sup>4</sup> Independent contractors can also have their contracts terminated in accordance with the terms of the contract without the terminating party being subject to a requirement of justification.<sup>5</sup> Contractors will not have access to the low-level, low- or no-cost dispute resolution services provided under the employment framework such as the Mediation Service and Employment Relations Authority.<sup>6</sup>

## Vulnerability as an Independent Contractor

Not only has it become more difficult to distinguish between “an employee” and “an independent contractor”, but the blurring of these terms is also part of wider discourses on outsourcing and the shift from secure to insecure work – important features that are rarely included in the disaster literature. The experience of an increasing number of workers employed in the structured networks of production and services is the “downsizing” of large organisations and “outsourcing” of their work, which in turn has resulted in a growing pattern of displacement of more stable contracts of employment in large organisations (Lamm & Walters, 2004).

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<sup>2</sup> Unlike other systems of law, New Zealand does not impose a general duty on parties to deal with each other fairly and in good faith (good faith in this general sense should not be confused with the statutory duty of good faith set out in the Employment Relations Act 2000 though it is a subset of that wider duty). See Burrows, Finn and Todd (2007) at [2.2.6] and [6.3].

<sup>3</sup> Such as those provided by the Contractual Mistakes Act 1977 and the Contractual Remedies Act 1979.

<sup>4</sup> Section 3(a)(ii) of the Employment Relations Act 2000.

<sup>5</sup> As is required by section 103A of the Employment Relations Act 2000.

<sup>6</sup> Parties may access the Disputes Resolution Tribunal in some instances (if the sum sought is less than \$15,000 and other exclusionary criteria are not met).

As a result of these structural changes to production and services, there has been a proliferation of small independent contractors reliant for their income on outsourced work from a larger business or businesses, (Blyton & Turnbull, 1994; Quinlan, et al., 2010). For many independent contractors the reality is that they are in fact *dependent* contractors. This is particularly so for self-employed people dependent on a single client and who often have little control over their work and have few (if any) rights over their pay and conditions. Studies on the wages and conditions of dependent contractors indicate that their working conditions and pay are often exploitative, compared to contractors who are not reliant on one client (Caritas, 2007). Mayhew and Quinlan (1997) also argue that the effects of subcontracting and outsourcing on independent contractors will in certain instances lower OHS standards of independent contractors and their employees because of: (a) employment status is fluid or ambiguous; (b) the nature of skill/work involved; and (c) remuneration is based on output.

Studies indicate that an increasing number of workers are being coerced into contracting situations, typically by their employer, resulting in the loss of significant remuneration and any semblance of job security while assuming significant additional safety and financial risks (Lamm, 2002; NZCTU, 2013). Related to this is the practice of reclassification or misclassification of employees as independent contractors whereby the act of outsourcing places at once both the task and the employer's duty of care outside the domain of the firm, thus further undermining the protective legal framework for employees (Lamm, 2002; Donahue, Lamare and Kotler, (2007:2). Donahue, Lamare and Kotler, (2007:2) argue though that misclassification of employees as independent contractors occurs for different reasons. Responsible employers may misclassify workers because they are unclear or confused about how to apply complex, inconsistent, and varying standards. Other employers intentionally misclassify workers, assuming the risk of incurring penalties, as a strategy to significantly cut labour costs, limit their liability, and gain an unfair competitive advantage. Notwithstanding the different reasons for the misclassification, the authors state that the impact of the practice can have severe implications for workers in that it denies many workers protections and benefits that they are entitled to. Moreover, worker misclassification disrupts labour markets by enabling unscrupulous employers to ignore labour standards. Thus, these so-called independent contractors are for all intents and purposes *de facto*, dependent employees in which the remuneration and working conditions are often poor.

There is also a substantial body of evidence showing that the effects of insecure work are pervasive and overwhelmingly negative (Dorman, 2000; Quinlan and Mayhew, 2001; Tucker, 2002; Bohle, et al, 2004; Connelly and Gallagher, 2004; McLaren, et al, 2004 Burgess, et al, 2008; Lewchuk, et al, 2008; Seixas et al, 2008; Kalleberg, 2009; Reisel, et al 2010; Probst and Ekore, 2010). Like outsourcing, insecure work is at the centre of reframing full-time, permanent work into precarious employment such as temporary, seasonal, casual, labour hire (agency), and fixed-term employment (Connelly and Gallagher, 2004; Vosko, 2008; Boocock, et al, 2011; Quinlan, 2012). And yet both forms of work are increasingly being adopted for cost-cutting reasons and shifting the risk from the principal employer to the independent, sub-contractor (Kalleberg, 2009 also see Johnstone, Mayhew and Quinlan, 2005:351-2).

A great deal of the empirical work and conceptualisation on insecure work and outsourcing has in fact had OHS factors of vulnerability as a focal point (see Quinlan and Mayhew, 1999; 2000; Tucker, 2002; Quinlan and Bohle, 2004, 2009; Hannif and Lamm,

2005; Sargeant and Tucker, 2009; Gravel, et al, 2013). In particular, studies have begun to establish a link between work-related injuries and illnesses suffered by vulnerable workers and interconnected social, economic, legal, and political factors. For example, in the 2007 World Health Organization's Employment Conditions Knowledge Network (EMCONET) report *Employment Conditions and Health Inequalities*, a number of factors were highlighted explaining the disparities in working conditions among vulnerable workers. These include employment status, conditions of recruitment, sector of employment or occupation, employment in the informal sector, lack of freedom of association, and collective bargaining rights. Another example of using OHS factors to measure and describe vulnerability among groups of workers is the 'Pressures, Disorganization and Regulatory Failure' (PDR) model developed by Quinlan and Bohle (2004, 2009), which helps to explain the poor OHS outcomes of precariously employed workers. The model is useful in that it organises a number of factors that have a negative impact on the OHS of precarious workers into three categories: economic and reward pressures; disorganisation at the workplace; and regulatory failure (Quinlan and Bohle, 2009).

## Disasters and Independent Contractors

It is clear, therefore, that an independent contracting workforce can, in certain situations, be vulnerable in terms of their pay, conditions, health and safety, and tenure. What is not clear, however, is the impact of disasters, such as PRCM explosions, on this group of workers. The dominant paradigm in the disaster literature is one of coping during and after the disaster and rebuilding post-disaster. Here independent contractors are viewed as part of the solution rather than victims of circumstances. However, no one has asked the question: what is the impact of disasters on vulnerable independent contractors? Given that this question has yet to be fully addressed in the literature, perhaps more orthodox disaster research, such as Quarantelli's (1985; 1999) work on the psychosocial aftermath of disasters, can shed some light in this area.

Quarantelli's (1985:14) research is useful for our discussion in that it outlines the psychosocial effects of disasters on small regional communities (i.e. Greymouth). In particular, he notes that there are two opposing views. One position holds that disasters are traumatic life events, producing "...very pervasive, deeply internalized, and essentially negative psychological effects. Disaster victims are viewed primarily as attempting to cope with the meaning of the trauma and disaster impact." The second position holds "...that community disasters have differential rather than across-the-board effects. Some of the effects are positive as well as negative; many of the latter are relatively short in duration. The varying problems of victims are more closely related to the post-impact organized response than they are to the disaster impact itself." Quarantelli's review indicates that the matter may never be decided because no two disasters are completely similar as to their conditions or to the manner in which they are researched.

More recently attention has been on the impact of work-related injuries and illness and, in particular, traumatic work-related death, on the victims' families (see Matthews, Bohle, Quinlan, and Rawlings-Way, 2011 and. Matthews, Quinlan, Rawlings-Way and Bohle, 2012. As Matthews, et al (2012:647; 663) argue:

"...serious illness, injury, or death at work ... has cascading psychological, social, and economic effects on victims' families and close friends. These effects have been neglected by researchers and policymakers. The number of persons immediately

affected by workplace death is significant, even in rich countries with relatively low rates of workplace fatality... [However], how employers, unions and government agencies deal with families following a workplace death is ... poorly understood”

In particular, they note that:

“The wider bereavement literature indicates that exposure to sudden, traumatic death can leave people vulnerable to adverse mental and physical health outcomes such as depression, posttraumatic stress, complicated grief and cancer ... These conditions may result in reduced ability to work, both in the short and longer term and lead to poor quality of life for partners and children ... Children and adolescents exposed to traumatic death are particularly vulnerable to lasting behavioural, emotional and cognitive consequences that may become severely disabling.”

In short, Matthews et al, (2012: 663) conclude that a traumatic work-related death, punctuated by financial and health problems, can dramatically change family relationships, recalibrate family roles and structure, and disrupted friendships.

New Zealand research also suggests that an injury to the owner or a key staff member can have a significant impact on the viability of a small business, including an independent contracting business. Based on workers’ compensation claims, it has been estimated that 1,800+ New Zealand businesses ceased to operate in the year 2002-2003 as a result of an injury to the owner or an employee.<sup>7</sup> In a later survey undertaken on behalf of New Zealand’s Accident Compensation Corporation in 2006, it was revealed that 58 per cent of the respondents stated that the closure of the small business was a direct result of either the owner or employee being injured while 19 per cent said that an injury to a member of the business was to some extent responsible for the business closure (Johnson, 2006). When those respondents who had been injured were asked if they were likely to work in the future 56 per cent said no while 8 per cent were not sure.

Previous research on the impact of disasters on individuals, businesses, and communities provides a number of insights that in turn can be applied to the PRCM) case study below. While there is yet no complete data analysis on the social consequences and economic costs of the PRCM disaster on the local community, we can speculate that such a disaster will affect Greymouth and the surrounding district. Many of Greymouth’s working population of approximately 1,427 small businesses, employing approximately 7,000 employees, support the local mining industry. Workers in Grey District are 57 times more likely to be employed in coal mining than they are in the rest of the country. Therefore, the closure of the PRCM (and other subsequent mine closures, including Spring Creek Coal Mine) have had a detrimental impact on the level of unemployment and the local economy (Grey District, 2013). The Grey District is not only highly dependent on the mining or extraction industry but is also dependent on tourism, which has already been disrupted by the influx of specialists to help with the rescue and recovery mission as well as media (Wood, 2011).

## **Case Study: Pike River Coal Mine Ltd.**

On 19 November 2010 at 15.45 hours the first of four explosions at Pike River Coal Mine occurred. Of the 31 men underground only two survived. It is believed that 29 men lost their lives as a result of the first explosion. Chance played a big part in which men and how many remained underground at 3:45pm. Confusion as to how many miners and who

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<sup>7</sup> Statistics New Zealand (2003) estimate that the small business population in 2002-2003 was 394,471.

were trapped underground days after the explosion together with a lack of a coherent rescue strategy and an inexperienced incident team were to undermine any hope of retrieving the miners dead or alive.

Since the disaster, there have been several inquiries, including a Royal Commission of Inquiry, an internal governmental inquiry and three court cases, two of which have concluded with prosecutions against the company and one of the main sub-contractors. The third court case against the Chief Executive Officer, Peter Whittall, has yet to be convened. In the most recent court case, Pike River Coal Mine Ltd (in receivership) was charged with failing to take all practicable steps to prevent harm to its employees. Judge Jane Farish ordered Pike River Coal Mine Ltd to pay a total of \$3.41 million in reparation – \$110,000 for each of the victim’s families and survivors Russell Smith and Daniel Rockhouse. She also fined the company a total of \$760,000 over nine charges. The receivers of Pike River Coal Mine Ltd stated that it had only enough money to pay \$5000 to each family. Judge Farish argued that: “Even a company in a fragile state usually comes forward and offers reparation, but here nothing has been forthcoming.”

Prompted by the conviction of Pike River Coal Mine Ltd (in receivership) for breaches of the Health and Safety in Employment Act, 1992 and the reluctance of the receivers to pay reparations to the families of the deceased families, Brian Gaynor (July 13<sup>th</sup>, 2013) posed the following questions in a recent opinion piece for the *New Zealand Herald*:

- Why won't Pike River meet its \$3.41 million obligation, even though it has received \$90.7 million in insurance pay-outs?
- Why has each family received only \$18,700 from the company when families in the United States received US\$1.5 million (\$1.9 million) each in a similar situation?
- Why has the Bank of New Zealand received all of its money back – plus interest – yet there is nothing left for the bereaved families?
- What are the legal and/or moral obligations of New Zealand Oil & Gas (NZOG), Pike River's directors and the Government as far as the \$3.41 million court order is concerned?

These are pertinent questions and highlight the vulnerability of the PRCM workers and its sub-contracted workers. However, before we explore these questions further it is necessary to first provide a background of the disaster. The case study below is based on the evidence reported in the Royal Commission of Inquiry and the Government’s internal inquiry as well as conversations with the key informants and the families and friends affected by the PRCM disaster.

### ***Pike River Coal Mine beginnings & management challenges***

Located within New Zealand’s rugged West Coast Paparoa Range, Pike River Coal Mine is one of several underground mines in the region. The mine is located on Crown land adjacent to the Paparoa National Park and administered by the Department of Conservation. Because Pike River Coal was located on Crown land and next to a national park, the company was under strict conservation restrictions, which determined to a large extent how the mine was developed and constructed. Added to this was the fact that the terrain is exceptionally challenging, and the coal seam itself sits some 600 metres above sea level and within 100 metres of the surface. As with many of the West Coast mines, it was a particularly gassy mine in which methane was present in moderate to high levels. Information pertaining to the geology of PRCM and the extent and location of the coal



seam was based on an initial 14-borehole exploration, supplemented by a further similar number of drilled boreholes. It has been argued that the initial exploration provided insufficient geological information, which led to adverse unexpected ground conditions. These in turn meant that the construction of the drift took much longer than anticipated, as did mine roadway development (see Royal Commission of Inquiry, 2012). In spite of these challenges, PRCM was thought to be a viable prospect as it promised to produce sufficient premium hard-coking coal essential for manufacturing steel.

In 1988 Pike River Coal Mine Ltd was bought by New Zealand Oil and Gas from United Resources and was a subsidiary of New Zealand Oil and Gas until 2005. It should be noted that both companies were chaired by Tony Radford who has been described as a stubborn Australian ruling both companies with an iron fist (Gaynor, 2013). A feasibility study, funded by additional equity from outsider shareholders, was completed in the early 2000s. In September 2005, Saurashtra Fuels, a large Indian coal exporter, and Gujarat NRE Coke Ltd (GNCL), which is India's largest coke producer and is listed on the Indian share-market, put new equity into the company. Pike River listed in July 2007 after raising \$85 million from the public through the issue of shares at \$1 each. After the initial public offering (IPO), the shares were allocated as follows: New Zealand Oil and Gas: 31.1%; Saurashtra Fuels: 8.5%; Gujarat NRE Coke Ltd: 10%; Accident Compensation Corporation: 14%; existing minority shareholders: 7.9%.<sup>8</sup> Unlike the public IPO shareholders, the corporate and minority shareholders gave themselves 22.5 million free options (exercisable at \$1.30 a share).

The Pike River Coal company had seven directors: chairman John Dow, Professor Ray Meyer, Stuart NaGrass, Tony Radford, Gordon Ward, Dipak Agarwalla of Saurashtra, and Arun Jagatramka of Gujarat. Tony Radford and Ray Meyer were also on the New Zealand Oil and Gas Board. An accountant by profession, Gordon Ward had been employed by New Zealand Oil and Gas for 20 years. He was chief executive and managing director of Pike River Coal Mine from January 2007 until October 1, 2010 when he left unexpectedly – 49 days before the first mine explosion at Pike River. According to the prospectus, “Gordon has been responsible for all aspects of the Pike River Project [since 1998]”. He was replaced as chief executive and managing director by Peter Whittall, who had been general manager of mines since joining Pike River in February 2005. The Royal Commission of Inquiry's report into the disaster noted that the board did not verify that effective systems were in place and that risk management was effective. Nor did it properly hold management to account, but instead assumed that managers would draw the board's attention to any major operational problems. The Royal Commission of Inquiry (2012:8) report also noted that: “the board did not provide effective health and safety leadership and protect the workforce from harm. Instead it was distracted by the financial and production pressures that confronted the company.”

Throughout 2010 the management team faced planning changes and operational challenges, including improving coal production, establishing the hydro panel, commissioning the new main underground fan, upgrading the methane drainage system, and resolving problems with mining machinery. These coincided with the drive to achieve coal production. There were also constant management changes over the years. In the 26 months preceding the explosion, there were six mine managers. The last mine manager at

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<sup>8</sup> These figures must be treated with caution as there are a number of versions of the exact percentage held by each of the main shareholders. What is not in dispute is the Accident Compensation Corporation shareholding of 14%.

the time of the explosion was Doug White, former deputy chief inspector of mines in Australia, who was appointed as Statutory Mine Manager (or General Mine Manager) and Operations Manager in September 2010. A month later the formal reporting structures changed, and all managers were required to report to Doug White as site General Manager (except Angela Horne, Financial Controller, who reported to Peter Whittall). Technical service was provided by Peter van Rooyen who had been a technical service manager at Pike River Coal Mine since February 2009 but resigned on 3rd November 2010 a week before the explosion. Technical services were responsible for mine design including underground ventilation, surface, underground exploration, strata control, scheduling, surveying, and geotechnical functions but they were not responsible for gas monitoring.

### ***Creditors***

After the disaster and shutdown of the mine, the major secured creditor New Zealand Oil and Gas appointed Price Waterhouse Coopers (PWC) as Pike River's receiver on December 13, 2010. Under New Zealand receivership law, preferential and secured creditors have clear priority over unsecured creditors. At that time the company had \$11.3 million in cash, \$110.4 million of creditor claims, and no operating revenue. However, by December 2012 the company had generated cash of \$103.9 million. The Bank of New Zealand and Solid Energy, which were owed \$23.5 million and \$400,000 respectively, have been paid in full as secured creditors. NZOG has been repaid \$50 million but it was still owed \$36.7 million, including accrued interest. An agreement was reached to pay \$10.7 million to unsecured creditors even though they ranked behind secured creditors. A maximum of \$18,700 per employee was classified as preferential, and \$1.4 million is still owed to employees on an unsecured basis.

### ***Pike River Coal Mine Explosion***

Against a backdrop of significant delays and spiralling costs, the attention of the executive management and the board was on increasing the level hydro coal production with little or no assessment of the associated risks. It should be noted that it is known that the use hydro mining exacerbates the levels of methane gas. After hydro mining began, high readings – many dangerously high – were recorded most days. The company also made the decision to place the main ventilation fan underground, which was unprecedented in any gassy coal mines in the world. The Royal Commission of Inquiry (2012:9) report stated that: “putting the fan underground was a major error. The decision was neither adequately risk assessed nor did it receive adequate board consideration. A ventilation consultant and some Pike staff voiced opposition, but the decision still was not reviewed.” Not only was the main ventilation fan incorrectly positioned but at the time of the explosion there were too few gas sensors. Many of the sensors were not working or positioned incorrectly and others were not fit-for-purpose. Critical information regarding the use of hydro mining, the levels of methane gas, the lack of sensors, and poor ventilation were not properly assessed, and the response to warning signs of an explosion risk was either not noticed or not responded to.

It is a regulatory requirement that electrical equipment and cabling must be protected and incapable of sparking an explosion in restricted and dangerous areas of gassy mines. Investigations are continuing to establish whether an electrical cause could have initiated the explosion, and answers will depend on gaining entry into the mine. However, in the

Pike River mine, electrical equipment and cabling was unprotected, and the risk of unprotected equipment and cables was never assessed. A number of variable speed drives (VSDs) were located underground. VSDs were used to controlled power supply to the fan and water pumps. There were problems with the VSDs, one of which was replaced and a number of which were removed for repair. The extent of these problems underlined the need for a comprehensive risk assessment of the electrical installations underground at Pike River mine.

### ***Subcontractors***

As stated above, 13 of the dead were contracted workers. The table below outlines who died, their employer, what they were doing at the time of the first explosion, the amount the companies were owed by Pike River Coal Mine Ltd, and if applicable how much the companies were fined. At the time of the PRCM explosion, out of a workforce of 200, there were over 80 independent contractors employed at the mine. Pike River Coal's contracting bill is understood to be worth about \$80 million a year while its wage bill is understood to be about \$13 million a year. At the time of writing this paper, the 43 independent contractors are owed almost \$5 million by Pike River Coal Mine Ltd and a number of them have gone into receivership. The impact of PRCM disaster on local small independent contracting companies is illustrated by the closure of the company Morris Contractors. Morris Contractors started on the West Coast in 1984 and operated throughout the South Island. The company completed work for Pike River Coal Mine before the mine explosion of November 19<sup>th</sup>, 2010 and is still owed \$58,000 by Pike River Coal. However, as unsecured creditors, Morris Contractors Ltd is unlikely to receive any of the money owing. Five months after the explosion the company went into receivership. John Morris, the company's owner, stated that he was "...proud of a team that I once led, very proud".

As mentioned earlier, PRCM not only subcontracted manual labour (skilled and unskilled), the company also outsourced aspects of the mine design, financial and environmental risk assessment, OHS planning, as well as engineering (including mine and ventilation) design. PRCM also used a number of contractors to support mining operations underground. They were involved in a range of activities, including shot-firing, in-seam drilling, electrical and mechanical work, pipe-laying, and construction. Many of the contractors in the mine had not previously worked in an underground coal mine and were not miners by trade.

**Table 2: Pike River Coal Mine: Impact of the Disaster**

<b><i>Principal Employer</i></b>
<b>Pike River Coal Mine Ltd</b> <ul style="list-style-type: none"> <li>• <b>Principal Employer</b></li> <li>• <b>Number of workers killed:</b> 16 killed</li> <li>• <b>Fined:</b> \$(NZ)760,000. &amp; required to pay \$(NZ)3.41millions in reparations to the families.</li> </ul>
<b>Events Before to the Explosion:</b> <ul style="list-style-type: none"> <li>• Eight men from C crew, Glenn Cruse, Christopher Duggan, Daniel Herk, Richard Holling, Brendon Palmer, Stuart Mudge, William Joynson, and Peter Rodger, were manning the alpine bolter miner (ABM), and driving a development road in the north-west corner of the mine.</li> <li>• Conrad Adams, the acting C crew underviewer, was last seen near Spaghetti Junction, but</li> </ul>

<p>could well have headed to rejoin his men at the coal face.</p> <ul style="list-style-type: none"> <li>• Three men, Allan Dixon, Peter O'Neill, and Keith Valli, were manning the monitor in the hydro panel at the most northern location in the mine.</li> <li>• Because there were only two men, Blair Sims and David Hoggart, in the roadheader crew – too few to undertake roadway development – they were on maintenance duties near the roadheader.</li> <li>• The continuous miner located at the westernmost point in the mine required servicing; engineer Malcolm Campbell and fitter Koos Jonker were undertaking this work.</li> </ul>
<p><b>Contractors</b></p> <p><b>Valley Longwall International (VLI) Drilling Pty Ltd.</b></p> <ul style="list-style-type: none"> <li>• <b>Independent Contractor:</b> Installation &amp; maintenance of the Ventilation</li> <li>• <b>Number of workers killed:</b> 3 killed</li> <li>• <b>Fined:</b> \$(NZ)46,800</li> <li>• <b>Unsecured creditor: ?</b></li> </ul> <p><b>Events Before to the Explosion:</b> VLI Drilling Pty Ltd employees, Joshua Ufer and Benjamin Rockhouse, were working at the in-seam drilling rig close to the continuous miner. Joseph Dunbar, aged 17, was in the mine on an orientation visit. He was to start work the following Monday, but he went into the mine with two of the company managers and elected to remain with the drilling crew until the end of their shift.</p>
<p><b>Graeme Pizzato Contracting Ltd &amp; Boyd Kilkelly Builder Ltd.</b></p> <ul style="list-style-type: none"> <li>• <b>Independent Contractors:</b> Builders &amp; general labourers</li> <li>• <b>Number of workers killed:</b> 4 killed</li> <li>• <b>Unsecured creditor:</b> owed \$(NZ)14,377.49 by Pike River Coal Mine Ltd (Receivership).</li> </ul> <p><b>Events Before to the Explosion:</b> Riki Keane, an employee of <i>Graeme Pizzato Contracting Ltd</i>, was driving a loader used to remove spoil from the work site. His vehicle broke down near Spaghetti Junction sometime after 3:00pm and he was last seen there, trying to restart the vehicle. Daniel Rockhouse assisted him by obtaining hydraulic oil before he continued driving outbye into the drift. Three builders, Michael Monk, an employee of Graeme Pizzato Contracting Ltd, and Kane Nieper and Zen Drew, employees of <b>Boyd Kilkelly Builder Ltd</b>, were constructing a stopping in a cross-cut deep in the mine. Mr Drew, however, was last sighted in a nearby tool box area and could well have been walking back to the worksite at the time of the explosion.</p>
<p><b>Chris Yeats Builders (CYB) Construction Ltd.</b></p> <ul style="list-style-type: none"> <li>• <b>Independent Contractor:</b> driving men in and out of the mine &amp; general labourers</li> <li>• <b>Number of workers killed:</b> 3 killed</li> <li>• <b>Unsecured creditor:</b> Owed \$(NZ)17,065.26 by Pike River Coal Mine Ltd (Receivership).</li> </ul> <p><b>Events Before to the Explosion:</b> John Hale, an employee of CYB Construction Ltd, was a permanent 'taxi driver', ferrying men in and out of the mine on a driftrunner. He was last seen at Pit Bottom but was understood to be en route to Spaghetti Junction. Other CYB employees, Andrew Hurren and Francis Marden, were inbye of the junction, preparing a sump area for concrete to be laid.</p> <ul style="list-style-type: none"> <li>• Mr Yeats said work at the mine made up around 10 per cent of his firm's business. Chris Yeats Building built the mining complex's pumphouse and shower block, as well as undertaking work in the mine itself.</li> </ul>

<ul style="list-style-type: none"><li>• Mr Yeats said he was confident the company would not be hit too badly by the suspension of the contracts but believed smaller businesses could suffer more.</li></ul>
<p><b>Subtech Services Ltd.</b></p> <ul style="list-style-type: none"><li>• <b>Independent Contractor:</b> Plumbers - installing a water pipe</li><li>• <b>Number of workers killed:</b> 3</li><li>• <b>Unsecured creditor:</b> Owed \$(NZ)12,876.80 by Pike River Coal Mine Ltd (Receivership).</li></ul> <ul style="list-style-type: none"><li>• <b>Events Before to the Explosion:</b> Terry Kitchin, Milton Osborne, and Samuel Mackie, Subtech Services Ltd employees, were installing a water pipe in pit bottom south. Mr Kitchin, however, was last sighted in a roadway near Spaghetti Junction and could have been in transit at the time of the explosion.</li></ul>
<p><b>Near-Misses &amp; Survivors</b></p>
<p><b>Pike River Coal Mine Ltd.</b></p> <ul style="list-style-type: none"><li>• <b>Principal Employer.</b></li></ul> <ul style="list-style-type: none"><li>• <b>Events Before to the Explosion:</b> Daniel Rockhouse, who was one of two survivors and worked for Pike River Coal Mine, left the crew, driving a loader to uplift some gravel needed for the roadway. Pike technical staff had also been into the mine to undertake various tasks but had returned to the surface before 3:45pm.</li><li>• Fifty-year-old Greymouth Russell Smith was a coal cutter for Pike River Coal Mine and was making his way down the mine just as the explosion occurred. He was dragged out of the mine unconscious by Daniel Rockhouse.</li></ul>
<p><b>McConnell Dowell.</b></p> <ul style="list-style-type: none"><li>• <b>Independent Contractor:</b> Mining and excavation</li><li>• <b>Unsecured creditor:</b> Owed \$(NZ)1,288,257.38 by Pike River Coal Mine Ltd (Receivership).</li></ul> <ul style="list-style-type: none"><li>• <b>Events Before to the Explosion:</b> As on any work day, others entered and left the mine at various times. A McConnell Dowell day crew of four men worked in stone, developing a stub to house equipment. The day shift finished at 4:00pm and the crew left the portal in a drifrunner at 3:41pm. The night crew of five workers was on the surface preparing to go underground when the explosion occurred.</li></ul>
<p><b>Skevington Contracting.</b></p> <ul style="list-style-type: none"><li>• <b>Independent Contractor:</b> Underground mining ground support</li><li>• <b>Unsecured creditor:</b> Owed \$(NZ)188,026.95 by Pike River Coal Mine Ltd (Receivership).</li></ul> <ul style="list-style-type: none"><li>• <b>Events Before to the Explosion:</b> Four employees of Skevington Contracting were also to finish work at 4:00pm and left the mine on the same drifrunner.</li></ul>
<p><b>McNaughton Mining Services</b></p> <ul style="list-style-type: none"><li>• <b>Independent Contractor:</b> surveyors</li><li>• <b>Unsecured creditor:</b> Owed \$(NZ) 26,253.39 by Pike River Coal Mine Ltd (Receivership)</li></ul> <ul style="list-style-type: none"><li>• <b>Events Before to the Explosion:</b> Two surveyors, Callum McNaughton and Kevin Curtis, were walking out of the mine and flagged down the drifrunner. Callum McNaughton was the Pike River Coal chief surveyor but worked only part-time.</li></ul>

**Coastline Roofing Ltd.**

- **Independent Contractor:** Building Services
- **Unsecured creditor: Unable to determine how much they were owed**
- **Events Before to the Explosion:** Earlier still, about 2:00pm, Lyndsay Main, a Coastline Roofing Ltd builder, finished work early and walked out of the mine about 70 minutes before the explosion.

From 2009 a small a sub-contracted project team, comprising a manager Terence Moynihan and two assistants, Rem Markland and Matthew Coll, were responsible for the general management of most of the smaller contractors including labour hire contractors. From around July 2010 onwards Pike River Coal Ltd had begun to engage contractors on one-hour contracts, which meant that contractors were going in and out of the mine on an hourly basis. While the project team tried to manage the day-to-day work of the smaller contractors, their role in terms of training the contractors in OHS was controlled by PRCM and was limited to just the construction and installation activities. The Royal Commission of Inquiry report revealed that until 2010 Mr Moynihan and his project management team were unaware of PRCM's health and safety policies and procedures and had not completed any documentation as to who was going down the mine and what they were doing. By mid-2010, PRCM management agreed that it would gradually improve its safety management system for contractors rather than delay the project work. However, no improvements were made by 19<sup>th</sup> November, which meant many contractors had staff working underground at PRCM without their own health and safety system in place, and without the alternative protection of having their staff inducted into PRCM's health and safety system.

Because there was an absence of an effective safety management system for the contractors and their staff, there was also no auditing of contractor safety performance and no supervision of contractors underground. Although PRCM safety management system required regular audits of contractor safety performance, there is no evidence that PRCM managers audited either McConnell Dowell and VLI (two of the largest contractors) or any of the smaller contractors who lost men on 19<sup>th</sup> November 2010 (Royal Commission of Inquiry, 2012:67). As a result of this omission, PRCM was missing vital information on its contractors and the hazards that their staff and/or equipment might have introduced to the mine. Furthermore, there was no formal system requiring PRCM supervisors to regularly check the safety of contractors while working underground. In practice it was left up to the discretion of contractors to check their areas of responsibility within the mine. There was also no system to keep track of the locations of contractors once underground although the project team had a weekly plan that included information on where their contractors were likely to be working each day. Contractors were not restricted from moving around the mine and 'pretty much looked after themselves'. Visitors and contractors were required to sign in and out but often it did not happen, and neither that system nor the portal tag board helped the control room or the supervisors to keep track of contractors' whereabouts underground. It was not surprising therefore there was confusion about who were actually trapped in the mine days after the first explosion.

***Victim Impact Statements***

In July, 2013 Pike River Coal Mine Ltd (in receivership) was sentenced in the

Greymouth Court. However, before sentencing, Judge Farish allowed the victims of the Pike River disaster to read out victim-impact statements. Below is a sample of the 21 statements made that day in Court. The first statement read out was from the blast survivor Daniel Rockhouse who is 27 years old and a father of four.

“I should have died on that day and often wish that I had... This tragedy has left me feeling tremendous guilt for not being able to help others and questioning why I survived. My marriage had collapsed and my wife has returned to Germany with my children due to my anger and behaviour since this event... It started out as a happy day because I was going on a month's leave at the end of the shift... I met my brother, Ben, 21, underground in the mine and joked around as always oblivious to what was to take place. I lost my much-loved little brother, very close friends and workmates that day... While I did not hear the explosion and spent considerable time unconscious, the exhausting trudge out of the mine, supporting friend and fellow survivor Russell Smith, will haunt me forever.

I have had to shift to Australia to work in an underground coalmine to support my family. Not a day goes by without feeling fear and regret as I enter the mine. I now have little to show for my adult life and the road ahead looks very bleak. Since the blast, I have had to undergo considerable counselling, but have gained little benefit from it and am now unable to afford more. The [Pike River Coal Mine] blast's financial burden has been significant, such as relocation costs to Australia and having to start afresh in another country.”

The former safety and training manager for Pike River Coal Mine, Neville Rockhouse also read out a statement. His son, Ben, 21, was killed in the explosion and his second son, Daniel, survived but is still traumatised by the experience.

“It never goes away. It's with you every day. It's been an emotional two and a half years and I don't think any Kiwi has not been touched by this disaster in some way or form... Mistakes were made on that project and no-one can learn from those mistakes until you first acknowledge that you'd made some, and that's the first step in this thing never happening again in this country. I'm quite embarrassed having been a miner at Pike River.”

Bernie and Kath Monk lost their son Michael in the disaster. They have been at the forefront of the campaign to investigate what and why the disaster occurred, to reform New Zealand's OHS framework, and to retrieve the bodies from the mine. Kath Monk, stated that:

“The blast had been called an accident. However, the definition of an accident is an unforeseen event or one with no apparent cause, but in our eyes, this was not the case. We are disgusted that to this day no-one from Pike River Coal has apologised personally to our family for the loss of Michael. The lack of accountability of this disaster has been really hard to accept. It is really hurtful and insulting that no-one has accepted responsibility. It makes us feel that there is so little value placed on the lives of the 29 men. The blast had robbed our family of seeing Michael marry, have children and have a successful future. He was a handsome, self-assured young man with a smile that "could light up a room", hence his nickname of Sunshine. Michael's death has been a shattering experience and nothing can prepare you for this. It was a parent's instinctive duty to protect their children and we were not able to do this. Initially we clung to the hope that Michael had survived, was maybe injured, was he burnt, suffering, afraid, scared and calling out for our help. Was he alone, warm, did he have anything to drink? He would expect we would be doing our utmost to rescue him, but

we were not allowed any access to the mine area... We will continue to fight to have the men's remains brought out of the mine.”

Milton Osborne's widow, Anna Osborne, told of her raw devastation at being unable to bring her husband's body home and was unable to hold a memorial service for him as a result. She said she had struggled with depression, anxiety, and illness since becoming a widow “in the blink of an eye” at age 44 years of age. Negligence by “so many people” had caused her husband's early death. She added:

“This was no accident. It was totally avoidable and unnecessary... This disaster should have and could have been avoided. So many people at so many levels failed our guys and destroyed our worlds...I find myself trapped in this surreal world of depression and a downward spiral where there seems no escape. I miss my beloved husband so badly, putting on a false smile when I go out but crumbling behind closed doors.”

Peter O'Neil's widow, Tammie O'Neil, said her husband had 38 years of experience as a miner and would have been the most experienced man in the mine when it exploded. He was also an active member of Mines Rescue for 22 years and would have never put himself at risk. She stated that:

“The fact I have been unable to bury my husband has been difficult to bear... He has missed so many family milestones, including his youngest daughter's wedding last year. Since the Pike River tragedy, I have difficulty sleeping. I find myself continuously trying to relive Peter's last moments, wondering what he was thinking, did he suffer and what went so very wrong down the mine that day... There are days when I struggle to get out of bed in the mornings, go to work and try to be strong for my family.”

A number of victim statements were read out by their lawyers and a sample of the statements are presented below:

- Samuel Mackie's mother, Beth Mackie, said about her only child: “An act of violence has been committed against my son and I am very angry and bitter. I had believed my child being born in New Zealand was very fortunate. That a company in this country could play Russian roulette with his life and the lives of 28 other men is like something from a horror movie.”
- The parents of Malcolm Campbell, 25, of Scotland, said he had only gone to work in New Zealand while he waited for his Australian residency to come through. They noted that: “Unfortunately this did come through on the day of the first blast.” Malcolm's parents added that: “Not one day goes by without thinking of Malcolm. We wonder what kind of dad he would have been, how many children he would have had. Knowing he is on the other side of the world is just hellish.”
- John Hale's partner, Brenda Rackley, said he told her the mine was disorganised and chaotic. “When he mentioned the safety issues at Pike, I became concerned for his safety and asked him to leave the mine several times. He always replied ‘I'm not leaving. I'm staying till the end of the contract!’”
- William Joynson's widow, Kim Joynson, from Queensland, Australia, told the court she and their two sons had been in Christchurch for several major earthquakes while in New Zealand during the blast's aftermath. Her two sons also did individual victim impact statements, written by her, and detailing their health problems suffered as a result of their father's death. Benjamin, who was 11 years old when the blast occurred, started having intermittent epileptic episodes, which doctors blamed on stress from the Pike disaster. Their eldest son, Jonathon, who was then 13 years old and had mild



autism, was put on suicide watch after the blast as his school feared he would self-harm. On one occasion he ran into the middle of the road to put himself in the path of a car but fortunately there was little or no traffic at the time.

### ***Charges Laid***

Pike River Coal Ltd (In Receivership) was charged with four offences of failing to take all practicable steps to ensure the safety of its employees; four offences of failing to take all practicable steps to ensure the safety of its contractors, subcontractors, and their employees; and one offence of failing to take all practicable steps to ensure that no action or inaction of its employees harmed another person. These failures relate to methane explosion management, strata management, ventilation management, and mitigating the risk and impact of an explosion.

VLI Drilling Pty Ltd (Australia) was charged with one offence of failing to take all practicable steps to ensure the safety of its employees; one offence of failing to take all practicable steps to ensure the safety of contractors, subcontractors, and their employees; and one offence of failing to take all practicable steps to ensure that no action or inaction of its employees harmed another person. On 26 October 2012, the company was convicted on the charges and fined \$46,800.

Peter Whittall is charged, as an officer of Pike River Coal Limited, with four offences of acquiescing or participating in the failures of Pike River Coal Limited as an employer; four offences of acquiescing or participating in the failures of Pike River Coal Limited as a principal; and four offences of failing to take all practicable steps to ensure that no action or inaction of his as an employee harmed another person. These failures relate to methane explosion management, strata management, ventilation management, and mitigating the risk and impact of an explosion. Mr Whittall has pleaded not guilty to all charges.

### **Concluding Remarks**

While we acknowledge that there is still a great deal more research to be done, we have endeavoured nonetheless to show that the multiple levels of independent contractors used at the PRCM illustrates the complexity of relationships inherent in most contemporary worksites. In addition, we argue that there is *vulnerability in contracting* and the “independent contractor” has in fact become the latest “vulnerable worker”. What is often missing in the discussion on engaging independent contractors in times of disasters is how little protection there is for these groups of workers who operate in the market as opposed to employees operating within the firm. Legislators have placed restrictions on the firm in terms of how and under what conditions employees can be employed yet these same restrictions are not transferred to the marketplace and to independent contractors.

Finally and more importantly we argue that independent contractors as victims have been omitted from the disaster literature. We argue that the story of the independent contractors is not confined to just their role in disaster control and recovery but is much broader and deeper than that. More often than not they are part of the community and they (and/or their families) are directly affected by the disaster, as was the case in the Pike River Coal Mine.

## References

- Blyton, P. and Turnbull, P. (1998) *Employment Relations*. MacMillan Press, London.
- Bohle, P., Quinlan, M., Kennedy, P., Williamson, A. (2004). *Working hours, work life conflict and health in precarious and "permanent" employment*, Presented at the XV1 International Symposium on Night and Shift work, November 2003, Santos, SP, Brazil.
- Boocock, M., Hannif, Z., Jamieson, S., Lamare, R., Lamm, F., Martin, C., McDonell, N., Roberston, C., Schweder, P., Schulruff, B. (2011) *Occupational Health and Safety of Migrant Workers; An international concern*, in M. Sargeant & M. Giovannone (Eds) *Vulnerable Workers Health and Safety and Wellbeing*, Gower Publishing Ltd, Surrey, England.
- Burgess, J., Campbell, I., & May, R. (2008). Pathways from casual employment to economic security: the Australian experience. *Social Indicators Research*, 88(1), 161-178.
- Burrows, J., Finn, J. and Todd, S. (2007) *Law of Contract in New Zealand* (3rd Ed) Wellington LexisNexis NZ Ltd
- CARITAS, 2007. *Delivering the Goods: A Survey of Child Delivery Workers*. Thorndon: CARITAS.
- Connelly, C. E., & Gallagher, D. G. (2004). Emerging trends in contingent work research. *Journal of management*, 30(6), 959-983.
- Donahue, L.H., Lamare, J.R. and Kotler, F.B. (2007). *The Cost of Worker Misclassification in New York State*. Cornell University: ILR School.
- Dorman, P. (2000). *The economics of safety, health, and well-being at work: an overview*. Geneva: ILO.
- Gravel, S., Legendre, G., and Rheume, J. (2013). 'Occupational safety and health in small businesses in urban areas: the non-participation of immigrant workers', *Policy and Practice in Health and Safety*, 11(1), 19-29.
- Grey District (2013) *Community Economic Development: Strategy 2013 – 2023*, <http://www.greydc.govt.nz/about-district/projects/economic-development/>
- Hannif, Z. and Lamm, F. (2005). 'When Non-Standard Work Becomes Precarious: Insights from the New Zealand Call Centre Industry', *Management Review*, 16(3): 324-350.
- International Labour Organization (ILO). (2012). *From precarious work to decent work: outcome document to the workers' symposium on policies and regulations to combat precarious employment*. International Labour Office, Geneva. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---actrav/documents/meetingdocument/wcms\\_179787.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/meetingdocument/wcms_179787.pdf)
- Johnson, M. (2006) *Ceased Business Survey (#3343)*. Research New Zealand.
- Johnstone, R., Mayhew, C., & Quinlan, M. (2000). Outsourcing Risk-The Regulation of Occupational Health and Safety Where Subcontractors are Employed. *Comp. Lab. L. & Pol'y J.*, 22, 351.
- Kalleberg, A. L. (2009). Precarious work, insecure workers: Employment relations in transition. *American Sociological Review*, 74(1), 1-22.
- Lamm, F. (2002). OHS in Small Businesses. In Lloyd, M. (ed) *Occupational Health and Safety in New Zealand: Contemporary Social Research*. Wellington, Dunmore Press, pp93-118.
- Lamm, F. & Walters D. (2004). OHS in Small Organisations: Some Challenges and Ways Forward. In Buff, L.; Gunningham, N. & Johnston, R. (eds) *OHS Regulations for the 21<sup>ST</sup> Century*. Sydney, Federation Press, pp94-120.
- Lewchuk, W., Clarke, M., & de Wolff, A. (2008). Working without commitments: Precarious employment and health. *Work, Employment & Society*, 22(3), 387-406.
- Matthews, L. R., Quinlan, M., Rawlings-Way, O., & Bohle, P. (2011). The adequacy of institutional responses to death at work: Experiences of surviving families. *International Journal of Disability Management Research*, 6(1), 37-48.
- Matthews, L. R., Bohle, P., Quinlan, M., & Rawlings-Way, O. (2012). Traumatic death at work: Consequences for surviving families. *International journal of health services*, 42(4), 647-666.
- Mayhew, C. and Quinlan, M. (1997) *The Management of Occupational Health and Safety Where Sub-contractors are Employed*. *Journal of Occupational Health and Safety – Australia and New Zealand*, 13(2):161-169.
- McLaren, E., Firkin, P., Spoonley, P., de Bruin, A., Dupuis, A. and Inkson, K. (2004). *At the Margins: Contingency, Precariousness and Non-Standard Work*. Research Report 2004/01 – Labour

- Market Dynamics Research Programme, Albany and Palmerston North: Massey University.
- New Zealand Council of Trade Unions (NZCTU), (2013) *Under Pressure: A Detailed Report into Insecure Work in New Zealand*, <http://union.org.nz/underpressure>
- Nossar, I., Johnstone, R., & Quinlan, M. (2004). Regulating supply-chains to address the occupational health and safety problems associated with precarious employment: the case of home-based clothing workers in Australia. National Research Centre for OHS Regulation, Working Paper, 21.
- Probst, T. M., & Ekore, J. O. (2010). An exploratory study of the costs of job insecurity in Nigeria. *International Studies of Management and Organization*, 40(1), 92-104.
- Quarantelli, E. L. (1988). Disaster crisis management: A summary of research findings. *Journal of management studies*, 25(4), 373-385.
- Quarantelli, E. L. (1999). The disaster recovery process: What we know and do not know from research.
- Quinlan, M. and Mayhew, C. (2001). *Evidence versus ideology: lifting the blindfold on OHS in precarious employment*, Industrial Relations Working Paper Series 138, <[www.docs.fce.unsw.edu.au/orgmanagement/WorkingPapers/WP138.pdf](http://www.docs.fce.unsw.edu.au/orgmanagement/WorkingPapers/WP138.pdf)>
- Quinlan, M., Mayhew, C. and Bohle, P. 2001. The Global Expansion of Precarious Employment, Work Disorganization, and consequences for Occupational Health: A Review of Recent Research. *International Journal of Health Services*, 31(2), 335-414.
- Quinlan, Michael and Philip Bohle (2004). Contingent Work and Occupational Safety. The Psychology of Workplace Safety. J. Barling and M. R. Frone, eds. *American Psychological Association*, 81-106, Washington, DC.
- Quinlan, Michael and Philip Bohle. (2009). 'Over-Stretched and Unreciprocated Commitment: Reviewing Research on the OHS Effects of Downsizing and Job Insecurity', *International Journal of Health Services*, 39 (1), 1-44.
- Quinlan, M., Bohle, P. & Lamm, F. (2010). *Managing Occupational Health and Safety: A Multidisciplinary Approach*. Sydney: Macmillan.
- Quinlan, M. (2012). The 'Pre-Invention' of Precarious Employment: The Changing World of Work in Context. *The Economic and Labour Relations Review*, 23(4), 3-24.
- Reisel, W. D., Probst, T. M., Chia, S. L., Maloles, C. M., & König, C. J. (2010). The effects of job insecurity on job satisfaction, organizational citizenship behavior, deviant behavior, and negative emotions of employees. *International Studies of Management and Organization*, 40(1), 74-91.
- Royal Commission of Inquiry (2012) *Royal Commission on the Pike River Coal Mine Tragedy*, Volume 1 and 2. [pikeriver.royalcommission.govt.nz](http://pikeriver.royalcommission.govt.nz)
- Sargeant, M. and Tucker, E. (2009). 'Layers of vulnerability in OHS for migrant workers: case studies from Canada and the UK', *Policy and Practice in Health and Safety*, 7(2), 51-73.
- Seixas, N. S., Crollard, A., Neitzel, R., Stover, B., and Dominguez, C. (2013). 'Intervening at the bottom: can a health and safety committee intervention influence management commitment?' *Policy and Practice in Health and Safety*, 11(1), 61-78.
- Standing, G. (2011). *The precariat: The new dangerous class*. A&C Black.
- Statistics New Zealand (2013) Statistical standard for labour force status, <http://www.stats.govt.nz/~media/Statistics/surveys-and-methods/methods/class-stnd/labour-force-status/LABFSTAT99-statistical-standard.pdf>
- Tucker, D. (2002). *Precarious' Non-Standard Employment – A Review of the Literature*, Wellington, Department of Labour.
- Vosko, L. F. (2008). Temporary work in transnational labor regulation: SER-centrism and the risk of exacerbating gendered precariousness. *Social Indicators Research*, 88(1), 131-145.
- Vosko, L., MacDonald, M. and Campbell, I. (Eds.) (2009). *Gender and the Contours of Precarious Employment*. London: Routledge.
- Wood, A. (2012) Disaster ripples across region's economy, Fairfax <http://www.stuff.co.nz/national/pike-river-mine-disaster/4378482/Disaster-ripples-across-regions-economy>
- World Health Organisation (2007) Employment Conditions Knowledge Network (EMCONET) report *Employment Conditions and Health Inequalities*, [http://www.who.int/social\\_determinants/publications/employmentconditions/en/](http://www.who.int/social_determinants/publications/employmentconditions/en/)