

## CV for Christopher Peace

Chris is Lecturer in Occupational Health and Safety at Victoria University of Wellington but had previously set up Risk Management Ltd in 2003 to help clients establish effective risk management frameworks, including systems for business continuity and compliance, and carry out major risk assessments as part of decision-making. Between 2005-2012 Chris was part-time Lecturer in Risk Management Studies at Massey University and re-wrote the course handbooks to align them with ISO31000:2009 *Risk Management – Principles and guidelines* and ISO31010: 2009 *Risk Management – Risk Assessment Techniques*.

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### **Career**

Chris was born and educated in the UK. He graduated from the University of Aston in 1974 and started his working life enforcing health and safety legislation in the UK before emigrating to New Zealand in 1980, moving to work in the insurance industry as a loss control engineer and subsequently as a risk consultant.

In 1990 he returned to the UK for five years where he worked for Jardine Lloyd Thompson as a risk management consultant helping major UK employers manage their risks more effectively. During that time he worked with major manufacturing and retail companies and public and private hospitals. His work took him to the USA, the Caribbean, Holland, Spain, Eire and Italy and included working with captive insurance companies and acting as an expert witness.

During the period 1974-1980 Chris gave evidence in numerous health and safety prosecutions and between 1990-1994 he was called by the defence as an expert witness in three cases. In 2019-2021 he has provided reports as an expert witness called by the prosecution in four Health and Safety at Work Act cases (two are awaiting trial and two have entered guilty pleas).

Chris returned to New Zealand in 1995 and set up the Risk Management Unit of Jardine Lloyd Thompson, then a specialist in local body risk and insurance management. There he worked with local authorities, tertiary education bodies and private sector companies on liability risk management, legal compliance and asset management. Projects included auditing risk management and development of risk management frameworks. In 2000 Chris joined Natural Gas Corporation (NGC) as their Risk Manager, establishing the risk management framework and managing the internal audit and insurance functions of the company. Since leaving NGC and setting up RML Chris has worked for a wide range of organisations on diverse aspects of risk and the management of risk.

In April 2020 he was appointed Lecturer in Occupational Health and Safety in the Faculty of Health at Victoria University, and teaches two papers at Master's level (HLWB507 *Principles of Health and Safety Management* and HLWB509 *Identification, Assessment and Control of Hazards and Risks*) and is paper coordinator for HLWB513 *Research topic*. In 2021 Chris is providing monthly professional development webinars for the New Zealand Institute for Safety Management (NZISM)

### **Risk management standards**

Chris represents NZISM on the joint standards committee that wrote AS/NZS 4360: 2004 *Risk Management* (now replaced by ISO 31000: 2018 *Risk Management*). He is also a member of the joint standards committee on dependability and has contributed to some recent IEC standards. He conceived and substantially wrote two Standards New Zealand specialist handbooks on risk management (SNZ HB 4360: 2000 *Risk Management for Local Government* and SNZ HB 4525: 2006 *Fire Risk Management Handbook*) and contributed to the development of the joint handbooks SA/NZS HB 205:2017 *Managing health-and-safety-related risk*. In 2019 he represented NZISM on the committee that recommended adoption of ISO45001 as a joint Australia/New Zealand standard.

### **Qualifications and memberships**

PhD (School of Management, Victoria University in Wellington, 2019)

MSc Risk Management and Safety Technology (Aston University, 1996)

BSc (Hons) Environmental Health (Aston University, 1974)

Diploma in Occupational Health and Safety (Coventry Technical College, 1977)

Diploma in Air Pollution Control (taught at Aston University, awarded by Royal Society of Health, 1975)

Admitted to the HASANZ register of health and safety professionals (<https://www.hasanz.org.nz/>, 2018)

Certified Fellow of the New Zealand Institute of Safety Management (<https://www.nzism.org/>, 2015)

Chartered Fellow of the UK Institution of Occupational Health and Safety (<https://www.iosh.com/>, 2009)

Fellowship examinations for UK Institute of Risk Management (1993)

American Foreign Insurance Association Fire Engineer (in-house course, 1982-1984)

### **Research in hand**

Development of theoretical and practical applications of the Goal Tree (part of the Theory of Constraints) to management problems.

Barriers to and opportunities from the development of occupational health and safety management systems in small and medium enterprises: a longitudinal, cross-sector study.

Development of a risk techniques identification key as an aid to quality assurance in risk assessments.

Fault tree analysis of major fires: potential application to risk management reports and education (joint project with Peter Hughes).

Development of a public safety management system based on ISO45001 for the Electrical Engineers Association (funded project).

### **Journal articles**

Peace, C., Dearsly, G., Parkes, H., & Lamm, F. (2019). The evolution of the OHS profession in New Zealand. *Safety Science*, 120, 254-262.

Peace, C., Mabin, V., & Cordery, C. (2017). Due diligence: a panacea for health and safety risk governance? *Policy and Practice in Health and Safety*, 15(1), 19-37.

Peace, C. (2017). The risk matrix: uncertain results? *Policy and Practice in Health and Safety*, 15(2), 131-144.

Peace, C. (2017). The reasonably practicable test and work health and safety-related risk assessments *New Zealand Journal of Employment Relations*, 42(2), 61-78.

Muir, D., Lovell, M., & Peace, C. (1981). Health hazards in natural history museum work. *Museums Journal*, 80(4), 205-206.

### **Book chapters**

Peace, C. (2012). Risk Management. In M. Marvel (Ed.), *Encyclopedia of New Venture Management*. Thousand Oaks, Ca: Sage Publications Ltd.

Peace, C. (2008). Fire Risk. In M. Spearpoint (Ed.), *Fire Engineering Design Guide* (pp. 21-30). Christchurch, NZ: Centre for Advanced Engineering.

Peace, C. (1998). Risk management case studies – occupational safety and health. In D. Elms (Ed.), *Owning the Future: Integrated Risk Management In Practice* (pp. 199-204). Christchurch, NZ: Centre for Advanced Engineering.

### **Academic research reports**

Peace, C. (2019). *The effectiveness of risk assessments in informing decision makers*. (PhD Thesis), Victoria University of Wellington.

Lindsay, J., & Peace, C. (2005). *Health and Safety Issues in a Volcanic Ash Environment* [Project Report AELG 7] <http://www.aelg.org.nz/>

Peace, C. (1996). *Free from patent defect or patently defective?* MSc thesis, University of Aston in Birmingham, Birmingham, UK.

Peace, C. (1977). *The Health and Safety at Work Act 1974 - Its implications for the Environmental Health Department of Rugby Borough Council as a place of work*. (Diploma in Occupational Health and Safety project), Coventry Technical College, Coventry.

Peace, C. (1974). *Noise in the environment*. (BSc (Hons) Project Report), Aston University, Birmingham.

Peace, C. (1993). Feasibility study for a captive insurance company for the Angmar Group plc [Fellowship, Institute of Risk Management]. London.

### **Academic conference papers**

Peace, C., & Mabin, V. (2020). *The Goal: Effective risk assessments 2020* TOCICO Virtual Conference

Peace, C., & Mabin, V. (2019). *Risk techniques identification key*. Paper presented at the Risk and Decision Making, 13-14 November 2019 Wellington organised by Society for Risk Analysis.

Peace, C. (2017). *Are you sure? Lexicological difficulties arising from risk terminology*. Paper presented at the Risk in an Interconnected World conference, 20-23 November 2017 Melbourne organised by Society for Risk Analysis.

Peace, C., Mabin, V. J., & Cordery, C. (2016). *The reasonably practicable test and OHS risk assessments*. Paper presented at the Conference on Labour, Employment and Work: The Changing Nature of Work and Employment, organised by Victoria University of Wellington.

Peace, Christopher. (2014). Did Goldilocks use professional judgement before entering the woods? The place of professional judgement, expertise and intuition in risk assessments. Wellington, NZ organised by Operational Research and Statistics NZ Society.

Peace, Christopher. (2014). *How does Goldilocks find out about the bears? Currently-used risk processes and techniques*. Paper presented at the conference Risk Beyond the Numbers, Palmerston North, NZ organised by Society for Risk Analysis.

## Clients 2003-2020

Names given were those at the time of the work. The following are New Zealand entities unless stated otherwise.

### In the State Sector:

- Accident Compensation Corporation
- Airways NZ Ltd
- Animal Health Board
- Capital and Coast DHB
- Civil Aviation Authority
- Correspondence School
- Crown Forestry Rental Trust
- Crown Law
- Department of Conservation
- Department of Corrections
- Department of Labour
- Earthquake Commission
- Electricity Authority
- Environmental Protection Authority
- Hawke's Bay District Health Board
- Independent Commission against Corruption (NSW)
- Industrial Research Ltd
- Inland Revenue Department
- Land Information NZ
- Mid-Central District Health Board
- Mighty River Power Ltd
- Ministry of Civil Defence and Emergency Management
- Ministry of Justice
- Ministry of Social Development
- NZ Army
- NZ Fire Service Commission
- NZ Immigration Service
- NZ Search and Rescue
- Office of the Auditor-General
- Office of the Clerk of the House of Representatives
- Reserve Bank of New Zealand
- Rural and Regional Affairs and Transport Committee of the Australian Senate
- Solid Energy Ltd
- South Island District Health Boards
- Transit NZ
- TVNZ
- WorkSafe NZ

### In the local body sector:

- Auckland City Council
- Capacity Infrastructure Ltd
- Christchurch City Council
- Environment Canterbury
- Greater Wellington Regional Council
- Hauraki District Council
- Horizons Regional Council
- Manila Water Company Inc
- Matamata Piako District Council
- Metrowater Ltd
- Port of Taranaki Ltd
- Rotorua District Council
- Wanganui Gas Ltd
- Wellington City Council.

### In the private sector (general):

- Barker Fruit Processors Ltd
- Centre for Advanced Engineering NZ
- Dominion Salt Ltd
- Ebert Construction Ltd
- Fletcher Building Ltd
- Geni Ltd
- Healthcare NZ Ltd
- International Panel & Lumber (West Coast)
- Landco Ltd
- MinterEllisonRuddWattsStone
- Motor Trade Association
- NZ Rugby Union
- Pan Pac Ltd
- Pacific T&R
- Resene Paints Ltd
- Ruapehu Alpine Lift Ltd
- Woolyarns Ltd
- Yealands Wine Group Ltd

### In the private sector (energy):

- Contact Energy Ltd
- Electricity Networks Association
- Energy Development Corporation (Philippines)
- First Gen Corporation (Philippines)
- Gas Industry Company Ltd
- Liquigas Ltd
- Maui Development Ltd
- NGC Holdings Ltd (now part of Vector Ltd)
- Powerco Ltd
- Top Energy Ltd
- Vector Ltd.

### In education and training:

- Conferenz Ltd/BrightStar Ltd
- Liquid Learning Pty
- Massey University
- Methodware Ltd
- NZ School of Business and Government Ltd (previously Change Training Ltd)
- Uni-Strategic Pte (Singapore).

### In finance and insurance:

- Aon NZ Ltd
- FMG Insurance Ltd
- Jardine Lloyd Thompson (Australia) Ltd
- Jardine Lloyd Thompson (New Zealand) Ltd
- Vero Specialist Risks Ltd
- Trustees and Executors Ltd.

### Professional and trade bodies:

- Institute of Directors
- Institute of Internal Auditors
- New Zealand Institute of Management
- New Zealand Institute of Safety Management
- SiteSafe.

## Assignments to 2021

<b>Selected assignments (in New Zealand unless otherwise stated), includes some significant projects since 1990</b>	<b>Year</b>
Pedestrian safety in a retirement village	2021
Risk finance and a product liability claim	WIP
Analysis of prosecution evidence under the Health and Safety at Work Act and development of a statement of evidence (case four)	WIP
Analysis of prosecution evidence under the Health and Safety at Work Act and development of a statement of evidence (case two)	WIP
Analysis of prosecution evidence under the Health and Safety at Work Act and development of a statement of evidence (case one, guilty plea)	2020
Factors affecting the death of a senior manager in a service company	2019
Analysis of prosecution evidence under the Health and Safety at Work Act and development of a statement of evidence (case three, guilty plea)	2019
Risk assessment training course for 15 risk and safety practitioners in an emergency services organisation	2019
Risk assessment preceding post-earthquake repairs to a network of heritage assets	2019
Business continuity plan for a manufacturing business	2019
Implementation of ISO45001 Occupational health and safety management systems: masterclasses in 16 centres for members of NZISM	2018
Training South Island District Health Board risk champions in the conduct of effective risk assessments	2018
Training a group of managers in an electricity lines company in the conduct of risk assessments	2017
Review of the stop card and risk matrix for a unique chemical company	2017
Preparation of an expert witness report for the respondent in a High Court case (joint with Peter Hughes)	2017
Facilitated workshop and follow-up work on recovery from disruption-related risk for a sector organisation	2016
Development of a risk management framework in a major winery	2016
Development of a risk management framework for a unique company in the food sector	2016
Assessment of fire-related risks in a gas compressor station (joint with Peter Hughes)	2016
Facilitation of a workshop for an International Electrotechnical Commission (IEC) committee and subsequent report	2016
Development of a risk reporting framework for a company developing a disruptive technology in the food industry	2016
Review of corporate governance and risk management in an energy company	2016
Review of the 5x5 consequence/likelihood matrix for an energy sector company	2015
Review of risk management maturity in a District Health Board	2015
Risk assessment and risk finance options for a company with major exposures to natural hazards	2015
Risk assessment of a novel production process in a primary industry	2015
Investigation into causes of a project failure and advice on improvements to project risk management	2014
Review of risk management in a major water services company	2013
Review of risk management in a sector-governance organisation	2013
Development and delivery of risk management training courses for the NZ Institute of Directors	2013
Review of the risk evaluation matrix used in a significant Australian regulatory agency	2013
Delivery of two 2-day training courses for the New Zealand Institute of Safety Management (continuing through 2016)	2013
Gap analysis for new and existing legislation in a regulatory agency	2013
Review of risks and the risk management framework in a national emergency management organisation	2013
Review of the risk evaluation matrix used in a significant Australian agency	2013
Review of the risk management framework in a territorial local authority	2012
Risk assessment workshop for a border security agency	2012
Delivery of a half-day training course for the New Zealand Society for Risk Management	2012
Facilitated workshops on application of fault tree analysis and MORT to plant and equipment failures	2012
Governance and risk: direction and management workshops in a DHB	2012
Assessment of business continuity risk treatment options for a key financial services organisation	2012
Review of business continuity management arrangements & exercising for an industry sector governance organisation	2012
Review of business continuity management arrangements for a major state sector organisation	2012
Assessment of insurable risks in an LPG distribution company	2012
Pre-audit of public safety management system for an LPG supply company	2012
Pre-audit of public safety management system for an electricity generator	2011
Development and delivery of two risk management training courses for a water supply company in the Philippines	2011
Assessment of risks associated with the transport by rail of a hazardous substance	2011
Development of an on-line survey tool for a business impact analysis	2011
Development and delivery of two-day training courses for an Australian training organisation (recurring work)	2011
Review and revision of the risk management framework for the operational arm of a state sector organisation	2011
Development of a crisis management plan for a major state sector organisation	2011

Review and revision of the risk management framework for a state sector organisation	2011
Development of a crisis management plan for a major state sector organisation	2011
Facilitated risk workshop for the senior management team of a key insurance company	2010
Assessment of insurable risks in three high-profile buildings with special reference to earthquake	2010
Review of risk management software options for an aviation-sector client	2010
Preparation of an expert witness affidavit for a case under the Fisheries Act	2010
Underwriter information reports on three major buildings in Wellington and Christchurch	2010
Development of a business continuity plan for an energy company	2010
Risk appetite and insurance in a timber company	2010
Assessment of public safety risks due to electricity networks	2010
Assessment of insurable risks in an LPG distribution company	2010
Review of the risk management process in a safety-critical aviation organisation	2010
Assessment of environmental risks from proposed 14 tonne LPG tank installation	2010
Development and delivery of two 2-day training courses for energy companies in the Philippines	2010
Development and delivery of a two-day risk management training course in Kuala Lumpur	2009
Investigation of a fatality during a major construction project: options for future safety management and expert witness statement	2009
Development and delivery of a two-day risk management training course for the Institute of Internal Auditors	2009
Advice on the development of a corporate risk management framework for a key financial organisation	2008
Assessment of legal liability risk for a state sector pest control and animal health organisation	2008
Assessment of insurable risks in a telecommunications company for its insurer	2008
Risk management review for the LPG division of a major energy company	2008
Presentations on compliance and risk management to staff of a telecommunications service company	2008
Assessment of insurable risks in a distribution warehouse for its insurer	2008
Assessment of insurable risks in a manufacturer for its insurer	2008
Peer review of documents for a proposed risk management project	2008
Preparation of enforcement policies and procedures for a key government agency (included a major literature review)	2008
Revision of a key safety case guidance document for a government agency	2008
Submission to the Reserve Bank on "Captive insurance Companies in New Zealand"	2008
Delivery of training on auditing the risk management framework for Institute of Internal Auditors	2008
Delivery of risk management training for a large employer	2008
Development of a risk management framework for a key audit organisation	2007
Development of a risk management framework for a major state sector organisation	2007
Assessment of insurable risks in a multi-site feedstuffs manufacturer for its insurer	2007
Assessment of insurable risks in a unique aviation industry organisation for its insurer	2007
Facilitated risk management workshop in a manufacturing organisation	2007
Development of a risk management framework for an energy company	2007
Presentation of paper "Captive insurance in action: Case studies" at NZ Captive Insurance Conference	2007
Assessment of insurable risks in a major manufacturer for its insurer	2007
Risk and business impact analysis leading to business continuity management framework for an energy retailer	2006
Underwriter information reports on carpet manufacturing sites	2006
Risk assessment for a government agency following a high-profile fatality	2006
Training for major private sector and government organisations in corporate governance and strategic risk management and the use of risk management software to facilitate their risk management frameworks	2006
Insurance options for a national energy company (included exploration of a captive option, joint with Terry Smith)	2006
Assessment of insurable risks to gas distribution networks of an energy retailer	2006
Risk management training and review of risks for a significant government agency and development of a business continuity plan	2006
Development and delivery of a two-day, applied risk management course for Massey University	2006
Assessment of a specific risk to a major gas transmission pipeline	2006
Review of insurance for a government agency	2006
Review of risks to a major water supply utility, adequacy of their current insurance cover and an RFP for insurance broking services	2006
Preparation of a Fire Risk Management Handbook under contract to the New Zealand Fire Service Commission, published by Standards New Zealand as HB 4525	2005
Preparation of civil defence plans for an energy company	2005
Preparation of a brief risk review leading to the development of a business continuity framework for a food manufacturer	2005
Health and Safety Issues in a Volcanic Ash Environment	2005

Review of major risks and the risk management framework in a large government agency	2005
Assessment of insurable risks for a large energy company and preparation of insurance underwriter information reports	2005
Business continuity review for a large retail organisation (joint project with Business Continuance Planning Ltd)	2005
Review of insurances for a major New Zealand manufacturer	2005
Preparation of a risk and assurance statement (analogous to a "safety case") for a major energy company	2004
Preparation of underwriter information reports for insurance placements of an energy company (included legal liability exposures)	2004
Risk assessment of operational implementation of the Mount Ruapehu active volcano lahar emergency response plans	2004
Preparation of a review of the reinstatement options for flood-damaged gas transmission pipelines and consequent insurance claims	2004
Preparation of underwriter information reports for insurance placements of a social services organisation	2003
Investigation into the rupture of a gas transmission pipeline and preparation of expert witness statement for subsequent legal action	2001
Investigation into fatality on a construction site at Wellington International Airport and preparation of expert witness statement for subsequent legal action	1999
Training courses for NZ local bodies on liability prevention on behalf of RiskPool, mutual liability fund	1996-99
Thesis for Fellowship of UK Institute of Risk Management "Feasibility study for a captive insurance company for the Angmar Group plc"	1993
Investigation into the use of hand-held knives by 30,000 employees of Kwiksave & presentation of evidence as an expert-witness	1992
Preparation of underwriter information reports for insurance placements in the captive of an opencast and construction products business	1994
Preparation of reports on annual insurable risk surveys of six Kwiksave distribution centres (1992, 1993, 1994 and 1995)	1992-95
Assessment of insurable risks in the Kwiksave distribution centres as part of captive insurance feasibility study	1991
Investigation into the causes and consequences of the total loss by fire in the Kwiksave distribution centre in Newport, South Wales	1991
Investigation into gradual pollution at three historic sites for potential inclusion in a captive insurance programme	1990

### **Employers (in reverse order)**

2020- now	Victoria University of Wellington
2003-2020	Risk Management Ltd
2000-2003	Natural Gas Corporation Ltd
1995-2000	Jardine Lloyd Thompson (NZ) Ltd
1990-1995	Jardine Lloyd Thompson (GB) Ltd (now part of Marsh Ltd)
1985-1990	Marsh (NZ) Ltd (previously Bowring, Burgess, Marsh & McLennan)
1982-1985	Monarch Insurance Ltd (the trading name in New Zealand for American Foreign Insurance Association)
1981-1982	Prudential Assurance Company Ltd
1980-1982	Wellington City Council
1974-1980	Work as an Environmental Health Officer in Rugby and Bristol

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