

# QUEENSLAND MINING INDUSTRY

## HEALTH & SAFETY CONFERENCE



21 - 24 August 2011

## EMBRACING THE AGE

Supporting People and Technology

Townsville Entertainment  
& Convention Centre (TECC)  
and  
Jupiters Townsville

## HANDBOOK



This Handbook is proudly Sponsored by Safety Equipment Australia Pty Ltd

# Sponsors

The Queensland Mining Industry Health and Safety Conference Committee wishes to thank the following organisations for their generosity and continuing support of this event.



The above Sponsors were confirmed at the time of printing.

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## Vehicle Displays

Australasian Safety Services  
Hostile Environmental Services  
Protector Alsafe

# Welcome



Dear industry colleagues,

It is my pleasure on behalf of the Committee of the 2011 Queensland Mining Industry Health and Safety Conference to extend to you a very warm welcome to this year's event.

Our theme 'Embracing the Age – Supporting People and Technology' will be the focus for many of the presentations over the next few days.

Every year a theme is selected to highlight a specific issue or challenge faced by our industry.

This year it is the need to embrace the changes that we believe will alter the face of mining as we know it.

In light of the amazing technological advances occurring in our equipment and operating systems and in the context of a workforce that encompasses men and women from many ethnic backgrounds, and from generation Y to baby boomers; we need to look to new ways of keeping our people healthy and safe.

There are exciting times ahead in an industry as dynamic as ours so this year we have several surprises in store for you.

Rugby great Dan Crowley will be our MC and our first keynote presenter, Russell White will take the lead with a very different approach to road safety. Russell, who is founder of the national road safety campaign 'Fatality Free Friday' is well qualified to open up new ideas to make the journey safer.

Following Russell will be coffee king Phillip Di Bella. His unique approach to managing cultural change in an old established industry promises to give us all a wake up call.

Dr Thomas Novak from the University of Kentucky will provide an international perspective with a look into the future in terms of science and technology in mining and Dr Jennifer Bowers will tackle the ever controversial topic of the importance of mental health in the workplace.

We are of course looking forward to the Innovation Sessions on Monday afternoon.

These have become an integral part of the conference, paving the way for significant improvements in workplace safety. Winners will be announced at the conference dinner on Tuesday night.

We also invite you to take part in all the social activities, as this is where the networking really happens.

Most of us are so busy we have little time to meet with our colleagues and friends and just catch up with what is happening outside of our own work environment.

This is just a snap shot of what's in store over the next few days, and we invite you to participate in the lively debates that are sure to occur.

On behalf of the committee, I pay special tribute to our sponsors whose generous support allows us to keep the registration fees low so the maximum number of delegates may attend.

We are looking forward to meeting as many of you as possible during the next few days and we trust you will find that taking time to attend this Conference has been a most rewarding experience.



Greg Lane  
Chairman  
2011 Queensland Mining Industry Health and Safety Conference

## Conference Committee

### Chairman Greg Lane

*Queensland Resources Council*

### Secretary Grant Cook

*Queensland Resources Council*

**Stewart Bell**  
*DEEDI*

**Darren Brady**  
*Simtars, DEEDI*

**Greg Dalliston**  
*CFMEU Mining and Energy  
Division*

**Hag Harrison**  
*Australian Workers' Union*

**Rob O' Sullivan**  
*Mines and Energy, DEEDI*

**Liz Sanderson**  
*Anglo American  
Metallurgical Coal*

**Ken Singer**  
*Mines and Energy, DEEDI*

**Gerard Tiernan**  
*Simtars, DEEDI*  
**Nicola Garland**  
*Queensland Resources Council*

## Conference Organiser

**Marion Powell and Robert Seaman**

*ACCLAIM  
Special Events and Meeting Management*

**All correspondence to be addressed to:**

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Special Events and Meeting Management  
371 Bowen Terrace  
New Farm Qld 4005 Australia*

**Tel:** 61 7 3254 0522

**Fax:** 61 7 3254 0406

**Email:** [safeconf@acclaimsemm.com.au](mailto:safeconf@acclaimsemm.com.au)



# Conference Venues

## Business Sessions - Sunday to Wednesday

Townsville Entertainment and Convention Centre (TECC).

## Welcome Function - Sunday

The Banquet Centre & The Brewery in the old Post Office Building, 252 Flinders Mall.

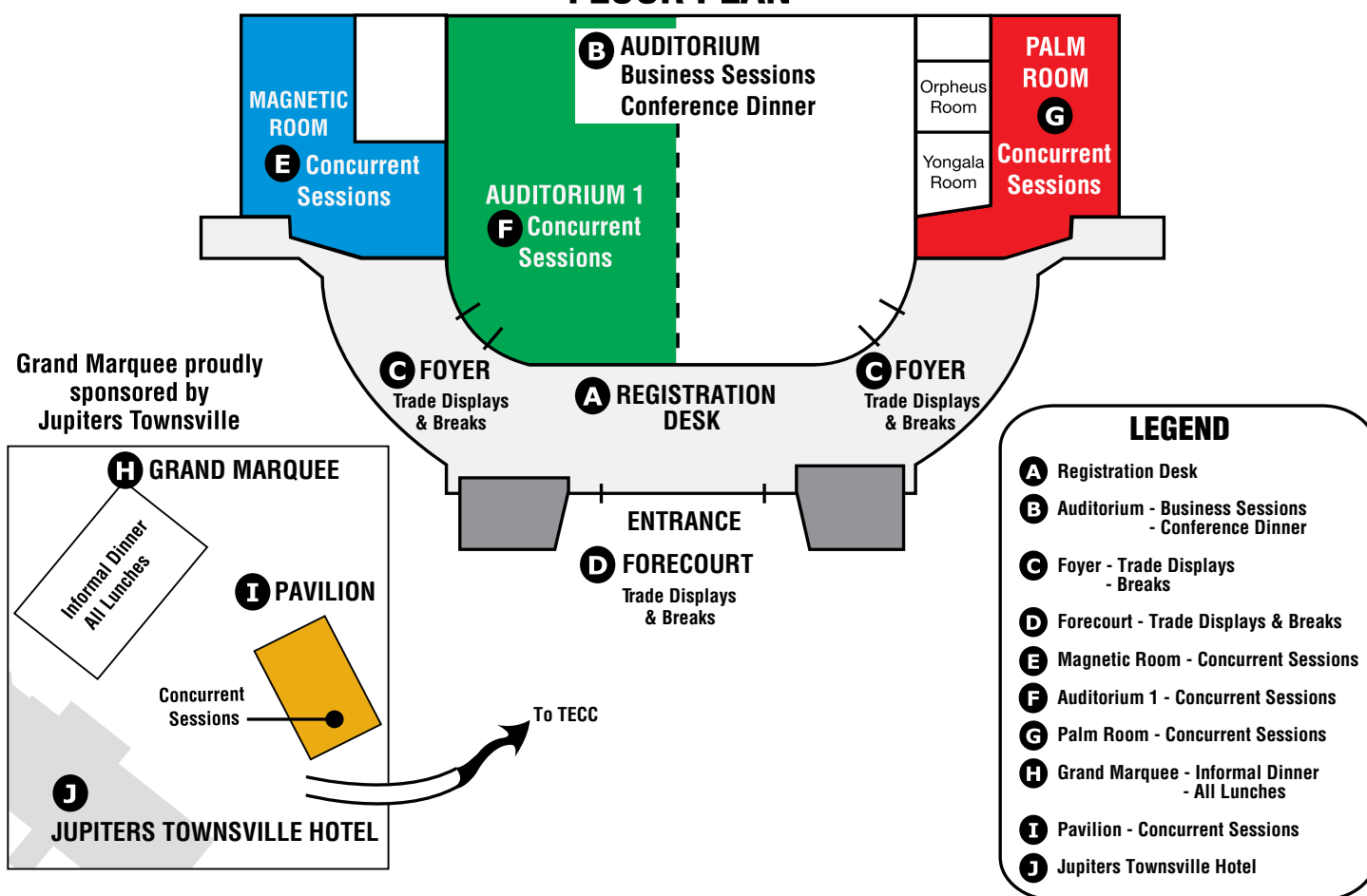
## Informal Dinner - Monday

The Grand Marquee at Jupiters Townsville Hotel.

## Conference Dinner - Tuesday

The Townsville Entertainment and Convention Centre (TECC).

## Townsville Entertainment and Convention Centre FLOOR PLAN



## DISPLAYS

A special feature of the Conference will be the Displays where representatives of many of the leading suppliers will be on hand to discuss their latest products and services. These Displays will be open before each morning Session and during the morning and afternoon Tea Breaks. Please take time to visit all the Displays.

## CONFERENCE PROCEEDINGS

The following proceedings will be available Post Conference on the website at [www.qldminingsafety.org.au](http://www.qldminingsafety.org.au)

- Power Point presentations provided by Keynote Speakers
- Power Point presentations provided by Concurrent Session Presenters
- Papers provided by Concurrent Session Presenters
- PowerPoint presentations from the Innovation Sessions
- Innovation Finalists Submissions

Conference Proceedings Proudly Sponsored by IDEXX



## STUDENT HOST PROGRAM

The Program is designed to promote health and safety within the mining industry by giving students who are studying relevant courses exposure to the industry via the medium of the Conference.

Students come from the Queensland Resources Council Graduate Program and Minerals Industry Safety & Health Centre.

Program Proudly Sponsored by Minerals Industry Safety & Health Centre



# Conference Information

## Registration

The Registration Desk will be located in the Foyer of the Townsville Entertainment and Convention Centre

Opening times: **2.00pm – 6.00pm Sunday**

**7.30am – 6.00pm Monday and Tuesday**

**7.30am – 1.30pm Wednesday**

### NAME BADGE

Name badges will be provided at Registration. It is essential they be worn at all times to allow entry to Conference Sessions and all Social Functions. Should replacement badges be required, please contact the Acclaim staff at the Registration Desk.

Proudly Sponsored by Kinect 

## General

### DRESS CODE

**Business Sessions, Welcome Function and Informal Dinner** - Smart casual attire is suitable for all Conference Sessions and most Social Functions.

**Conference Dinner** - Lounge Suits for Men and Cocktail Attire for Ladies is recommended.

### CONFERENCE SATCHEL

Upon arrival each delegate will be provided with a Conference Satchel.

Proudly Sponsored by Down Under Training



### CONFERENCE HANDBOOK

Each delegate will be given a Conference Handbook containing the Full Program including all Innovations and Abstracts.

Proudly Sponsored by Safety Equipment Australia



### POCKET PROGRAM

For quick reference a pocket sized Program will be supplied to all delegates.

Proudly Sponsored by Onsite Health Solutions



### INNOVATION SUBMISSION BOOK

This is a compilation of all the Innovation Submissions received for this year's Awards.

Proudly Sponsored by Capability Group



## Coach Transfers - *Complimentary Service*

### • Airport Transfers

**Sunday** - The Coach service will meet all main flights into Townsville airport and transfer delegates to the \* Conference Hotels.

**Monday** - This service will also operate on Monday morning, picking delegates up at the airport and transferring them to their Hotel and/or to Townsville Entertainment & Convention Centre.

**Wednesday** - The Coach service will be available to transfer delegates from the Townsville Entertainment & Convention Centre to the Airport at the conclusion of the Conference.

### • Daily Coach Shuttle Service

#### Business Sessions

**Sunday Afternoon** - This service will collect delegates from designated points close to the \* Conference Hotels and take them to the Townsville Entertainment & Convention Centre in time for Registration and the commencement of the Conference.

**Monday, Tuesday and Wednesday** - This service will operate each morning and Monday and Tuesday afternoons between designated points close to the Conference Hotels and Townsville Entertainment & Convention Centre.

#### Social Functions

**Sunday Evening** - Coaches will be ready at the close of the Opening Session to transfer all delegates to the Welcome Reception at the Banquet Centre & The Brewery and return them to their accommodation at the end of the Function.

**Monday and Tuesday Evenings** - Coaches will be ready at the close of the Business sessions to transfer all delegates to a designated point close to their accommodation. Coaches will return to transfer delegates to the Social event that evening and then provide a return transfer to their accommodation at the end of the Function.

\* Those Hotels organised through the Conference Organiser.

Proudly Sponsored by SleepRisk Solutions



# Conference Program & Index

## Sunday 21st August

**2.00pm - 6.00pm REGISTRATION**  
Foyer - Townsville Entertainment & Convention Centre

**4.30pm CONFERENCE OPENING**

**Master of Ceremonies**  
Dan Crowley, Director, Verifact Security

### WELCOME

Greg Lane, Chairman, Queensland Mining Industry Health and Safety Conference 2011  
Betty Kiernan MP, Parliamentary Secretary for Emergency Services

**5.15pm KEYNOTE PRESENTATION** *Page 10*  
**Extreme Risk Management**  
Dr Glenn and Heather Singleman

**6.30pm WELCOME FUNCTION** - The Banquet Centre & The Brewery

**10pm to late THE RESCUE STATION** - Lobby Bar, Jupiters Townsville

## Monday 22nd August

**7.30am - 6.00pm REGISTRATION** - Townsville Entertainment & Convention Centre

**9.00am - 10.30am KEYNOTE PRESENTATIONS** *Page 11*  
**Driving Change**  
Russell White, Managing Director, Driver Safety.com.au

**Evolving in a People Business**  
Phillip Di Bella, Founder and Managing Director, Di Bella Coffee

**10.30am - 11.00am MORNING BREAK AND TRADE DISPLAYS**

**11.00am - 12.30pm KEYNOTE PRESENTATIONS** *Page 12*  
**Health and Safety - Keeping Pace with Technology**  
Dr Thomas Novak, Professor and Alliance Coal Academic Chair, Department of Mining Engineering, University of Kentucky USA  
**Better Practice Mine Safety Regulation**  
Kym Bills, Executive Director, Safety Investigation and Regulatory Review Australia (SIRRA)

**12.30pm - 1.30pm LUNCH AND TRADE DISPLAYS**

**1.30pm - 3.00pm INNOVATION PRESENTATIONS** *Page 15*  
**Decline Warning Lights System**  
BHP Billiton - Cannington Mine: Jason Lindley  
**Quick Hitch Fan Cradle**  
Newcrest Mining Ltd - Cracow Gold Mine: Nick Strong  
**The Safe Mine Sling Holder**  
Downer EDI Mining: Ben Karma, Murray Parker  
**Surface Teleremote Operation**  
BHP Billiton - Cannington Mine: Jason Lindley  
**The Strongback Power Lift**  
MMG Century: Rod Dugmore

**3.00pm - 3.30pm AFTERNOON BREAK AND TRADE DISPLAYS**

**3.30pm - 5.15pm INNOVATION PRESENTATIONS** *Page 19*  
**Conveyor Idler Replacement Tool**  
Xstrata Coal Queensland - Abbot Point  
Bulkcoal: Aaron Ginzburg  
**Light Vehicle Penetration Protection System**  
BHP Billiton - Cannington Mine: Adrian Bush  
**Innovative Ventilation Duct Installation Method**  
Redpath Australia Pty Limited: Clayton Donnelly  
**Carbon Fibre Vent Tube Project**  
Xstrata Coal - Oaky North: David Lawrence

**Fluid Injection Protection - 700 Bar Twin-line Hose**  
MMG Century: David Leonard  
**Perilya Handrail Testing Device**  
Perilya Broken Hill Limited: Peter Lean - NSW Winner of the Metalliferous Innovation Award for 2011

**5.00pm - 6.30pm THE RESCUE STATION** - Lobby Bar, Jupiters Townsville

**6.30pm - 7.00pm PRE DINNER DRINKS** - The Grand Marquee, Jupiters Townsville

**7.00pm - 10.30pm INFORMAL DINNER & CHARITY AUCTION in aid of RACQ - CQ Rescue** - The Grand Marquee, Jupiters Townsville

## Tuesday 23rd August

**7.30am - 6.00pm REGISTRATION** - Townsville Entertainment & Convention Centre

**9.00am - 10.30am KEYNOTE PRESENTATIONS** *Page 25*  
**The Dangers Lie Below the Surface - Recognising the Importance of Mental Health in Mining to Improve Safety and Productivity**  
Dr Jennifer Bowers, Chief Executive Officer, Centre for Rural & Remote Mental Health Queensland

**Last Man Standing**  
Steven Bradbury OAM, Australia's First Winter Olympic Gold Medallist

**10.30am - 11.00am MORNING BREAK AND DISPLAYS**

**11.00am - 12.30pm CONCURRENT PAPERS** *Page 27*

**12.30pm - 1.30pm LUNCH AND TRADE DISPLAYS**

**1.30pm - 3.00pm CONCURRENT PAPERS** *Page 41*

**3.00pm - 3.30pm AFTERNOON BREAK AND TRADE DISPLAYS**

**3.30pm - 5.00pm CONCURRENT PAPERS** *Page 55*

**6.30pm - 7.15pm PRE DINNER DRINKS** - Townsville Entertainment and Convention Centre - Forecourt

**7.30pm CONFERENCE DINNER AND INNOVATION AWARDS** - Townsville Entertainment and Convention Centre - Auditorium

## Wednesday 24th August

**7.30am - 1.30pm REGISTRATION**

**9.00am - 10.30am Presentation** *Page 69*  
**What Managers and Supervisors Say When Things Go Wrong: Lessons from the Courtroom**  
Paul Cutrone, Partner, Sparke Helmore Lawyers

**10.30am - 11.00am MORNING BREAK AND DISPLAYS**

**11.00am - 12.15pm Presentation**  
**Pike River Overview**  
Ken Singer, Deputy Chief Inspector of Coal Mines, DEEDI  
Wayne Hartley, State Manager, Queensland Mines Rescue Service  
Stewart Bell, Deputy Director-General, Commissioner for Mine Safety and Health, DEEDI

**12.15pm - 12.30pm FORMAL CLOSE OF CONFERENCE**  
Stewart Bell, Spokesperson, Queensland Mining Industry Health and Safety Conference 2011

**12.30pm - 1.30pm FAREWELL LUNCH**

The presenters, topics and times are correct at the time of publishing and in the event of unforeseen circumstances, the Conference Committee reserves the right to alter or delete items from this program.

# Social Program



The Social Events offer a unique opportunity for networking and therefore we encourage you to join in these activities.

These special events offer a rare and invaluable opportunity for you to catch up with friends and colleagues and make new contacts within the industry.

**DELEGATES TICKETS TO ALL LUNCHEES AND SOCIAL FUNCTIONS ARE INCLUDED IN ALL FULL REGISTRATIONS.**

**ADDITIONAL TICKETS FOR PARTNERS AND GUESTS ARE AVAILABLE FOR PURCHASE THROUGH THE REGISTRATION FORM OR ONSITE FROM THE CONFERENCE ORGANISER.**

## SUNDAY 21st August

### 6.30pm **WELCOME FUNCTION – The Banquet Centre & The Brewery**

*Proudly Sponsored by Peabody Energy Australia Pty Ltd*

The Welcome Function, is always one of the most important events at this Conference, setting the tone for the rest of the event. The Banquet Centre is the latest addition to The Brewery. Located on the first floor it is a stunning new venue and as in past years you can expect a mouth watering menu featuring fresh seafood and including the boutique beers and special beverages which are a feature of this venue.

**Partner and Guest Tickets \$72.00 per person**

## MONDAY 22nd August

### 12.30pm **LUNCH – The Grand Marquee Jupiters Townsville**

*Proudly Sponsored by Xstrata North Queensland Operations*

**Partner and Guest Tickets \$41.00 per person**

### 7.00pm **INFORMAL DINNER AND CHARITY AUCTION – The Grand Marquee, Jupiters Townsville**

*Proudly Sponsored by uvex Safety Australia Pty Ltd*

RACQ CQ RESCUE based in Mackay has been chosen as the beneficiary of this year's Auction. Master Auctioneer Phil Black, will once again entertain whilst encouraging you to bid for some really great Auction Items.

**SPECIAL ENTERTAINMENT – Presenting Brad Blaze – Corporate Entertainer Extraordinary.**

Brad Blaze has enthralled audiences across Australia, Asia, United Arab Emirates and The United States performing at large Gala Dinners where subjects included celebrities such as Tiger Woods, Robert Allenby, Cameron Smith, Shane Warne and many more - raising over \$500,000.00 for charity.

**Partner and Guest Tickets \$94.00 per person**

## TUESDAY 23rd August

### 12.30pm **LUNCH – The Grand Marquee at Jupiters Townsville**

*Proudly Sponsored by ABSC Group Pty Ltd*

**Partner and Guest Tickets \$41.00 per person**

### 7.00pm **CONFERENCE DINNER & INNOVATION AWARDS – Townsville Entertainment & Convention Centre**

*Proudly Sponsored by Australian Workers' Union and CFMEU Mining & Energy Division*

Address by the Honourable Stirling Hinchliffe MP, Minister for Employment, Skills and Mining

The Conference Dinner is always a feature of this event. This evening which includes the presentation of the Innovation Award Winners is the perfect opportunity to enjoy dinner with friends and colleagues within the mining industry.

**SPECIAL ENTERTAINMENT – Presenting Ahn Do**

Ahn has been voted Comedian of the Year. He is recognised by throughout Australia through his appearances on Rove, Thank God You're Here and Dancing With the Stars. He's entertained, motivated and affected thousands and thousands at corporate events in Australia and throughout the world.

**Partner and Guest Tickets \$110.00 per person**

## WEDNESDAY 24th August

### 12.30pm **LUNCH – The Grand Marquee at Jupiters Townsville**

*Proudly Sponsored by Vale Australia*

**Partner and Guest Tickets \$41.00 per person**

## Master of Ceremonies



**Dan Crowley**

Dan played for Australia in three World Cups in 1991, 1995 and 1999, which qualifies him for membership of a most unique international rugby club. He was a member of two winning World Cup teams (1991 and 1999), another rare honour for the Brisbane born front-rower and onetime undercover cop. At state level he made 125 appearances for the Reds.

In 2003 Dan made his debut as a member of the Seven Network's rugby commentary team and was widely praised for his insightful, analytical and sometimes humorous comments throughout the season culminating in its Rugby World Cup coverage.

Dan is a Director of Verifact Security and manages the security and safety management division that provides security, paramedics and emergency response team support to a number of mining, gas and other large infrastructure clients in Queensland and NSW.

## Presenters



**Phillip Di Bella**

Phillip's success story is one fuelled by passion, focus, and innovation. His passion for coffee and customer service led to a career in hospitality and the establishment of his own coffee company. His focus and dedication quickly put Di Bella Coffee on the map as Australia's most awarded and largest specialty coffee company. His innovation has been celebrated on numerous occasions: this highly-awarded entrepreneur is the world's youngest recipient of an Italian knighthood, and an adjunct professor at Griffith University's Griffith Business School.

The qualities that led him to succeed continue to earn Phillip recognition and respect amongst both his employees and his peers, and ensure that most of his story is yet to be written.



**Kym Bills**

Kym worked as a Commonwealth senior executive from 1993 to 2009, with initial safety roles in marine investigation and directorships of the Australian Maritime Safety Authority and ANL Limited. He was the foundation Executive Director of the Australian Transport Safety Bureau from 1999 to 2009, chairing the National Road Safety Strategy Panel from 1999-2008 and the International Transportation Safety Association from 2006-2007.

From November 2009 to June 2011 he was Project Director of the National Mine Safety Framework. He is on the Board of the National Offshore Petroleum Safety Authority since 2009 and is now a company director and safety consultant.



**Dr Jennifer Bowers**

Jennifer is the Chief Executive Officer of the Centre for Rural and Remote Mental Health Queensland. Dr Bowers has led mental health services and their reforms at The Park Centre for Mental Health in Queensland and then for the state of South Australia.

She has also managed various aged and community care services for the Commonwealth Government both nationally and at the state level. Jennifer's other career experiences include a successful private consulting practice in the export of healthcare services and health and rehabilitation equipment throughout Australasia and she has also been involved in the development of a remote tourism facility. Jennifer has a first class honours degree in Science and a PhD in Social Psychiatry from the Australian

National University. She has adjunct appointments with Griffith University as an Associate Professor and is a Professorial Research Fellow at the Cairns Institute at James Cook University. She was a finalist in the Telstra Business Women's Awards for Innovation in 2010.



**Steven Bradbury**

Speed Skater Steven Bradbury collected the most unlikely, unthinkable gold medal in the history of the Olympics. Australia's first Winter Olympic Gold medal! Steven tells an amazingly inspirational story of triumph over adversity, of how he underwent years of obsessive training, pain, setbacks, sacrifice and life threatening injuries and of how he armed himself with the information and tools he needed to achieve this amazing success.



**Dr Thomas Novak**

Thomas is Professor and Alliance Coal Academic Chair in the Department of Mining Engineering at the University of Kentucky. Prior to his present position, he served as the Director of Science and Technology for the Office of Mine Safety and Health Research at the National Institute of Occupational Safety and Health. Thomas earned his Ph.D. and B.S. degrees in Mining Engineering and Electrical Engineering, respectively, at Penn State University, and an M.S. degree in Mining Engineering from the University of Pittsburgh. He is a licensed professional engineer and a fellow of the Institute of Electrical and Electronics Engineers.





### Dr. Glenn & Heather Singleman

An Australian husband and wife team, Glenn and Heather jointly hold two astonishing World Records - one for the highest BASEjump and the other for the highest Wingsuit BASEjump, both set from a 6672 metre Himalayan Mountain. Glenn is well known to Australian and International audiences both as a speaker and documentary film-maker. He is also a practicing medical doctor.

Heather is the only woman in the world to combine mountaineering and BASEjumping, let alone wingsuit BASEjumping.

Glenn and Heather attribute their success to the strength of their relationship, their shared vision; their commitment to their goals and an ongoing passion for what they do.



### Russell White

Russell is the Managing Director of Driversafety.com.au. His experience in the Driver Training Industry spans more than 20 years and he is widely regarded as one of Australia's leading Road Safety advocates.

Throughout his career, Russell has assisted thousands of people from all over the world to become safe and competent drivers. He is a regular media commentator on road safety issues and contributes written articles for several leading publications. In addition he has written his own book titled Driveability.

Russell is also the Founder and CEO of the Fatality Free Friday Road Safety Foundation. The foundation's activities include the Fatality Free Friday Campaign, World's Largest Driving Lesson, the Fleet Safety Coalition and the Australian Road Safety Awards.

## Charity Auction in aid of



**RACQ CQ RESCUE** is the Mackay-based helicopter rescue service and was formed as a result of forty business people from Mackay seeing the need for an emergency aero-medical service within the region. This group of people first met in 1994 and the first emergency flight was flown on 1st September 1996.

The area covered by RACQ CQ RESCUE is from Bowen in the north to St Lawrence in the south and includes most of the Bowen Basin from Collinsville to Clermont. The area serviced by RACQ CQ RESCUE is approximately four times the size of Tasmania. Although outside of their specified region, RACQ CQ RESCUE conducts missions to Townsville when the need arises. These types of tasks generally involve seriously injured patients who require vital medical care which may not be available in Mackay or critically ill patients who require urgent transport from this region to Townsville.

The crew consists of four pilots, three air crewmen, a rescue crewman and paramedics who have been trained in rescue crewman roles. Successful negotiations between RACQ CQ RESCUE and Queensland Ambulance Service have resulted in an Intensive Care Paramedic being made available to fly with the RACQ CQ RESCUE crew 24 hours a day, 7 days a week. A Queensland Government funded doctor is assigned to RACQ CQ RESCUE. Our rescue service is the only facility between Townsville and Brisbane to benefit from having a doctor at a rescue base. Having a doctor and paramedic readily available enables the rescue crew to respond to tasks in a fast, efficient and professional manner.

### Community Benefit

Without the helicopter rescue service the outcome for many patients would result in serious consequences. The community is aware of the significance of the service which is evident in the amount of support we receive. In some instances RACQ CQ RESCUE is sometimes a patient's only lifeline and while the cost of a life cannot be measured in dollars and cents, the gratitude shown by these patients' means a great deal to our crew.

**Lots of great items for you to bid on – so make sure you bring your wallets as this cause is close to home for many of us in the Mining Industry. Master Auctioneer Phil Black, will not only be the Auctioneer on the night he will dazzle you with his quick repartee and ability to conduct the Auction.**

## QRC/WIMARQ Networking Function - Poolside Jupiters Townsville

**Monday 22nd August 5.00pm - 6.30pm**

The Queensland Resources Council is proud to host a Women in Mining and Resources Queensland (WIMARQ) event on Monday 22 August.

Guest speaker will be winner of the 2011 QRC Resources Awards for Women, Heather Parry. Heather, employed by Leighton Contractors, is project manager of the \$157 million Dawson North Mine Project in Central Queensland. She has a Bachelor of Engineering (Civil) and supervises 130 personnel. Heather has been active in the recruitment of women in the resources sector and her mining fleet boasts almost 20 percent women. She will share her career experiences and provide insights into climbing the corporate ladder.

The event will be held at Poolside Jupiters Hotel from 5pm to 6.30pm. The WIMARQ events have become well known for providing entertaining networking opportunities for women in the resources sector throughout Queensland. Men are also encouraged to attend.

The event is free. Drinks and finger food will be provided.

**To book: Please see the Conference Organisers or contact Jim Devine direct on 0412 190 021**





## Monday 22nd August

**7.30am – 6.00pm**

**REGISTRATION – Foyer**  
**Townsville Entertainment and Convention Centre**

**9.00am – 10.30am**

**KEYNOTE PRESENTATIONS** - *Proudly Sponsored by Xstrata North Queensland Operations*

**Driving Change**

Russell White, Managing Director, Driver Safety.com.au

**Evolving in a People Business**

Phillip Di Bella, Founder and Managing Director, Di Bella Coffee

**10.30am – 11.00am**

**MORNING BREAK AND DISPLAYS** - *Proudly Sponsored by Protector Alsafe*

### Driving Change

Presenter: Russell White, Managing Director, Driver Safety.com.au

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### Evolving in a People Business

Presenter: Phillip Di Bella, Founder and Managing Director, Di Bella Coffee

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## Monday 22nd August

**11.00am – 12.30pm**

**KEYNOTE PRESENTATIONS** - *Proudly Sponsored by Anglo American Metallurgical Coal*

### **Health and Safety – Keeping Pace with Technology**

Dr Thomas Novak, Professor and Alliance Coal Academic Chair, Department of Mining Engineering, University of Kentucky, USA

### **Better Practice Mine Safety Regulation**

Kym Bills, Executive Director, Safety Investigation and Regulatory Review Australia (SIRRA)

**12.30pm – 1.30pm**

**LUNCH AND DISPLAYS** - *Proudly Sponsored by Xstrata North Queensland Operations*

## Health and Safety – Keeping Pace with Technology

**Presenter:** Dr Thomas Novak, Professor and Alliance Coal Academic Chair, Department of Mining Engineering, University of Kentucky USA

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## Better Practice Mine Safety Regulation

**Presenter:** Kym Bills, Executive Director, Safety Investigation and Regulatory Review Australia (SIRRA)

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## Innovation Submissions 2011

This year 29 submissions were received for the Innovation Awards.

With a view to providing a wider circulation throughout the Industry, the Conference Committee has printed a separate publication which includes all the Innovations received for the 2011 Awards.

## Notes



**1.30pm – 3.00pm**

## Decline Warning Lights System

### Quick Hitch Fan Cradle

## The Safe Mine Sling Holder

## Surface Teleremote Operation

## The Strongback Power Lift

### MMG Century: Rod Dugmore

**3.00pm – 3.30pm**

**AFTERNOON BREAK AND DISPLAYS** - Proudly Sponsored by Protector Alsafe

## BHP Billiton – Cannington Mine

## The Problem

The interaction of light and heavy vehicles has long been recognised as a principal hazard. In a dark underground hard rock mine, this hazard is magnified due to a lack of visibility. The inclusion of pedestrians and other workers in confined areas where haul vehicles and light vehicles interact adds additional potential for high consequence incidents.

## Quick Hitch Fan Cradle

### Newcrest Mining Ltd – Cracow Gold Mine

#### The Problem – How do we make hanging secondary UG vent fans safe and efficient?

Underground secondary ventilation fans often require constant removal and re-installation. Large secondary fans are bulky items and can weigh in excess of 500kg. Installing secondary fans underground has traditionally been a very hazardous task and can take several hours of inefficient heavy labouring.

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## The Safe Mine Sling Holder

### Downer EDI Mining

#### The Problem or Initiative

Heavy machines, such as bulldozers, are prone to becoming bogged in wet weather. When this occurs, the recovery team may have to use a towline, such as a chain, cable or sling, to tow the vehicle out.

Towing slings for heavy vehicles are expensive pieces of equipment and may cost in the range of \$8,000 to \$12,000. It is therefore important that they are not damaged during the towing operation. However, far more critically, recovering vehicles can be hazardous for the personnel involved in the operation, and it is of paramount importance to ensure that **they** are not damaged during the towing operation.

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## Surface Teleremote Operation

### BHP Billiton – Cannington Mine

#### The Initiative

Teleremote operation of vehicles is not new in mining. Cannington Mine has used Teleremote capabilities for five years. While an Underground Teleremote Operation reduces operator exposure to certain risks by removing the individual from the cabin of the vehicle, existing practice is that the operator is still present in the underground environment. Typically the operator is around 200 – 300 metres from the machine being operated, and therefore still exposed to various hazards including noise, dust, diesel particulate, rock falls and vehicle interactions.

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## The Strongback Power Lift

### MMG Century

#### The Problem or Initiative

A series of gusseted steel plates, or belly guards, are used to prevent damage to the underside of a bulldozer (dozer). The belly guards for the Caterpillar D10 and 11 equivalents weigh in excess of 215 kg each, not including accumulated oil, grease, soil and rock product.

The removal and refitting of belly guards is a common task within Century's Mine Maintenance Workshop (MMW), necessary to carry out routine services or inspections, or to change-out under-body components. It is a task that cannot be avoided, and one that can be required in a workshop or field environment.

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## Notes



**3.30pm – 5.15pm**

**INNOVATION PRESENTATIONS** - Proudly Sponsored by Sharp Training

## Conveyor Idler Replacement Tool

Xstrata Coal Queensland – Abbot Point Bulkcoal: Aaron Ginzburg

## Light Vehicle Penetration Protection System

BHP Billiton – Cannington Mine: Adrian Bush

## Innovative Ventilation Duct Installation Method

Redpath Australia Pty Limited: Clayton Donnelly

## Carbon Fibre Vent Tube Project

Xstrata – Oaky North: David Lawrence

## Fluid Injection Protection – 700 Bar Twin-line Hose

MMG Century: David Leonard

## Perilya Handrail Testing Device

Perilya Broken Hill Limited: Peter Lean - NSW Winner of the Metalliferous Innovation Award for 2011

**5.00pm – 6.30pm**

## THE RESCUE STATION – Lobby Bar, Jupiters Townsville

**6.30pm – 7.00pm**

## PRE DINNER DRINKS – Jupiters Townsville Grand Marquee

**7.00pm – 10.30pm**

## INFORMAL DINNER & CHARITY AUCTION in aid of RACQ - CQ Rescue – Jupiters Townsville Grand Marquee

*Proudly Sponsored by uvex Safety Australia*

## Conveyor Idler Replacement Tool

## Xstrata Coal Queensland - Abbot Point Bulkcoal

## In Brief

Expanding operations at the Abbot Point Coal Terminal mean that the maintenance of conveyors is more important than ever. The processes involved in Maintaining Conveyor Idlers were identified by the Xstrata Coal Queensland team as activities that presented particular risks of injury and significant operating cost. The problem was resolved by two Abbot Point team members in a way that was both significantly safer and cheaper than many project engineers had recommended.

## Light Vehicle Penetration Protection System

BHP Billiton – Cannington Mine

### The Problem

Rock bolts and other rigid objects penetrating the floor pans of light vehicles is a hazard across the mining industry. These incidents, which can occur on surface roadways as well as in the underground environment, have the potential to cause serious injury to the occupants of the light vehicle.

In the underground, rock bolts become mixed with the ore when drives are being developed through previously mined sections of the ore body. During transport the loose rock bolts can fall out of loader buckets, from the back of trucks, or off conveyors. A bolt submerged in dirt or water is difficult to detect, and has the potential to flick (with one end firm against the ground) and penetrate the floor pan of any vehicle that runs over it.

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## Innovative Ventilation Duct Installation Method

Redpath Australia Pty Limited

### The Problem or Initiative

The problem involved the installation of steel ventilation duct of 1.4m and 1.8m diameter in an underground single entry heading as part of the drift development works at Kestrel Mine Extension. It was viewed early on in preconstruction risk assessments, that the installation of these sized ducts, needed to be undertaken without the direct physical involvement of people.

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## Carbon Fibre Vent Tube Project

### Xstrata Coal – Oaky North

#### The Problem

Xstrata Coal Oaky North operation applies ventilation to all underground coal faces by attaching lengths of ducting (vent tubes) to an auxiliary fan. This process creates negative pressure in the area being ventilated which draws air into the working face.

Historically, ventilation ducting was made from tin / stainless steel, later replaced by a fibreglass version which was far more durable and slightly lighter. Tubes came in various lengths, usually between 2.5 – 3.0m and could weigh in excess of 30kg each. An unfortunate feature of the tubes was that they often splintered easily when minor damage was incurred.

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## Fluid Injection Protection - 700 Bar Twin-line Hose

### MMG Century

#### The Problem

The very first fluid injection death occurred in Glasgow, Scotland to a rescue worker using the Jaws of Life. The 700 bar (10,000psi) hose he had draped over him failed and injected a high-pressure stream of oil into his body.

Mazzer Industries in Italy has developed the Texsleeve sleeve that goes over a hose. Under testing it has been found to prevent 950 bar (13,778 psi) of direct fluid injection oil spray. This product is certified to M.S.H.A. IC 213/0. Enerpac Australia is using this product on their commercially available 700 bar single hydraulic hoses. To date, no-one has been able to fit this sleeve to twin-line hoses used on the Jaws of Life and other workshop equipment. I have developed a process to fit this product to twin-line hoses, thereby increasing the safety of mine rescue and workshop employees by reducing the risk of fluid injection injuries.

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**Perilya Broken Hill Limited - NSW Winner of the Metalliferous Innovation Award for 2011**

The problem is to develop and implement a practical and robust testing regime to track handrail condition highlighting those handrails that require repair and confirming those that are still 'fit for purpose'.

The handrail testing system as per AS1657-1992 Appendix B – B3 (b) states “ a **means** of applying to the guard rail post a force of 550N” is required. As stated the **means** is the problem we have encountered because the testing apparatus and a suitable process are not defined. This is where a design was required to make an apparatus to ensure compliance with standards.

# Voting for Peoples Choice

Please cast your vote for the Peoples Choice Award and tear out for collection at the end of the Session.



## Queensland Mining Industry Health and Safety Conference 21 - 24th August 2011 Innovations Peoples Choice Award

### Innovation

Please tick only one box ☒

- |     |  |                          |
|-----|--|--------------------------|
| 1.  | <b>Decline Warning Lights System</b><br>BHP Billiton – Cannington Mine                   | <input type="checkbox"/> |
| 2.  | <b>Quick Hitch Fan Cradle</b><br>Newcrest Mining Ltd - Cracow Gold Mine                  | <input type="checkbox"/> |
| 3.  | <b>The Safe Mine Sling Holder</b><br>Downer EDI Mining                                   | <input type="checkbox"/> |
| 4.  | <b>Surface Teleremote Operation</b><br>BHP Billiton – Cannington Mine                    | <input type="checkbox"/> |
| 5.  | <b>The Strongback Power Lift</b><br>MMG Century  | <input type="checkbox"/> |
| 6.  | <b>Conveyor Idler Replacement Tool</b><br>Xstrata Coal Queensland – Abbot Point Bulkcoal | <input type="checkbox"/> |
| 7.  | <b>Light Vehicle Penetration Protection System</b><br>BHP Billiton – Cannington Mine     | <input type="checkbox"/> |
| 8.  | <b>Innovative Ventilation Duct Installation Method</b><br>Redpath Australia Pty Limited  | <input type="checkbox"/> |
| 9.  | <b>Carbon Fibre Vent Tube Project</b><br>Xstrata Coal – Oaky North                       | <input type="checkbox"/> |
| 10. | <b>Fluid Injection Protection – 700 Bar Twin-line Hose</b><br>MMG Century                | <input type="checkbox"/> |









## Tuesday 23rd August

7.30am – 6.00pm

**REGISTRATION** – Townsville Entertainment and Convention Centre Foyer

9.00am – 10.30am

**KEYNOTE PRESENTATIONS** – *Proudly Sponsored by Jobfit Systems*

**The Dangers Lie Below the Surface - Recognising the Importance of Mental Health in Mining to Improve Safety and Productivity**

Dr Jennifer Bowers, Chief Executive Officer, Centre for Rural & Remote Mental Health Queensland

**Last Man Standing**

Steven Bradbury OAM, Australia's First Winter Olympic Gold Medallist

10.30am – 11.00am

**MORNING BREAK AND DISPLAYS** – *Proudly Sponsored by DownerEDI Mining*

## The Dangers Lie Below the Surface - Recognising the Importance of Mental Health in Mining to Improve Safety and Productivity

Presenter: Dr Jennifer Bowers, Chief Executive Officer, Centre for Rural & Remote Mental Health Queensland

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## Last Man Standing

Presenter: Steven Bradbury OAM, Australia's First Winter Olympic Gold Medallist

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## Notes



# Conference Program - Concurrent Sessions



**Tuesday 23rd August**

**11.00am – 12.30pm**

**CONCURRENT PAPERS**

## Magnetic Room

### VEHICLE SAFETY

Proudly Sponsored by  
**SICK Pty Ltd**

**Chairman** Jim Randell, General Manager New Acland, New Hope Group.

**Avoiding Collisions in Underground Mines**

**Robin Burgess-Limerick**

Professor of Human Factors Minerals Industry Safety and Health Centre, The University of Queensland.

**Haul Road Design and Road Safety**

**Richard Jois**

Principal Road Safety Engineer, Safe Systems, ARRB Group.

**Breaking the Mould – New Vehicle Safety Policies**

**Matt Elischer**

Team Leader (QLD/NT), ARRB Group.

## Palm Room

### FATIGUE

Proudly Sponsored by  
**LifeAid Pty Ltd**

**Chairman** Neil Reynoldson, General Manager Moorvale, Macarthur Coal.

**Workplace Fatigue: Supporting Staff, Managing Risk**

**Shae McCartney**

Partner, Clayton Utz.

**Sleep-wake Patterns in Queensland Mine Workers**

**Dr Naomi Rogers**

Associate Professor, Central Queensland University.

**Which Factors Predict Tiredness and Sleepiness During a Morning Commute?**

**Prof. Lee Di Milia**

School of Management & Marketing, Central Queensland University.

**Dr Naomi Rogers**

Associate Professor, Central Queensland University.

## Jupiters Pavilion

### HEALTH & WELLBEING

Proudly Sponsored by  
**Core Health Consulting Pty Ltd**

**Chairman**

**Workforce Indicators of Health Literacy**

**Hugh Shannon**

Lecturer, Unit Coordinator, Institute of Health and Biomedical Innovation, Faculty of Health, Queensland University of Technology.

**Mental Health and Wellbeing in the Mining Industry**

**Dr Kristy McLean**

Postdoctoral Fellow, Institute of Health and Biomedical Innovation, School of Public Health, Queensland University of Technology.

**Embracing Bowel Health – Supporting People Through Education and Awareness**

**Tammy Farrell**

Managing Director, Core Health Consulting Pty Ltd.

## Auditorium 1

### LEGAL

Proudly Sponsored by  
**Sparke Helmore Lawyers**

**Chairman**

**Conduct Outside of Work Hours – Can and Should an Employer Interfere**

**Belinda Winter**

Partner, Cooper Grace Ward.

**Bullying and Harassment in the Mining Industry: Understanding the Beast and How to Tame It**

**Harold Downes**

Partner, Employee Relations, Freehills.

**Paul Smith**

Solicitor, Employee Relations, Freehills.

**When Breaching Safety Can Cost You Your Job**

**Shae McCartney**

Partner, Clayton Utz.

**12.30pm – 1.30pm**

**LUNCH AND DISPLAYS** - Proudly Sponsored by ABSC Group Pty Ltd

### Avoiding Collisions in Underground Mines

Presenter: Robin Burgess-Limerick

Author: Robin Burgess-Limerick

Collisions between vehicles or equipment, and between people and equipment, are a high risk in underground mines. The probability of collisions is relatively high because of the restricted working environment, restricted visibility from vehicles, and in some situations by the use of mining methods which involve close interactions between pedestrians and equipment. The consequences include serious injury and fatalities.

The prevention of collisions has recently been a focus of attention by regulators; and particularly the promotion of technological solutions for alerting equipment operators to the proximity of other vehicles, equipment or people. While the application of proximity detection technology is potentially beneficial, this paper takes a broader view of the problem and provides an review of the human factors and ergonomics issues related to the prevention of collisions in underground mines.

Case studies are presented which illustrate: the potential for equipment design changes to improve visibility; augmenting perception through the use of video cameras; the potential for proximity detection technology to reduce underground collisions; the role of vehicle control design in reducing collision risks; and the potential role of mine design. Human factors issues associated with the introduction of remote control and automation are also canvassed.



**Presenter:** Richard Jois  
**Author:** Richard Jois

The mines have an opportunity to improve their mine haul roads using demonstrated road safety techniques and reduce the likelihood of incidents and accidents if they build and maintain their mine haul roads to a high standard with safety as a focus.



### Breaking the Mould: New Vehicle Safety Policies

**Presenter:** Matt Elischer

**Authors:** Adam Ritzinger, Luke Callaway, Nick Trevorrow, Anthony Germanchev

The braking capability of mobile plant is a critical operational safety issue for the mining industry. At the heart of this problem is the trend for vehicles designed for use in normal environments such as roads and highways to be operated in mining environments, where the conditions are often much less forgiving. As a result, the braking systems of these vehicles can suffer degradation in performance.

Xstrata Zinc – Mt. Isa Mines identified this as a potential safety hazard, and engaged ARRB Group Ltd to conduct a review of the braking capabilities of a range of vehicles operated at the George Fisher mine in Queensland in 2009. ARRB worked closely with Xstrata to understand their concerns, and together they conducted a dynamic field testing program of a range of vehicles in typical operational scenarios.

ARRB also reviewed local and international brake capability standards and codes of practice, and aftermarket devices aimed at addressing vehicle brake performance in mine environments. The results of this investigation, combined with the field test data, were used to generate a set of safety policies for Xstrata, aimed at reducing the risk involved with operating on-highway vehicles in mining environments to an acceptable level.





**Presenter:** Shae McCartney  
**Authors:** Hedy Cray, Shae McCartney

Fatigue management is a complex and important obligation, taken seriously by the industry. There is always a difficult balance between maintaining an employee's privacy and taking all reasonable steps to ensure that they get home safely. This balance is made more difficult by:

- Join Hedy Cray, Partner and Shae McCartney, Senior Associate to discuss the important issue of fatigue in and out of the workplace, and the rights and responsibilities of employers and workers in managing it.



### Sleep-wake Patterns in Queensland Mine Workers

Presenter: Naomi L. Rogers

Authors: Lee Di Milia, Greg A. Dalliston, Chris J. Gilbert

Shiftwork affects sleep-wake timing and sleep quality, as well as waking capabilities. The effect of night shiftwork on waking functions is two-fold, with employees attempting to be awake and alert across the night, but experiencing difficulty sleeping during the day. Poor daytime sleep produces additional pressure in maintaining high levels of functioning during waking periods due to an accumulated sleep debt and resulting high levels of fatigue. As a consequence workers experience difficulty maintaining alertness and performance levels during work periods, putting them at increased risk for errors, injuries and accidents.

Different roster schedules have different effects on sleep-wake patterns. Factors that may impact sleep-wake behaviour, include shift length, number of consecutive shifts, direction of shift rotation and number of days off.

To understand the effects of different rosters on sleep-wake behaviour, mine-workers from 4 mines, working on 4 different rosters were studied for one roster cycle. Sleep-wake patterns were assessed using actigraphs, small watches that detect movement and allow us to determine when someone is awake or asleep, and sleep diaries.

Data will be presented to show the effects of different rosters on sleep-wake behaviour and sleep duration and quality. Results from this study will be used in the development of controls and management strategies to help improve sleep-wake patterns and sleep quality and improve waking functioning and reduce fatigue.



Authors: Lee Di Milia, Naomi L Rogers

Drivers that reported being 'sleepy' or 'tired' were involved in a series of incidents; 15 drivers either ran-off the road or crossed the centre line, one clipped a guide post and one stopped for road works that did not exist. No accidents were recorded.



### Workforce Indicators of Health Literacy

Presenter: Hugh Shannon

Authors: Hugh Shannon, Tony Parker

Health literacy represents cognitive and behavioural responses to understanding, seeking and using information in ways that impact on physical and mental health. Health literacy is recognised by the World Health Organization as a capacity building health determinant. The Workforce Health Innovation (WHI) group at QUT's Institute of Health and Biomedical Innovation is developing an understanding of health literacy in the mining industry with the aim of improving strategies to enhance communication of health issues and improve health related behaviour. The rationale for the work is based on several years experience in the Queensland mining industry. The presentation will discuss procedures for the evaluation of health literacy focusing on musculoskeletal, cardiovascular and mental health issues.

Different forms of health literacy will be discussed around factors such as:

- Using health information provided by others;
- Discussing health at work, home or with friends;
- Finding health information;
- Achieving good control over personal health; and
- Helping others to achieve good health.

The Australian Mining Health Literacy Questionnaire, developed by the WHI group is based on the preceding factors. Methods and outcomes of the validation process for this new measurement tool will be discussed and a plan for its future use presented.



### Mental Health and Well-being in the Mining Industry

Presenter: Kristy McLean

Author: Kristy McLean

Psycho-social problems are increasing in the Queensland mining workforce most likely as a function of several factors including, living away from family, roster structures, long working hours, and increasing work demands. These issues may result in poor mental health which can impact on a person's quality of life and their ability to participate productively in the labour force. Thus, health and well-being have important consequences for individual employees, as well as for the organisation in which they work. This talk will present findings from a qualitative study conducted with a sample of Queensland open-cut miners. They identified several key areas of concern regarding the influence of social factors on their mental health and well-being and their perceived impact on work and family relationships. Results are discussed in light of implications for workplace culture and policy regarding the support of mental health issues in the industry.



### Embracing Bowel Health: Supporting People Through Education and Awareness

Presenter: Tammy Farrell

Author: Tammy Farrell

Health screening within the mining industry has certainly come along way in the past few decades, helping to raise the awareness of our fellow colleagues highlighting the importance of keeping our health on track by further investigating what may have otherwise been overlooked. It is time we now start to enlighten the mining industry on Bowel Cancer. It is often the topic people like to speak least about, with the concern it might turn people away or may sound too extreme. It is only extreme when you listen to a person telling you they have had bowel cancer symptoms for the past 3 years and it is now too late to do anything to eliminate it... that is extreme!

#### The Facts:

1 in 12 Aussies will be diagnosed with Bowel Cancer by age 85.

Of the 274 new cases diagnosed every week, 78 people die from the disease.

If caught in time, 90% of bowel cancer cases can be treated successfully.

The facts are that bowel cancer is the second largest cause of cancer deaths in Australia, and we are starting to see an increase in cases affecting both men & women, young and old. Within the mining population, the demographics of both men and women working within this industry is reason enough to start promoting the screening for bowel cancer. In 2007 in Australia it is reported that 7,804 males compared to 6,430 females were diagnosed with bowel cancer. From these statistics it is unclear whether men have a higher risk of bowel cancer or if they are less likely to report their symptoms or be screened in good time, what is clear is that neither gender can afford to ignore the early warning signs.

Often just knowing bowel cancer is in the family can be reason enough to get screened and prevent potential polyps or cancers from spreading, putting the individuals life at risk. When over 14,000 people are being diagnosed with bowel cancer each year, it is imperative we start to make this industry aware of helping to potentially prevent the spread of this disease within this workforce by embracing our health through both awareness and early detection.

People should talk to their GP if they are experiencing symptoms or are concerned they may be at risk of Bowel Cancer. For more information contact Bowel Cancer Australia on 02 9923 8269 or to order test kits for your staff please call 1800 555 494. Reference: Bowel Cancer Australia [www.bowelcanceraustralia.org](http://www.bowelcanceraustralia.org)





### Conduct Outside of Work Hours: Can and Should an Employer Interfere?

Presenter: Belinda Winter

Author: Belinda Winter

In 2006, only 13% of workers in the Queensland mining industry were female. Five years on, female workers are still by far in the minority. However, the increased participation of female workers in mining has already created new challenges for employers and their employees. Managing appropriate workplace behaviours between employees at work is a must for all employers to comply with their health and safety obligations. However in the mining industry, this is complicated due to the provision of onsite living arrangements and shared social areas. Difficult questions arise as to an employer's level of responsibility to supervise and regulate employee behaviour in these circumstances.

This paper explores this issue and provides some guidance to employers, based on case examples, about the extent to which they can and should interfere with work relationships outside of work. The paper will also provide some strategies for employers to minimise their exposure against legal claims arising from the conduct of employees and contractors outside of work hours.



### **Bullying and Harassment in the Mining Industry: Understanding the Beast, and How to Tame It.**

Presenters: Harold Downes, Paul Smith

Authors: Harold Downes, Paul Smith

In addition to mining health and safety obligations, mines may also (depending on the nature of their operations) attract general workplace health and safety obligations. Workplace bullying and harassment has also become a central issue for employers and regulators.

Mines must continue to be vigilant in guarding against workplace bullying and harassment.

Harold Downes and Patrick Barry will discuss:

- how workplace bullying and harassment impacts upon mining operations;
- exposures for mines and individuals and the approach taken by regulators;
- recent bullying and harassment prosecutions; and
- ways of ensuring workplace bullying and harassment is guarded against on a mine.



### When Breaching Safety Can Cost You Your Job

Presenter: Shae McCartney

Authors: Hedy Cray, Shae McCartney

Workplace safety is obviously a high priority for workers, employers and those that represent them, but when should a worker's breach of safety protocols cost them their job?

As with all industrial matters there is a balance between an employer's ability to direct employees to comply with their safety obligations and an employee's right to be treated fairly. Fair Work Australia has recently handed down a number of decisions on unfair dismissal claims which seem to split down the middle between upholding dismissals in relation to safety breaches and overturning them.

It is obvious that safety breaches can justify dismissal. However, when will one safety breach be serious enough to justify summary dismissal as opposed to a long history of minor breaches? How can employers, workers and unions work together to ensure that the importance of the safety message is not overshadowed by procedural and parity issues?

Join Hedy Cray, Partner and Shae McCartney, Senior Associate, to discuss the rights and obligations of workers and employers in this important and topical area of the law.



## Notes



# Conference Program - Concurrent Sessions



**Tuesday 23rd August**

**1.30pm – 3.00pm**

**CONCURRENT PAPERS**

## Magnetic Room

### TECHNOLOGY

Proudly Sponsored by  
**LSM Technologies**

**Chairman** Greg Ward, General Manager Health, Safety, Environment & Community, Macarthur Coal.

**Nexys: a Real-time Risk Management System**

**Kerstin Haustein**

Research Engineer, CSIRO Earth Science and Resource Engineering.

**Dean Kirkwood**

Managing Director, Mining Logic Solutions.

**New Kids on the Block – Impact of Emerging Technologies in Training Simulation**

**James Croft**

Learning Technologist, Mining Industry Skills Centre.

**Cabin Air Quality System: Improving Operator Health in Mobile/Fixed Plant Cabins**

**Peter Woodford**

Managing Director, LMS Technologies Pty Ltd.

## Palm Room

### CONTRACTOR

Proudly Sponsored by  
**MICOMM**

**Chairman** Robert Nowotny, General Manager, John Holland.

**Supporting the Safe Operation of Contractors**

**Shae McCartney**

Partner, Clayton Utz.

**Contractor Management**

**Mark Parcell**

Consultant, Mine Safety Institute of Australia.

**First Impressions Last – Make Your Induction Count**

**Shane O'Neill**

Director, Capability Group.

## Jupiters Pavilion

### MUSCULOSKELETAL RISKS

Proudly Sponsored by  
**Ford Health**

**Chairman**

**Prevention of Musculoskeletal Injury and Disorder**

**Prof. Tony Parker AM**

Professor Emeritus, Institute of Health and Biomedical Innovation, Faculty of Health, Queensland University of Technology.

**Job Role Criteria (JRC)**

**Joel Edson**

Occupational Therapist, Xstrata, North Queensland.

**Lyndonna Ross**

Occupational Therapist, Xstrata, North Queensland.

**Assessing Work Tasks of Blasting Personnel**

**Dr. Michael McDonald**

School of Human Movement Studies, Queensland University of Technology.

## Auditorium 1

### LEGAL

Proudly Sponsored by  
**TMM Group**

**Chairman** Brett Garland, Chief Operating Officer, Caledon Resources.

**Reasonable Practicability in Practice – a Practical Understanding of a Legal Concept**

**Alastair Smith**

Associate, Norton Rose Australia.

**Too Many Fatalities – Lessons To Be Learned**

**Ian Humphreys**

Partner, Blake Dawson.

**OHS Harmonisation: Implications for Senior Leaders**

**Andrew Cardell-Ree**

Special Counsel, Employment, Workplace Relations and Safety, Herbert Geer Lawyers.

**3.00pm – 3.30pm**

**AFTERNOON BREAK AND DISPLAYS** - Proudly Sponsored by DownerEDI Mining

### Nexsys™: A Real-time Risk Management System

Presenters: Kerstin Haustein, Dean Kirkwood

Authors: Kerstin Haustein, Eleonora Widzyk-Capehart,  
Dean Kirkwood, Peter Wang, Ricky Prout

Monitoring dangers in underground coal mines requires constant surveillance of numerous factors, including data from various sensors and systems, to avert disaster and achieve zero harm in the mining environment. This amount of data can be overwhelming for control room operators, and highlights the need to integrate mine data into one concise view for easy interpretation and decision support. This is the role of the Nexsys™ Real-time Risk Management system, primarily designed for the underground coal mining industry.

Nexsys™ integrates traditionally incompatible data from a variety of proprietary mining systems, for which it provides real-time analysis and an anomaly detection capability. This brings valuable information to hand in a succinct view to assist in making the best possible decision about what to do in a potentially risky situation. The system, beginning as a CSIRO research project with Australian Coal Association Research Program (ACARP) and Japan Coal Energy Center (JCOAL) funding, is now available as a commercial product through Mining Logic Solutions (MLS).

While Nexsys™ was primarily designed to address the needs of the underground coal mining industry, other potential applications include surface coal mining, metalliferous mining and miscellaneous hazardous worksites, providing the potential to reform safety across these industries.





Presenter: James Croft  
Author: James Croft

The Mining Industry Skills Centre's paper reviews traditional simulated environments, and explores emerging technology including, augmented reality, virtual spaces and smart phone applications, and considers their ability to provide relevant, accessible, integrated simulated training environments for the resources industry.



### Cabin Air Quality System: Improving Operator Health in Mobile / Fixed Plant Cabins

Presenter: Peter Woodford

Author: Peter Woodford

Mobile and Fixed Plant is subjected to “dusty” contaminated operating environments in the Mining, Quarrying, Construction, Earthmoving, Fertiliser, Cement, Agriculture, Timber & many other Industries. These environments contain airborne particulate / fibres that can cause severe lung disease & other short & long term health issues.

Conventional Pressuriser / Filtration designs for HVAC Air Filtration Systems are not adequate to handle high volumes of dust / fibres for long periods of time and are not compliant to OEL (Operator Exposure Limits) as required by Safe Work Australia: “Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]”.

HVAC Systems for Fixed & Mining Plant Cabins have the same principal objectives:

- Comfort for the Operator: Optimised Heating & Cooling.
- Health: Pressurise the Cabin and provide Clean Air supply.
- Health Safety: Provide Fresh Air so as to avoid CO2 concentration (Premature Fatigue / Micro sleeps).

The RESPATM PFP (Precleaner + Filtration + Pressuriser) is an innovative technology that has been field tested by DEEDI- Queensland Mines Health Surveillance Unit and endorsed in numerous test reports by NIOSH National Institute of Occupational Safety and Health.

RESPATM technology has proven to be compliant to both International and Australian Standards and the provides the highest Protection Factor for Quality Cabin Air for Operators.



**Presenter:** Shae McCartney  
**Authors:** Hedy Cray, Shae McCartney

Contractor management is always a key risk area. Recent cases and the impact of harmonisation will mean an even greater focus is placed on how contracts are set up and managed. All stakeholders have an important role to play in ensuring that contractors are used to provide specialist and technological expertise to increase safety rather than detract from it. Join Hedy Cray, Partner and Shae McCartney, Senior Associate to discuss what is required to manage safety obligations when utilising contractors in the workplace from set up to demobilisation.



### Contractor Management

Presenter: Mark Parcell

Author: Mark Parcell

Since the introduction of the Queensland Coal Mining Safety and Health Act (1999) and Regulation (2001) there have been eight fatal accidents at Queensland coal mines. Seven of these accidents have involved contractors. The only fatal accident at a Queensland coal mine that involved an employee of the Mine Operator was when the Senior Mining Engineer fell from the high wall at a surface mine. Every other person to die in an accident at a coal mine for the past 10 years has been a contractor.

Contractors make up almost 50% of coal mine workers yet represent 90% of fatalities. The coroner has made recommendations for the management of contractors at Queensland coal mines and supported by advice from other authorities. This paper aims to amalgamate the advice given in relation to the management of contractors at Queensland mines in order to protect the safety of all coal mine workers, including contractors.



Presenter: Shane O'Neill

**Authors:** Shane O'Neill, Jamie Sharpe

This paper begins with a series of questions that challenge you to evaluate your current induction program. The paper then examines the difference between induction programs that apply a 'one size fits all' approach to a more innovative method of induction delivery applying a 'just in time, just enough' approach.

As our workforce grows and becomes more diversified, the quality and consistency of key messages will become even more crucial to ensure upfront engagement of our new employees and contractors at an induction level. This is the key opportunity where the desired culture and importance of safe behaviours can be reinforced and demonstrated. Easier said than done? Maybe, but we have found that this can be achieved by focusing on an inclusive approach to delivery using traditional forms of learning, with an innovative slant, combined with technology based applications. The paper concludes by exploring the processes required to develop an induction program which delivers a positive and lasting first impression to our future workforce.



### Prevention of Musculoskeletal Injury and Disorder

Presenter: Tony Parker

Author: Tony Parker

Progress and barriers to the effective prevention of musculoskeletal injury and disorder in the mining industry

Despite considerable efforts to reduce the risk of musculoskeletal injury and disorder in the mining industry, the incidence remains high together with significant short and longer term personal and financial costs. Expansion of the workforce with increasing diversity, longer working hours and high productivity demands also further complicates the issue and promotes a more reactive and less proactive approach to managing the problem.

Factors involved are numerous and interactive, including organisational climate and leadership, general health status and the validity of outcomes derived from health surveillance programs including pre-employment screening, return to work and health promotion.

Prevention also implies knowledge of the risk factors for injury and implementation of strategies to control these risks. Evaluating risk particularly across 12-hour shifts and extended rosters is made difficult by the lack of objective measures of exposure and the means to measure the effects of various exposures on musculoskeletal tissues. New and innovative technologies are required to address these issues.

This presentation will use research information obtained from the mining industry and workforce over an extended period of time, to identify some of the major impediments to improvement in the prevention of this major health problem and identify new technologies and strategies designed to enhance outcomes in this area.



**Presenters:** Joel Edson, Lyndonna Ross  
**Authors:** Joel Edson, Lyndonna Ross

The Job Role Criteria is a living document and provides ongoing opportunity to improve the quality and quantity of communication, health, rehabilitation and injury management outcomes and support internal systems.





### Assessing Work Tasks of Blasting Personnel

Presenter: Michael McDonald

Author: Michael McDonald

Job tasks that involve exposure to work related musculoskeletal disorder (WMSD) risk factors may impact both the risk of injury and production downtime. Common WMSD risk factors associated with mining tasks include forceful exertions, awkward postures, repetitive motion, jolting and jarring, forceful gripping, contact stress, and vibration.

Blasting is a complex activity demanding special skills on the part of the blaster and other crew members. The general functions of the blast crews are to use explosives to break up overburden, which then can be removed by draglines, dozers and trucks to expose coal seams, and to break up coal seams so that the coal can be loaded onto haul trucks. Information obtained from the literature indicates that blast crews perform tasks that are physically demanding, particularly when they are exposed to extremes in weather conditions.

This presentation will discuss the process adopted to examine the common work practices of blasting personnel from an injury risk perspective as part of a larger project concerned with M/S injury. The project provides an approach to identify key factors which impact upon injury and opportunities for improvement in injury prevention strategies.

Discussion will highlight the importance of understanding the relationship between various factors which contribute to musculoskeletal injury within the industry.



**Authors:** Aaron Anderson, Alastair Smith

As a result of this enhanced understanding, business will be able to better design their risk assessment procedures, particularly in relation to the identification and selection of controls, to enable them to properly comply with their obligations.



## Too Many Fatals – Lessons To Be Learned

Presenter: Ian Humphreys

Author: Ian Humphreys

Ian has been involved in safety related matters for over 25 years. At first he worked in the shipping and stevedoring industries and then for the last 20 years, as a lawyer. During this time, he has managed and advised on dozens of tragic industrial fatalities and many more serious incidents. In this paper, Ian will canvas a range of key legal lessons and practical insights learnt from this experience. The paper will cover key legal issues associated with the legal response to an industrial fatality and will also consider a range of practical steps which can be taken to best manage such an event.



### OHS Harmonisation: Implications for Senior Leaders

Presenter: Andrew Cardell-Ree

Author: Andrew Cardell-Ree

The harmonisation of occupational health and safety (OHS) laws across all sectors from January 2012 will mean significant change for the mining sector.

While the long-awaited National Mine Safety Framework review is expected to adopt an operational level focus on OHS, harmonisation will have far-reaching implications for senior leaders and middle management who are not involved in the day to day operation of a mine. Never has "off site" been less "off the hook".

How can a leader show they are exercising "due diligence"? Who is affected and what does that mean in practice? What does "good" look like, and how can you achieve it?

This session will address:

- The new legal duty of "officers" to "exercise due diligence", how it differs from the current regime, and what that means for senior leaders and the way you do business.
- Implications for "middle managers" who sit somewhere between the Board of Directors and the site senior executive responsible for day to day operations.
- Practical steps to manage your legal risks, and to support your people, whatever your role.



## Notes



# Conference Program - Concurrent Sessions



**Tuesday 23rd August**

**3.30pm – 5.00pm**

**CONCURRENT PAPERS**

Magnetic Room	Palm Room	Jupiters Pavilion	Auditorium 1
ROAD & VEHICLE SAFETY	CULTURES & BEHAVIOUR	HEALTH & TECHNOLOGY	INVESTIGATION
<p>Proudly Sponsored by <b>Australian Safety + Training Alliance</b></p> <p><b>Chairman</b></p> <p><b>A Safety Case for Haul Truck Brakes</b> <b>Keith Larsen</b> Manager - Engineering Services, Hastings Deering (Australia) Ltd.</p> <p><b>Commuting in Queensland Mine Workers</b> <b>Dr Naomi Rogers</b> Associate Professor, Central Queensland University.</p> <p><b>Road Safety Beyond Mine Gates</b> <b>Damir Vagaja</b> Manager Mining &amp; Resources, Safe Systems, ARRB Group.</p>	<p>Proudly Sponsored by <b>Australasian Safety Services Pty Ltd</b></p> <p><b>Chairman</b> Bob Fulker, Asset President, BHP Billiton Cannington.</p> <p><b>What Makes People Tick? The Psychology of Safety</b> <b>Anthony Gibbs</b> Client Development Manager, Sentis Australia Pty Ltd.</p> <p><b>Creating a Safety Culture of Discretionary Performance Through Supporting People</b> <b>Carolyn Hands</b> Leadership Consultant, Safetyworks Group Pty Ltd.</p> <p><b>What to do when Incidents are not Caused by Safety Management System Deficiencies</b> <b>Cristian Sylvestre</b> Managing Director, SafeStart.</p>	<p>Proudly Sponsored by <b>Corporate Bodies International</b></p> <p><b>Chairman</b></p> <p><b>Whole-body Vibration Exposure in Mining</b> <b>Gary Foster</b> Occupational Hygienist, Managing Director, Fosters OHS.</p> <p><b>Embracing 7 Years of Functional Testing at a Mine</b> <b>Jenny Legge</b> Managing Director, JobFit Systems International Pty Ltd.</p> <p><b>Tailoring Technology to Create a Health Ownership Culture</b> <b>Helen Scott</b> Dietitian &amp; Exercise Specialist, Corporate Bodies International Pty Ltd.</p> <p><b>Emily D'Alterio</b> Senior Health and Safety Advisor, Rio Tinto Kestrel Coal.</p>	<p>Proudly Sponsored by <b>SICK Pty Ltd</b></p> <p><b>Chairman</b></p> <p><b>Not Enough Incidents</b> <b>Cristian Sylvestre</b> Managing Director, SafeStart.</p> <p><b>ICAM Investigations: Avoiding the Pitfalls</b> <b>Matthew Smith</b> Partner, Sparke Helmore Lawyers.</p> <p><b>Safety Investigations: a Cost or an Opportunity for Windfall Profits</b> <b>Peter Peachey</b> Senior Engineer, Scientific &amp; Engineering Consultants Pty Ltd.</p>

**6.30pm – 7.15pm**

**PRE DINNER DRINKS – Townsville Entertainment and Convention Centre Forecourt**

**7.30pm**

**CONFERENCE DINNER AND INNOVATION AWARDS**

*Proudly Sponsored by CFMEU Mining & Energy Division and Australian Workers' Union*

**Townsville Entertainment and Convention Centre Auditorium**



### A Safety Case for Haul Truck Brakes

Presenter: Keith Larsen

Author: Keith Larsen

It is inevitable that haul truck brakes eventually fail with dire consequences.

Embracing an age of Zero Harm supporting people and technology to declare proof (not probability) that inherent faults never fail to harm; might seem a Holy Grail. Yet the burden of proof on people and technology that Major Hazard Facilities never fail to catastrophic harm is already supported in fully Regulated Safety Cases. Only proven Facilities become licensed to operate.

To support mines or quarries carry the burden of proof of Zero Harm in context of continued brake effectiveness, User Tools called Specific Conditions of Use (SCUs), are published as fact in Regulator-free Safety Cases.

Complete adherence to all SCUs gives a User's SMS the option of "permit"-ing haul truck operation to declare complete proof of Zero Harm in context of continued effectiveness.

Safety Cases can also demonstrate:

- Accountable Professional level consultation in deference to SafeWork Australia's Safe Design Principle 5 (Information Transfer)
- A focus on system "fault" before, not whose "Fault" after
- Proof of conformity to regulated prescribed text
- "Just Cause" for not embracing an age of remnant generic prescriptive text (Corporate or Authoritative) falling short of supporting people and technology



### Commuting in Queensland Mine Workers

**Presenter:** Naomi L. Rogers

**Authors:** Tony K.P. Ip, Bradley G. Whitwell, Lee Di Milia,  
Greg A. Dalliston, Tim Whyte, Chris J. Gilbert

In Queensland, many mine-workers live on-site during their roster cycle, and travel to another location between cycles. One important issue is fatigue management during commuting.

In 2008, a questionnaire was sent to coal mines in Queensland, with n=917 employees responding. Employees were asked about roster length, living arrangements, commute length and resting. In 2011 a second questionnaire was sent to coal mines, asking about work and non-work activities, commuting and living arrangements.

From the first questionnaire, most employees lived in a house (64%), 21% in a studio style unit and 10% in a room during their roster cycle. 67% commuted between 1-3h, 19% between 3-5h, and 12% more than 5h. 81% of workers drove alone, while 12% car-pooled. Approximately half (46%) did not rest before commuting, although 33% rested between 1-4h before commuting. Workers who-car pooled were less likely to rest before commuting relative to those commuting alone; and the longer the commute the more likely someone was to rest first. Data from the second questionnaire will also be presented, and compared with that collected in 2008.

The data demonstrates that many mine-workers in Queensland drive long distances to and from work, with little or no rest breaks. New approaches are needed to develop effective fatigue management strategies for commuting.





### Road Safety Beyond Mine Gates

Presenter: Damir Vagaja

Author: Damir Vagaja

Incidents that occur within mine sites, particularly those with serious injury or fatal outcomes, usually feature prominently in media reports, causing additional pressure on mining operations. This is one of the reasons why mine operators put a lot of effort into dealing with safety issues within the confines of active mines.

However, mining activities also have a significant influence on safety that extends 'beyond mine gates'. One of the examples is traffic safety on roads generally not considered as directly associated with mining activities. This network of 'supporting roads' includes site access roads, railway access roads, service roads, exploration roads, as well as public roads used by mining operations.

Unfortunately, serious accidents occur on these roads but do not receive the same level of scrutiny by the media or attention by mining operators. Some of the hazards associated with driving beyond mine gates include:

- inadequate road configuration
- hazardous roadsides
- interaction with fauna
- unsafe speed
- long commute
- fatigue
- lack of training.

This paper will summarise a range of practical measures aligned with Safe System principles that can be implemented to reduce the risk for road users on the supporting roads network.



### What Makes People Tick? The Psychology of Safety

Presenter: Anthony Gibbs

Author: Ali Dale

As safety professionals and leaders within industry understand, the safety performance of any business is the result of a complex interaction between organisational and individual factors. With the almost inevitable plateau that many organisations are now experiencing, further improvements necessitate 'doing something different', rather than simply more of the same.

To do this, we need to apply good psychology and neuroscience to leadership within the safety domain. Using an applied approach, based on real industry examples, this session will:

- Use a simple functional model of the brain to understand core drivers of human behaviour as they apply to leading effective safety behaviours
- Explore the relatively predictable 'stages of change' as the framework to understand resistance to change and how to ensure true change that will be sustained over the long term
- Leave attendees with some practical tools of influence to achieve better safety outcomes



Presenter: Carolyn Hands  
Author: Carolyn Hands

**Author:** Carolyn Hands

To learn what leaders are doing to create and sustain discretionary safety performance in the workplace.

An ideal safety culture is one which creates a culture of discretionary performance where people behave in a certain way because they want to and not because they have to.

This presentation includes case studies to illustrate that such a culture is achievable.



### What To Do When Incidents Are Not Caused by Safety Management System Deficiencies

Presenter: Cristian Sylvestre

Author: Cristian Sylvestre

The paper outlines why people still have incidents even though organisations have a mature and effective Safety Management System in place, behaviour based safety is conducted and are fully submersed in safety leadership.

A simple behavioural pattern that is responsible for putting people in contact with hazards – which lead to a high percentage of personal safety incidents – is explained and outlined fully. This opens the door to areas of focus in safety that would not normally be targeted by organisations and leads to improving conformance with the Safety Management System and a better safety culture.

This new approach will attract people that have received an incident report where the corrective action was 'take more care' 'pay more attention' or 'employee counselled not to do that again' and have not known what to do.

The techniques used to address this are used by over 1500 organisations worldwide and have resulted in 60-90% reductions in injuries within 6-12 months of their introduction. Australian case studies in the mining & quarrying industry are presented to illustrate the success of the techniques.



### Whole-body Vibration Exposure in Mining

Presenter: Gary Foster

Author: Gary Foster

Whole-body vibration exposure has a positive association with musculoskeletal disorders including back injuries (NIOSH, 1997). The mining environment and the heavy earth moving equipment used in mining makes this industry susceptible to whole-body vibration exposure. Typically most mining exposures are placed in the Caution Zone of the Australia Standard guidelines. Several heavy vehicles such as dozers often cause exposures that exceed the Likely Health Risk Zone. This is supported by the literature as in a NIOSH report "An analysis of serious injuries to dozer operators in the U.S. mining industry" by Wieghagen et al (2001) whom correlated that dozers have the highest level of vibration health risks with the main cause of injury from vertical and lateral vehicle jolts and jars.

Safe design can play a pivotal role in designing out some of the health risks. Suspension seats are one factor that determines the extent of whole-body vibration exposure to an operator. This paper describes the test methods and results of comparative vibration tests conducted on a dozer performing typical tasks such as pushing, tramming and ripping. Three different air ride seats were tested under the same conditions. The paper discusses the methodology used and results of the comparative tests.



### Embracing 7 years of Functional Testing at a Mine

Presenter: Jenny Legge

Author: Jenny Legge

If people's livelihoods are being affected by decisions made from the results of Pre-Employment Functional testing, then we need to make sure that we have got it right.

ACARP funded a study into the Validity of Pre-Employment Functional Testing that compared injury rates to pre-employment functional testing results of 336 workers from December 2002 to January 2007. Using innovative technology, mismatches between worker capabilities and job demands demonstrated an increased risk to workers of 3.5 times in sustaining a back or shoulder injury from manual handling.

A total 637 records, have now been collected since 2002 which has allowed further investigation of the data. Injury risk of back, shoulder and knee injuries related to overall performance in the functional test and from performance on individual components of the assessment like squatting and stooping will be presented.

Even though the functional testing protocol was objective and used technology to identify areas of risk, we need to remember that people are involved in the decision-making and that these tools are designed to support not rule.

Implications of the research findings for workers, employers and health professionals will be discussed. Five common mistakes based on experience from over 5000 assessments will be highlighted.



### Tailoring Technology to Create a Health Ownership Culture

Presenters: Helen Scott, Emily D'Alterio

Authors: Helen Scott, Emily D'Alterio

In recent years the increased presence of technology has led to changes in the delivery of workplace health and wellbeing programs. Transition from face-to-face consultations and follow-up, to an online, computer-based learning system is changing the face of workplace health initiatives. The use of this technology coupled with the shift from onsite to offsite health initiatives will, in the long-term, assist in building a health ownership culture within the mining industry.

This paper examines the case study of Rio Tinto Kestrel. Corporate Bodies has tailored the Rio Tinto 'Achieve Health' program to meet the needs of the Kestrel workforce. The online 'Health Risk Management System' and 'Myhealth' personal online health page is coupled with face-to-face consultations during the initial and high risk intervention phase. This ensures individuals are provided with the knowledge and skills to improve their health. The program has grown from strength to strength and CBI and Kestrel Coal will share the lessons learnt to benefit other companies and providers who are looking to effectively utilise technology and offsite interventions to optimise their health and wellbeing initiatives.



**Presenter:** Cristian Sylvestre  
**Author:** Cristian Sylvestre

The paper also highlights a fundamental question that screams to be asked during incident investigations but hardly ever is, and provides information on how incident investigation processes can be improved to fully understand the root cause and thereby, prevent future incidents.





### ICAM Investigations: Avoiding the Pitfalls

Presenter: Matthew Smith

Author: Matthew Smith

Using the Incident Cause Analysis Method (ICAM) and similar models to investigate and report on health, safety and environmental incidents or near misses has become widespread across the mining industry.

These models do not just look to uncover the cause of an incident or near miss, they also consider the matrix of contributing factors and identify general deficiencies across a breadth of areas touching on an incident, regardless of their direct causal connection.

This all encompassing approach provides reassurance to mine health safety and environmental officers, managers and others that the appropriate corrective and preventative actions are being formulated to prevent future incidents. However, such an all encompassing approach, when not applied prudently and carefully, can have serious negative practical and legal implications for many, including the mine operator, mine management and other persons in statutory positions.

By considering both the positive and negative implications of ICAM reports, this paper will identify measures and actions that can be taken to:

- improve the quality of ICAM investigations and reports
- protect the contents of ICAM investigations and reports from inappropriate or damaging use
- ensure the legal liability of an organisation and its individuals are not unduly put at risk.



**Authors:** Peter Peachey, Martin Kortlucke

The Government recognises that “we all have to make a quid” and we all know that the mining industry must survive on profits not handouts, so this paper will explore some of the ways that safety investigations can not only improve safety but also trigger windfall profits.



## Notes





# Presentations

## Pike River Overview

**Ken Singer, Deputy Chief Inspector of Coal Mines, DEEDI**

Wayne Hartley, State Manager, Queensland Mines Rescue Service

Stewart Bell, Deputy Director-General, Commissioner for Mine Safety and Health, DEEDI







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