

Forward and Acknowledgement

Core Body of Knowledge for the Generalist OHS Professional

Third Edition, 2024

1.1



AIHS



Australian OHS Education Accreditation Board

Copyright notice and licence terms

Copyright (2024) Australian Institute of Health & Safety (AIHS), Tullamarine, Victoria, Australia

This work is copyrighted and has been published by the Australian Institute of Health & Safety (AIHS). Except as may be expressly provided by law and subject to the conditions prescribed in the Copyright Act 1968 (Commonwealth of Australia) or as expressly permitted below, no part of the work may in any form or by any means (electronic, mechanical, micro copying, digital scanning, photocopying, recording or otherwise) be reproduced, stored in a retrieval system or transmitted without prior written permission of the AIHS.

You are free to reproduce the material for reasonable personal or in-house, non-commercial use for the purposes of workplace health and safety as long as you attribute the work using the citation guidelines below and do not charge fees directly or indirectly for the use of the material. You must not change any part of the work or remove any part of this copyright notice, licence terms and disclaimer below.

A further licence will be required and may be granted by the AIHS for the use of the materials if you wish to:

- reproduce multiple copies of the work or any part of it
- charge others directly or indirectly for access to the materials
- include all or part of the materials in advertising of a product or services or in a product for sale
- modify the materials in any form or
- publish the materials.

Enquiries regarding the licence or further use of the works are welcome and should be addressed to:

The Manager, OHS Body of Knowledge
Australian Institute of Health & Safety,
PO Box 1376, Kensington, Victoria, Australia, 3031
manager@ohsbok.org.au

Disclaimer

This material is supplied on the terms and understanding that the Australian Institute of Health and Safety (AIHS) and its respective employees, officers and agents, the editor, or chapter authors and peer reviewers shall not be responsible or liable for any loss, damage, personal injury or death suffered by any person, howsoever caused and whether or not due to negligence, arising from the use of or reliance on any information, data or advice provided or referred to in this publication. Before relying on the material, users should carefully make their own assessment as to its accuracy, currency, completeness, and relevance for their purposes and should obtain any appropriate professional advice relevant to their circumstances.



The Australian Institute of Health & Safety (AIHS) financially and materially supports the *OHS Body of Knowledge* as a key requirement of the profession.

The *OHS Body of Knowledge* forms the basis of the AIHS OHS capability agenda and informs the other platforms of the agenda: education assurance through accreditation; role clarity, capability assurance through individual certification and continuing professional development.

Thus, the *OHS Body of Knowledge* is strategically important to the AIHS and vital for the profession. (www.aihs.org.au)



The *OHS Body of Knowledge* provides a framework for OHS professional education and continuing professional development. As the body managing accreditation of OHS professional education, the Australian OHS Education Accreditation Board influences, supports and monitors the *OHS Body of Knowledge*, and has a major role in the development and review of individual chapters to ensure that the quality and evidence base reflects current OHS research and leading-edge thinking, and so provides a suitable standard for OHS education and professional development.

www.ohseducationaccreditation.org.au

The first edition (2012) of the OHS Body of Knowledge was an outcome of the OHS Body of Knowledge project funded by a grant from WorkSafe Victoria and overseen by the Health and Safety Professionals Alliance (HASPA). The Technical Panel responsible for developing the conceptual framework for the OHS Body of Knowledge and for selecting the contributing authors and peer-reviewers comprised representatives from the Safety Institute of Australia, Latrobe University, RMIT University and the then University of Ballarat.

Safe Work Australia subsequently funded the development of four more chapters.

The ongoing development of new chapters and the updating of existing chapters is funded by the Australian Institute of Health & Safety, drawing on a range of income sources.

Dedication

This OHS Body of Knowledge is dedicated to all those who die, are injured, or whose health suffers as a result of their work activities and to their families and others affected by these deaths, injuries and illnesses*. It is also dedicated to those OHS professionals, OHS practitioners and others whose work and life passion is the improvement of safety and health conditions in the workplace and who believe that work should be a positive life influence rather than a source of harm.

*The Australian Bureau of Statistics estimated that 497,300 people experienced a work-related injury or illness in 2021-22¹, while for the same year, Safe Work Australia recorded 127,300 compensation claims for serious work-related injuries or illnesses² and 195 deaths resulting from work-related traumatic injury. While estimates of the injury cost depend on the statistical modelling, Safe Work Australia has estimated the total economic cost of work-related injury o the Australian economy for the 2012–13 financial year at \$61.8 billion, representing 4.1 per cent of GDP for the same period.³

¹ Australian Bureau of Statistics. (2021-22). *Work-related injuries*. ABS. <https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/work-related-injuries/2021-22>. Retrieved from <http://www.abs.gov.au>

² Safe Work Australia. (2023). *Key Work Health and Safety Statistics Australia, 2023*. (p.10. Retrieved from <http://www.swa.gov.au>.

³ Safe Work Australia. (2015). *The Cost of Work-related Injury and Illness for Australian Employers, Workers and the Community, 2012-13*. (p.3). Retrieved from <http://www.swa.gov.au>



Edition 1

2012 with further chapters in 2014 and 2015

STATEMENT FROM WORKSAFE VICTORIA

WorkSafe Victoria is dedicated to improving the health and safety of workers. As part of this commitment we strive to ensure workplaces have access to the most up to date strategic, evidence based occupational health and safety advice through suitably qualified OHS professionals.

The Safety Institute of Australia (SIA), in collaboration with industry and health and safety professional bodies, is now able to present this body of knowledge, providing consistent standards to guide OHS educators and professionals.

This work leads the way to consistent education for OHS professionals through accreditation of tertiary courses and is a credit to the extensive knowledge contributed by OHS educators and experts from around Australia. The accreditation process will play a significant role in both raising the standard of professional OHS advice and giving employers great confidence when engaging OHS expertise.

I would particularly like to thank the team from the SIA for their dedication and hard work, the Technical Panel for contributing their knowledge and coveted time to this important project, and the Health and Safety Professionals Alliance (HaSPA) that steered the project. Most importantly I acknowledge the significant contributions of the chapter authors. Without their work the Body of Knowledge could not have been written.

SIA and all parties involved can all be extremely proud of this piece of work and the collaborative spirit in which it was created. In developing these standards for education, SIA has achieved an acknowledged world first and generated much international interest. I have no doubt it will be of huge benefit to the OHS profession and as a result, the safety of workers.

Greg Tweedly
Chief Executive
WorkSafe Victoria, 2012

OHS Body of Knowledge Technical Panel

The Technical Panel established by the Health and Safety Professionals Alliance (HaSPA) was responsible for developing the conceptual framework of the OHS Body of Knowledge and for selecting contributing authors and peer-reviewers. Members of the Technical Panel were not remunerated.

The Technical Panel comprised representatives of:



Members of the Technical Panel were:

Pam Pryor (SIA) (Chair)

Professor Mike Capra (SIA)

Dr David Borys (University of Ballarat)

Susan Leggett (University of Ballarat) (part)

Associate Professor Wendy Macdonald (La Trobe University)

Dr Jodi Oakman (La Trobe University)

Leo Ruschena (RMIT University)

Associate Professor Susanne Tepe (RMIT University)

Acknowledgements

WorkSafe Victoria

This project was made possible with financial support and assistance from **WorkSafe Victoria**.

Health and Safety Professionals Alliance (HaSPA)

HaSPA as the official 'owner' of the project provided high level direction and gave regular feedback on progress reports.

Safety Institute of Australia

The **Safety Institute of Australia** was not only the contract holder and responsible for financial governance but provided resources such as meeting and teleconference facilities. The SIA also coordinated arrangements for engagements session and consultative processes.

Chair of the Technical Panel

Pam Pryor as chair of the Technical Panel liaised with authors and peer reviewers during writing of the Body of Knowledge also undertaking an editorial function directed to chapter layout and support for contributing authors.

Project Administration

Sally Bennett of Enhance Solutions undertook project management and administration together with workshop facilitation. Her expert professional advice was invaluable.

Editorial

Dr Anne Statham PhD, BBus, MBus(Comm) was the academic editor. Anne's editorial support went beyond the normal scope of the editorial role and the Technical Panel wishes to acknowledge their appreciation for her commitment to the task. As the respective authors for each chapter and the Chair of the Technical Panel had final chapter approval, any errors or inconsistencies are theirs.

Leo Ruschena provided considerable editorial and technical support in developing early drafts of some chapters and in the final production

Graphics

Graphics were developed or re-drawn by **Laura Kelly** of Rewire Group Pty Ltd.

Consultative Processes

Workshops and focus groups conducted as part of the OHS Body of Knowledge development process included:

- A two-day workshop attended by 40 OHS educators from throughout Australia
- SIA College of Fellows Professional Reference Group convened for the project
- Eight workshops conducted in all states and the ACT attended by 137 OHS professionals
- Focus groups conducted as part of developing the Model of OHS practice, involving approximately 30 OHS professionals.

While participants in these events are too numerous to name individually, the Technical Panel is appreciative of their time and interest and values their input.

Contributing Authors

The Technical Panel selected authors based on their demonstrated specialist expertise. Contributing authors were not remunerated; they wrote the chapters in their own time as part of their contributions to the OHS profession and to workplace health and safety. Contributing authors for the first edition of the of the OHS Body of Knowledge and their position at the time are listed below.

Dr Keith Adam, Senior Occupational Physician, Medibank Health Solutions, Queensland

Neil Adams, Director Neil Adams and Associates

Dr Chris Bearman, Research Fellow, Appleton Institute, University of Queensland.

Neville Betts, Chair College of Fellows, Safety Institute of Australia

Dr Elizabeth Bluff, Research Fellow, National Research Centre for Occupational Health and Safety, Australian National University

Carmel Bofinger, Associate Professor, Minerals Industry Safety and Health Centre, University of Queensland

Dr David Borys, Senior Lecturer OHS, University of Ballarat

Paul Breslin, OHSE Manager, Construction and Development, Brookfield Multiplex

Robin Burgess-Limerick, Professor of Human Factors, Minerals Industry Safety and Health Centre, University of Queensland

Dr Carlo Caponecchia, Lecturer, School of Aviation, University of New South Wales

Mike Capra, Professor of OHS, School of Biomedical Sciences, University of Queensland

Dr Margaret Cook, Senior Lecturer, OHS Education, University of Queensland

Dr Steve Cowley, Steve Cowley Health and Safety Consulting

Jean Cross, Emeritus Professor Risk and Safety Science, University of New South Wales

Drew Dawson, Professor and Director, Centre for Sleep Research, University of South Australia

Sidney Dekker, Professor and Director, Key Centre for Ethics, Law and Justice, Griffith University

Geoff Dell, Associate Professor and Development Leader (Accident Investigation) School of Health & Human Services Faculty of Sciences, Engineering and Health, CQUniversity

Dr Ross DiCorletto, Principal Advisor Industrial Hygiene, RioTinto

Niki Ellis, Professor and CEO, Institute of Safety, Compensation and Recovery Research, Monash University

Dennis Else, Professor OHS, University of Ballarat, Director, Sustainability, Safety and Health, Brookfield Multiplex

Neil Foster, Associate Professor, Newcastle Law School, University of Newcastle

Beno Groothoff, Managing Director, Environmental Directions Pty Ltd

Dr Jan Hayes, Senior Researcher and Program Leader, RP\$ Public Safety and Security of Supply, Energy Pipelines CRC, Australian National University.

Andrew Hopkins, Emeritus Professor, School of Sociology, Australian National University

Tim Horberry, Associate Professor and Principal Research Fellow (Human Factors). Minerals Industry Safety and Health Centre, University of Queensland

Allison Hutton, CQ University

Dr Kelly Johnstone, Senior Lecturer, School of Biomedical Sciences, University of Queensland

Richard Johnstone, Professor, Faculty of Law, Queensland University of Technology

Karen Klockner, CQ University

Wendy Macdonald, Associate Professor and Director, Centre for Ergonomics and Human Factors, School of Public Health & Human Biosciences, Faculty of Health Sciences La Trobe University

Gloria Kyriacou Morosinotto Director, Contract Safety Solutions

Andrew Morrell, Associate Professor, Minerals Industry Safety and Health Centre, University of Queensland

Dr Geoff R Newman-Martin, Scientific Advisor Toxinology and Toxicology, Defence Centre for Occupational Health, Department of Defence, Canberra, Australia; Adjunct Senior Lecturer, Centre for Military and Veterans' Health, University of Queensland

Bill Pappas, National Convenor, Australian Psychological Society, Occupational Health Psychology Interest Group

Dr Jessica L Paterson, Postdoctoral Research Fellow, Centre for Sleep Research, University of South Australia

Tony Payne, Director, Payne Consulting Services Pty Ltd

Chad Pettitt, Senior Consultant, AusSafe Consulting

Dino Pisaniello, Associate Professor, Deputy Head, Discipline of Public Health, University of Adelaide

Pam Pryor, Chair Technical Panel OHS Body of Knowledge

Dr Mike Rafferty, Senior Research Analyst, Workplace Research Centre, University of Sydney

Martin J Ralph, Managing Director, Industrial Foundation for Accident Prevention

Leo Ruschena, Senior Lecturer, School of Applied Science, RMIT University

Barry Sherriff, Partner, Norton Rose Fullbright Australia

Dr Kevin Sleigh, Consultant Occupational Physician

Dr Robert Stacy, Executive Manager, Zero Harm, Downer

Neil Storey, Director, Plant and Structures Section, Codes and Guidance Branch, Safe Work Australia

Dr Rwth Stuckey, School of Occupational Therapy, La Trobe University

Susanne Tepe, Associate Professor of OHS, School of Applied Science, RMIT University

Matthew Thomas, Associate Professor, Appleton Institute, Central Queensland University

Yvonne Toft, Associate Professor, School of Health & Human Services Faculty of Sciences, Engineering and Health, CQUniversity

John Toohey, Professor, Graduate School of Business and Law, RMIT University

Phillip Turner, Vice President Health, Safety and Environment, RioTinto Alcan

Derek Viner, Consulting Risk Engineer, Viner & Associates

Eleanor H Wertheim, Professor, School of Psychological Science, La Trobe University

Dr Eric Windholtz, Lecturer, Faculty of Law, Monash University

Kirsten A Way, Lecturer, School of Psychology, University of Queensland

Sally Wright, Senior Research Analyst, Workplace Research Centre, University of Sydney

Pauline Zardo, Department of Epidemiology and Preventive Medicine, Monash University/

Technical Contributors

Technical contributors participated in topic specific technical panels and made significant contributions to the content of chapters or provided specialist input to chapter content in other ways.

David Cliff, Professor and Director, Minerals Industry Safety and Health Centre, University of Queensland

Jim Joy, JKTech, University of Queensland

Peta Miller, Safe Work Australia

Angela Seidel, Independent risk professional

Peter Wilkinson, General Manager Risk, Noetic Group.

Peer-Reviewers

The peer-review process is vital to the quality and rigour of the content of the OHS Body of Knowledge. The OHS Body of Knowledge Technical Panel acknowledge those who committed their time and expertise to provide thoughtful and constructive feedback as part of the drafting of the chapters. The Technical Panel is appreciative of the input provided by the peer reviewers listed below along with those few who preferred to remain anonymous.

Timothy Ackland, Professor and Head, School of Sport Science, Exercise and Health, University of Western Australia

Dr Keith Adam, Senior Occupational Physician, Medibank Health Solutions, Queensland

Dr John Barton, Adjunct Reader, Centre for Integrative Systems, University of Queensland

Sally Bennett, Director, Enhance Solutions; Sessional Lecturer, Deakin University; President, Victorian Chapter, Risk Management Institute of Australia.

Robert Blackly, Radiation Protection Advisor, Australian Nuclear Science and Technology Organisation

Dr David Borys, Senior Lecturer OHS, University of Ballarat

Dr Matthew Brandt, Visiting Occupational Physician, Kinetic Health Care

Dr David Bromwich, Adjunct Professor, Griffith University

Marion Burgess, Research Officer, Acoustics and Vibration Unit, University of NSW, Canberra

Dr Peter Cairney, Principle Research Scientist, Australian Road Research Board

David Caple, Adjunct Professor, Centre for Ergonomics & Human Factors, La Trobe University;
Director David Caple and Associates Pty Ltd

Dr Carlo Caponecchia, Lecturer, School of Aviation, The University of New South Wales

Mike Capra, Professor of OHS, School of Biomedical Sciences, University of Queensland

David Cliff, Professor and Director, Minerals Industry Safety and Health Centre, Sustainable Minerals Institute University of Queensland

Richard Coleman, General Manager Safety, Asciano

Dr Steve Cowley, Steve Cowley Health and Safety Consulting

Dr Gary Dennis, Managing Director, Ergo Enterprises Pty Ltd, Adjunct Professor University of Queensland

Malcolm Deery, Group General Manager HSE, Programmed

Niki Ellis, Professor and CEO, Institute of Safety, Compensation and Recovery Research, Monash University

Peter (PJ) Fleming, Assistant Director, Safety Capability Development, Department of Defence

Gary Foster, Managing Director, Foster OHS Pty Ltd

Steve Gambrell, OHS Manager, Eraring Energy

John Green, HSEQ Director, Laing O'Rourke

Dr David Goddard, Senior Lecturer, Monash Centre for Occupational and Environmental Health, Monash University

Max Hely, Director, Safety Science Associates

Dr Tim Horberry, Principal Research Fellow (Human Factors), Minerals Industry Safety and Health Centre, University of Queensland

Richard Johnstone, Professor, Griffith Law School, Griffith University; National Research Centre for Occupational Health and Safety, Australian National University

Peter Knott, Senior Occupational Hygienist, 3M Australia Pty Ltd

Stephen Kuehn, Principle Engineer, Escape Technologies

Dr Robert McCartney, Occupational Physician, OccMD Pty Ltd, President, Australian & New Zealand Society of Occupational Medicine (ANZSOM)

John McDonald, Barrister and solicitor

Ern Millard, Principal Consultant, Ern Millard and Associates Pty Ltd

Andrew Morrell, Associate Professor, Minerals Industry Risk Management, Minerals Industry Safety and Health Centre, University of Queensland

Dr Howard Morris, Australian Strategy Team, Safe Work Australia

Bill Pappas, National Convener, Australian Psychological Society, Occupational Health Psychology Interest Group

Warwick Pearce, Associate Professor, School of Public Health, Queensland University of Technology

Leo Ruschena, Senior Lecturer, School of Applied Science, RMIT University

John Salter, Director, Emergency Preparedness Capacity Builders

Angela Seidel, Independent risk professional

Dr Lisa Steiner, Senior Scientist, Human Centered Design, National Institute for Occupational Safety and Health (NIOSH), Centre for Disease Control (CDC)

Jane Whitelaw, Lecturer Postgraduate OHS Program, University of Wollongong

Peter Wilkinson, General Manager, Noetic Group

Professor Chris Winder, Professor Chris Winder, Faculty of Business, Australian Catholic University

David Skegg, Manager, HSE, CBH Australia Pty Ltd

From the Chair of the Technical Panel

As Patrick Hudson clearly demonstrated in his 2010 Dr Eric Wigglesworth Memorial Lecture on *Rethinking Safety*, “OHS is not rocket science, it's much harder”. While recognising that everybody has a stake, and therefore a role, in workplace health and safety one of the objectives of the OHS Body of Knowledge is to support and encourage evidence-based practice by OHS professionals.

The development of the OHS Body of Knowledge has been a bit like giving birth. There has been a long gestation period with some challenges along the way; the delivery took longer than expected; and, while the outcome has been very gratifying, this is just the beginning. There will a maturation process requiring nurturing by many people and caring custodianship.

The OHS Body of Knowledge, 2012, is not intended to be a definitive statement, fixed in time. Rather it should be subject to continual reinterpretation and evolution as people engage with it, apply it, and extend it by research. Therefore this is the beginning of the discussion; a discussion that should occur on a national and international basis. It is proposed that this discussion will be facilitated by:

- An interactive web site facilitating evidence-based comment and input
- Workshops conducted in Australia with specialists and practicing OHS professionals to test and interpret the content of specific chapters and to clarify the scope of content in terms of the role of the generalist OHS professional
- Extension of these workshops to include international specialists; also with some workshops being held in other countries as part of the SIA's involvement with the International Network of Safety and Health Professional Organizations (INSHPO).

As with any work of such vast scope and compiled from the input of so many there will be those who think we have not got it quite right. I call on those people to be part of the discussion.

The OHS Body of Knowledge is just one part of the OHS Body of Knowledge project that has informed the establishment of the Australian OHS Education Accreditation Board to accredit OHS professional education programs and the creation of a certification process for generalist OHS professionals.

The OHS Body of Knowledge Technical Panel has been on quite a journey over the last three years, one that has forced us to think about our approach to and understanding of OHS in general and some aspects of OHS in particular. I encourage all OHS professionals to embark on a similar journey, to engage with the Body of Knowledge and in constructive discussion about the content. I also implore all OHS professionals to explore the scope of their work and the links with professionals in other OHS disciplines and work together to optimise workplace health and safety for all Australians.

While many people are recognised in the Acknowledgements I would personally like to thank all those who have contributed to the project and assisted me personally: the Technical Panel who tolerated my sometimes pedantic approach; the many authors and peer reviewers who I chased and sometimes nagged, Anne Statham the editor, the SIA, and of course Clarke Martin and his colleagues at WorkSafe Victoria. There has been a great commitment by many people and I think we have a really worthwhile result. Now let the discussion begin.



Pam Pryor BSc.BEd.GDipOHS.FSIA
Chair OHS Body of Knowledge Technical Panel, 2012



Edition 2

As at April 2021

Including new chapters and chapter revisions



Acknowledgements

Management and Development

Pam Pryor as Manager OHS BoK Development, Pam is instrumental in the conception of individual chapters, she project-manages the development of the chapters including liaison with technical panels, authors, peer reviewers and the editor; also undertaking a drafting and editorial function as required.


Editorial


Dr Anne Statham PhD, BBus, MBus(Comm) provides ongoing academic editing for each chapter to ensure consistency of approach, readability and rigour in referencing. Anne's editorial support goes beyond the normal scope of the editorial role and all involved in the OHS BoK express their appreciation for her commitment to the task. As the respective authors for each chapter and the Manager OHS BoK Development have final chapter approval, any errors or inconsistencies are theirs.


Graphics

Penny Toth of the Australia Institute of Health and Safety (AIHS) has taken on the role of developing the graphics for the chapters and we appreciate having the in-house service.

Collaboration partners

 **Australian Institute of Health and Safety (AIHS)**
The Australian Institute of Health & Safety (AIHS) financially and materially supports the *OHS Body of Knowledge* as a key requirement of the profession. The *OHS Body of Knowledge* forms the basis of the AIHS OHS capability agenda and informs the other platforms of the agenda: education assurance through accreditation; role clarity; capability assurance through individual certification; and continuing professional development. Thus, the *OHS Body of Knowledge* is strategically important to the AIHS and vital for the profession.

 **Australian OHS Education Accreditation Board** *Australian OHS Education Accreditation Board*
The *OHS Body of Knowledge* provides a framework for OHS professional education and continuing professional development. As the body managing accreditation of OHS professional education, the Australian OHS Education Accreditation Board influences, supports and monitors the *OHS Body of Knowledge*, and has a major role in the development and review of individual chapters to ensure that the quality and evidence base reflects current OHS research and leading-edge thinking, and so provides a suitable standard for OHS education and professional development.

 **International Network of Safety and Health Professional Organizations (INSHPO)**
INSHPO is the global voice for the occupational safety and health profession and acts as a forum for international collaboration among professional organisations to improve safety and health at work. INSHPO started from an appreciation that occupational safety and health issues and concerns are not limited by national borders. With the increasing worldwide distribution of products and provision of services, the widespread migration of workers, and the conduct of international corporate activities, almost every issue that occupational safety and health professionals face is global in scope.

Project partners



Australian New Zealand Society of Occupational Medicine (ANZSOM)

The Australian New Zealand Society of Occupational Medicine (ANZSOM) is the professional society for those who practice or have an interest in the fields of occupational medicine, occupational nursing and workplace health more generally. The society seeks to advance the knowledge, practice and standing of occupational health by providing opportunities for professional development, networking and partnerships.



Board of Canadian Registered Safety Professionals (BCRSP)

The Board of Canadian Registered Safety Professionals (BCRSP) sets certification standards for the occupational health and safety profession. The BCRSP administers the CRSP® and CRST certification schemes, and certificants are dedicated to the principles of health and safety, and are required to adhere to the *Rules of Professional Practice (Code of Ethics)*



Human Factors & Ergonomics
Society of Australia Inc.

Human Factors and Ergonomics Society of Australia (HFESA)

The HFESA vision is “People-centred environments, products and systems for all”. HFESA works to achieve this vision by: delivering quality and accessible professional development and networking programmes; continually improving professional standards; representing and lobbying government and industry on issues relevant to ergonomics and human factors in Australia; promoting the value of professional ergonomics and human factors to industry, business, government, and the community; and partnering with relevant key professional bodies, educational facilities and industry to promote both research and the quality of application of ergonomics and human factors in Australia.



Institution of Chemical Engineers (IChemE) Safety Centre (ISC)

The IChemE Safety Centre (ISC) is a not-for-profit industry-led organisation with a vision to be a global go-to organisation for process safety benchmarking, sharing of best practice and education, and be a forum for developing solutions to common problems. The collaboration with the OHS Body of Knowledge fits with ISC strategic direction to maintain close connections with other like-minded organisations and set the benchmark for process safety across industry and academia.



Risk Engineering Society

The Risk Engineering Society actively contributes to the effective management of risks in the workplace and in the community by collecting and disseminating information on all aspects of risk engineering, organising technical meetings and conferences, and liaising with interested organisations. They place special focus on risk issues associated with construction, design, safe plant operation and management.

Consultative Processes

Development of recent chapters has included the input of topic specific technical panels. Members of the technical panels are not remunerated and give of their time and expertise as part of their contribution to OHS and to the profession.

Depending on the chapter, other consultative processes may include scoping workshops of focus groups to test chapter drafts.

Contributing Authors

Many of the authors who contributed to Edition 1 also contributed to Edition 2 by reviewing and updating their original chapter and/or authoring new chapters.

Dr Keith Adam, Senior Occupational Physician, Medibank Health Solutions, Queensland

Neil Adams, Director Neil Adams and Associates

Chris Bearman, Associate Professor, CQ University

Carmel Bofinger, Associate Professor, Minerals Industry Safety and Health Centre, University of Queensland

Dr Elizabeth Bluff, Visiting Fellow, School of Regulation and Global Governance (RegNet) , Australian National University

Dr David Borys, Independent OHS researcher

Robin Burgess-Limerick, Professor of Human Factors, Minerals Industry Safety and Health Centre, University of Queensland

Dr Carlo Caponecchia, Senior Lecturer, School of Aviation, University of New South Wales

Mike Capra AM, Emeritus Professor, School of Earth and Environmental Sciences, University of Queensland

Dr Margaret Cook, Senior Lecturer, OHS Education, University of Queensland

Jean Cross, Emeritus Professor Risk and Safety Sciences, University of New South Wales

Drew Dawson, Professor and Director, Centre for Sleep Research, University of South Australia

Sidney Dekker, Professor and Director, Safety Science Innovation Lab, Griffith University

Dr Ross DiCorletto, Director, Monitor Consulting Services

Dr Sally Ferguson, Director, Appleton Institute, CQ University

Neil Foster, Associate Professor, Newcastle Law School, University of Newcastle

Beno Groothoff, Managing Director, Environmental Directions Pty Ltd

Jan Hayes, Associate Professor, Centre for Construction Work Health and Safety Research, RMIT University

Tim Horberry, Professor of Human Factors and Associate Director, Monash University Accident Research Centre, Monash University

Dr Jessica L Paterson, Senior Lecturer, Appleton Institute, CQ University

Tony Payne, Director, Payne Consulting Services Pty Ltd

Chad Pettitt, Senior Consultant, AusSafe Consulting

Pam Pryor, Manager OHS Body of Knowledge Development, Australian Institute of Health & Safety

Martin J Ralph, Regional Inspector of Mines, Department of Mines, Industry Regulation and Safety, Western Australia

Leo Ruschena, (Retired) past Senior Lecturer, School of Applied Science, RMIT University

Barry Sherriff, Principal Consultant and Lawyer, Sherriff Consulting

Neil Storey, Senior Project Officer, Safe Work NSW

Dr Rwth Stuckey, Associate Professor, School of Psychology and Public Health, La Trobe University

Susanne Tepe, Associate Professor of OHS, School of Applied Science, RMIT University

Matthew Thomas, Associate Professor, Appleton Institute, Central Queensland University

Derek Viner, Consulting Risk Engineer

Dr Eric Windholtz, Senior Lecturer, Faculty of Law, Monash University

Dr Kirsten A Way, Senior Lecturer, School of Psychology, University of Queensland

In addition to the authors who contributed to both Edition 1 and Edition 2 chapters, the following authors have been involved in developing new chapters for Edition 2.

Debra Burlington, Principal Consultant, Enhance Solutions

Brett Cleaves, Brett Cleaves, Director, Engineering Safety

Michael Griffiths, Director, Cornerstone Integral Solutions

Klaus Hofer, Founder and CEO Cat-i

Dr Amanda Jones, Lead Biological Safety Advisor, The University of Queensland

Trish Kerin, Director, IChemE Safety Centre, Institution of Chemical Engineers

Roger Lim, Principal Consulting Engineer, Plant Safety Solutions

Dr David Provan, Managing Director, Forge Works

Dr Andrew Rae, Senior lecturer, Griffith University

Andrew Stanbury, Special Inspector of Mines, Department of Mines, Industry Regulation and Safety, Western Australia

Technical Contributors

Technical contributors participated in topic specific technical panels and made significant contributions to the content of chapters or provided specialist input to chapter content in other ways.

Joe Aiken, Consultant, Safety Solutions, New Zealand.

Nan Austin, Health and Safety Manager, University of Waikato, New Zealand

Andrew Battye, Team Coordinator, Dangerous Goods & Explosives, SafeWork NSW.

Fiona Begg, Principal, Fiona Begg OHS Consulting, Senior OHS Consultant, Melbourne Health

David Caple AM, Director, David Caple & Associates Pty Ltd; Adjunct Professor, La Trobe University

Dr Tristan Casey, Lecturer, Safety Science Innovation Lab, Griffith University of Queensland

Sandra Code, Work Health & Safety Consultant (Practically Safe)

Dr Peter Cotton, Psychologist

Dr Anne Daly, Austin Health Pain Management Service

Dr Matthew Davies, Lecturer, School of Public Health, Curtin University, Western Australia.

Effie Eleftheriadis, Safety Compliance and Systems Manager, Rail Projects Victoria.

Jackie Ellis, Exposure Prevention Specialist, Fraser Health Authority, British Columbia.

Scott Fisher, Group Manager, Zero Harm Risk, Downer

Chris Fitzgerald, Director & Principal, Risk & Injury Management Services Pty Ltd

Mark Griffen, Professor, Future of Work Institute, Curtin University, Western Australia

Daniel Grivicic, Lead Engineer Machine Safety, Electro80.

Geoff Hurst, Principal, ENGENEOHS, President, Risk Engineering Society

Roisin Johnson, Manager, Risk Engineering, Worley Parsons.

Yogesh Koilala, Researcher, Mary Kay O'Connor Process Safety Center, Texas.

Peter Lalli, Senior Policy Officer, Clinical Excellence, Osteopathy Australia

Carol Lapeyre, Occupational Wellness

Fiona Landgren, Principal Consultant, Project Health

Kelly Lovely, Program Manager, AGL.

Colin McLean, Director, Principal Consultant, ERGOSH Safety Management Services Pty Ltd

Melinda Miller, ANZSOM President; Consultant Health and Wellbeing Specialist

Alan Munn, Consultant, MMI Engineering.

Fiona Murfitt, Vice President - Sustainability (HSE, Risk and Social Responsibility), Evolution Mining.

Ivica Ninic, Director, Forge Works.

Chad Pettitt, Senior Consultant, AusSafe Consulting

Ari Pianta, Physiotherapist

Dr Richard Pilkington, Chiropractor

Zeeshan Qureshi, Inspector, Major Hazards Unit, SafeWork NSW.

Tim Rigby, Global Business Unit Risk Manager, Mining and Metal, Bechtel Corporation

Vanessa Russell, Principal Advisor HSE, Origin.

Angela Seidel, Independent risk professional.

Dev Sharma, Electrical Engineer ,AGL.

Dr Kevin Sleight, Consultant Occupational & Environmental Physician

Tony Smith, Manager, Business Risk, East Gippsland Water, Victoria

Harry Stewart, Director, Workplace Safety and Prevention Services, Ontario.

Dr Peter Strahlendorf, Associate Professor, School of Occupational and Public Health, Ryerson University, Toronto, Ontario.

Jon Temby, Director, Axento Safety, Victoria.

Leanne Treadwell, Lecturer University of Wollongong, New South Wales.

Dr Eva Tsahuridu, Associate Professor and Industry Fellow, School of Accounting, RMIT University, Melbourne, Victoria.

Andrew Woodhams, Director, Safety Programs, Australian Petroleum Production & Explorations Association.

Nicola Wright, Executive Director, Board of Canadian Registered Safety Professionals; Vice President, Fletcher Wright Associates Inc., Mississauga, Ontario.

Peer-Reviewers

The peer-review process is vital to the quality and rigour of the content of the OHS Body of Knowledge. Those who committed their time and expertise to provide thoughtful and constructive feedback as part of the drafting of chapters for Edition 2 of the OHS Body of Knowledge are listed below.

Sidney Abiodun, Senior Inspector Onshore, Major Hazards Facility, WA Department of Mines and Petroleum

Paul Amyotte, Professor, Dalhousie University, Canada

John Beattie, CEO New Zealand Safety Council

Kym Bills, Executive Director, National Resource Sciences Precinct, Perth

Dr Hugh Breakey, Senior Research Fellow, Institute for Ethics, Governance and Law, Law Futures Centre, Griffith University, Queensland

Dr Carlo Caponecchia, Senior Lecturer, School of Aviation, University of New South Wales

Dr Tristan Casey, Lecturer, Safety Science Innovation Lab, Griffith University, Queensland.

John Culvenor, Independent Engineer

John Daly, Director Safe Design Australia

Helen Keen Dyer, Senior Lecturer and Discipline Lead, Emergency and Disaster M, CQ University.

Simon Farrar, Manager Systems Safety, WorkSafe Victoria

Tim Fleming, Safety Director, Macquarie Group

Kevin Figuerido, General Manager - Enterprise Risk and Safety at Super Retail Group

Vanessa Garbett, Team Leader, Electrical Installation Safety, Energy Safe Victoria

Jan Hayes, Associate Professor, RMIT University

Genevieve Hawkins, General Manager, Health, Safety and Wellbeing, Coles

James Heffernan, Senior Security, Emergency and Continuity Manager, Origin Energy

Peter Hicks, Prelude Production HSSE Manager, Shell Australia

Andrew Hopkins, Emeritus Professor, Australian National University

Matthew Hornby, Transport for NSW.

Dr Carole James, Associate Professor, School of Health Sciences, University of Newcastle

Jennifer Lourie, Production AIPSM Lead, Shell Australia

Elizabeth Miric, Biological Safety Advisor

Vince McNeilly, General Manager, McNeilly Consulting, UK

Marthinus Neethling, Senior Principal Engineer QinetiQ Pty Ltd

Tony Pooley, CEO, Principle Seven

Dr David Provan, Managing Director, Forge Works.

Dr Aldo Raineri, Discipline Lead – OHS, CQUniversity

Simon Roberts, Risk and Assurance Team Lead, Western Australia.

Leo Ruschena, Senior Lecturer, RMIT University

Brett Seeney, Director, Safety Designed

Angela Seidel, OHS professional representative; Chair, Australian OHS Education Accreditation Board

Brett Shields, Managing Director, Magellan Risk Management, Western Australia.

David Skegg, Lecturer, Central Queensland University

Danny Spadaccini, EHS Director – Alumina, Alcoa

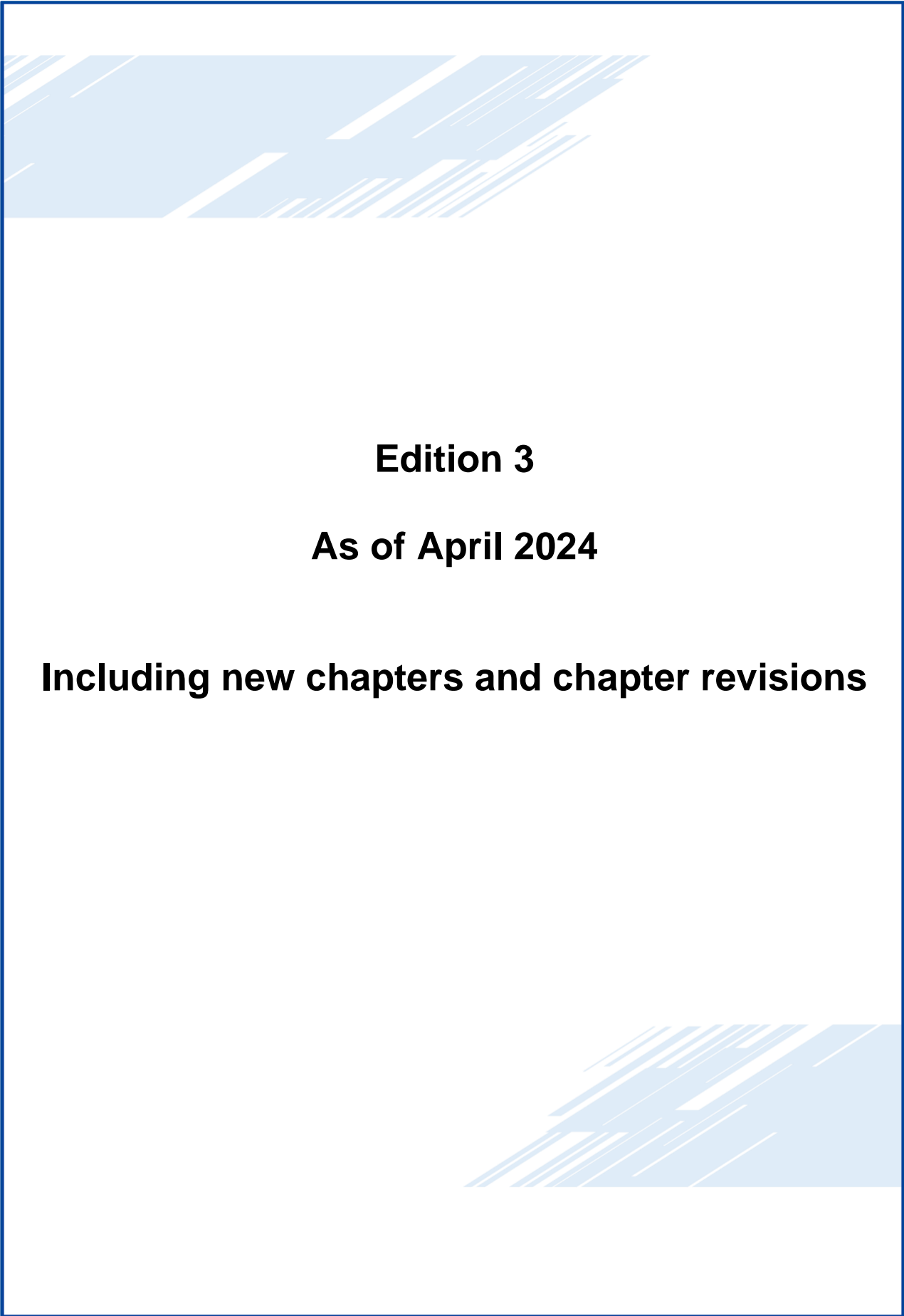
Philip Tradgett, Transport for NSW.

Leanne Treadwell, Lecturer, University of Wollongong

Derek Viner, Risk Engineer, Associate Professor, Central Queensland University

Dr Kirsten A Way, Senior Lecturer, School of Psychology, University of Queensland

Laurentiu Zamfirescu, Senior Inspector (Technical Process Safety), WA Department of Mines and Petroleum



Edition 3

As of April 2024

Including new chapters and chapter revisions



Acknowledgements

Management and Development

Dr. Marilyn Hubner, PhD, FAIHS, is the OHS BoK Manager. She plays a pivotal role in the development of the work, from the initial conceptualisation of each new chapter to overseeing its completion. Her responsibilities include managing project timelines, coordinating with technical panels, authors, peer reviewers, and the editor, and performing drafting and editorial duties as needed.


Editorial


Dr Anne Statham, PhD, BBus, MBus(Comm) provides ongoing academic editing for each chapter to ensure consistency of approach, readability and rigour in referencing. Anne's editorial support goes beyond the normal scope of the editorial role and all involved in the OHS BoK express their appreciation for her commitment to the task. As the respective authors for each chapter and the Manager OHS BoK Development have final chapter approval, any errors or inconsistencies are theirs.


Graphics

Australia Institute of Health and Safety (AIHS) has developed the graphics for new chapters, and we appreciate having the in-house service.

Collaboration partners

 **Australian Institute of Health and Safety (AIHS)**
The Australian Institute of Health & Safety (AIHS) financially and materially supports the *OHS Body of Knowledge* as a key requirement of the profession. The *OHS Body of Knowledge* forms the basis of the AIHS OHS capability agenda and informs the other platforms of the agenda: education assurance through accreditation, role clarity, capability assurance through individual certification, and continuing professional development. Thus, the *OHS Body of Knowledge* is strategically important to the AIHS and vital for the profession.

 **Australian OHS Education Accreditation Board** *Australian OHS Education Accreditation Board*
The *OHS Body of Knowledge* provides a framework for OHS professional education and continuing professional development. As the body managing accreditation of OHS professional education, the Australian OHS Education Accreditation Board influences, supports and monitors the *OHS Body of Knowledge* and has a major role in the development and review of individual chapters to ensure that the quality and evidence base reflects current OHS research and leading-edge thinking, and so provides a suitable standard for OHS education and professional development.

 **International Network of Safety and Health Professional Organizations (INSHPO)**
INSHPO is the global voice for the occupational safety and health profession and acts as a forum for international collaboration among professional organisations to improve safety and health at work. INSHPO started from an appreciation that occupational safety and health issues and concerns are not limited by national borders. With the increasing worldwide distribution of products and provision of services, the widespread migration of workers, and the conduct of international corporate activities, almost every issue that occupational safety and health professionals face is global in scope.

Project partners



Australian New Zealand Society of Occupational Medicine (ANZSOM)

The Australian New Zealand Society of Occupational Medicine (ANZSOM) is the professional society for those who practice or have an interest in the fields of occupational medicine, occupational nursing and workplace health more generally. The Society seeks to advance the knowledge, practice and standing of occupational health by providing opportunities for professional development, networking and partnerships.



Board of Canadian Registered Safety Professionals (BCRSP)

The Board of Canadian Registered Safety Professionals (BCRSP) sets certification standards for the occupational health and safety profession. The BCRSP administers the CRSP® and CRST certification schemes, and certificants are dedicated to the principles of health and safety, and are required to adhere to the *Rules of Professional Practice (Code of Ethics)*



Human Factors & Ergonomics
Society of Australia Inc.

Human Factors and Ergonomics Society of Australia (HFESA)

The HFESA vision is “People-centred environments, products and systems for all”. HFESA works to achieve this vision by: delivering quality and accessible professional development and networking programmes; continually improving professional standards; representing and lobbying government and industry on issues relevant to ergonomics and human factors in Australia; promoting the value of professional ergonomics and human factors to industry, business, government, and the community; and partnering with relevant key professional bodies, educational facilities and industry to promote both research and the quality of application of ergonomics and human factors in Australia.



Institution of Chemical Engineers (IChemE) Safety Centre (ISC)

The IChemE Safety Centre (ISC) is a not-for-profit industry-led organisation with a vision to be a global go-to organisation for process safety benchmarking, sharing of best practices and education, and being a forum for developing solutions to common problems. The collaboration with the OHS Body of Knowledge fits with ISC strategic direction to maintain close connections with other like-minded organisations and set the benchmark for process safety across industry and academia.



Risk Engineering Society

The Risk Engineering Society actively contributes to the effective management of risks in the workplace and in the community by collecting and disseminating information on all aspects of risk engineering, organising technical meetings and conferences, and liaising with interested organisations. They place special focus on risk issues associated with construction, design, safe plant operation and management.

Consultative Processes

The development of recent chapters has included input from topic-specific technical panels. Members of the technical panels are not remunerated and give their time and expertise as part of their contribution to OHS and to the profession.

Depending on the chapter, other consultative processes may include scoping workshops or focus groups to test chapter drafts.

Contributing Authors

Many of the authors who contributed to Editions 1 and 2 also contributed to Edition 3 by reviewing and updating their original chapters and/or authoring new chapters. In addition to the authors who have previously contributed to Editions 1 and 2, the following authors have developed new chapters for Edition 3.

Dr Geoff Dell, academic and freelance professional lead incident investigator, executive-level safety, and risk manager

Dr Yvonne Toft, academic and freelance professional lead incident investigator, executive-level safety manager and human factors engineer

Dr Ivan Cikara, specialist industry consultant, executive manager in safety, health and governance

David Skegg, academic and freelance professional lead incident investigator, executive-level safety, and risk manager

Shevaun Dell, academic, researcher, consultant and incident investigator

Debra Burlington, Principal Consultant, Enhance Solutions

Greg Dearsly, Managing Director, First 4 Safety Ltd

Dr Cassie Madigan, Senior Lecturer in OHS, University of Queensland

Eldeen Pozniak, Managing Director, Pozniak Safety Associates Inc.

Sue Bottrell, Managing Director, ContractorSAFE

Jon Harper Slade, General Manager, Construction Health and Safety Innovation,

Technical Contributors

Technical contributors participated in topic-specific technical panels and made significant contributions to the content of chapters or provided specialist input to chapter content in other ways.

Peer-Reviewers

The peer-review process is vital to the quality and rigour of the content of the *OHS Body of Knowledge*. Those who committed their time and expertise to provide thoughtful and constructive feedback as part of drafting chapters for Edition 3 of the *OHS Body of Knowledge* are listed below.

Mark Alston, Director, Investigations Differently

Peter Cumming, General Manager Operations, Office of the National Rail Safety Regulator

Steve Dine, Sergeant, Tasmania Police – Road Policing Services

Dr Graham Edkins, CEO, Leading Edge Safety Systems; Chief Investigator, Safety Wise Solutions

Christopher McKie, General Manager, Safety Systems and Operations Support, Virgin Australia

Rod Maule, General Manager, Safety and Wellbeing, Australia Post

Dr Simon Drew Roberts, Founder, Environmental Health, and Safety 2U

Peter Sturm, President, Sturm Consulting, Canada