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Risky Business: Implementing Risk Management at the Operational Level

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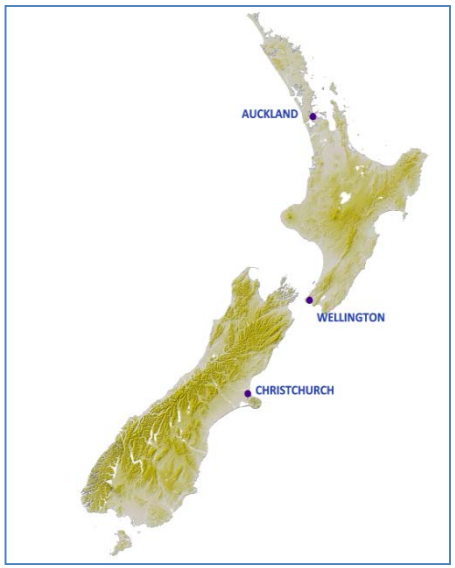
South Island Locations



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Risk Management Journey

- **Why start a risk management journey?**
  - ***Approval of Escarpment Mine 2013***
  - ***DRAFT Health Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013***

Risk Management Journey

- **Development plan for a revised Health Safety Management System**
  - ***What risk management processes are required at extractive site?***
  - ***How do policies, objectives, strategies, standards & procedures = a risk management organisational culture?***

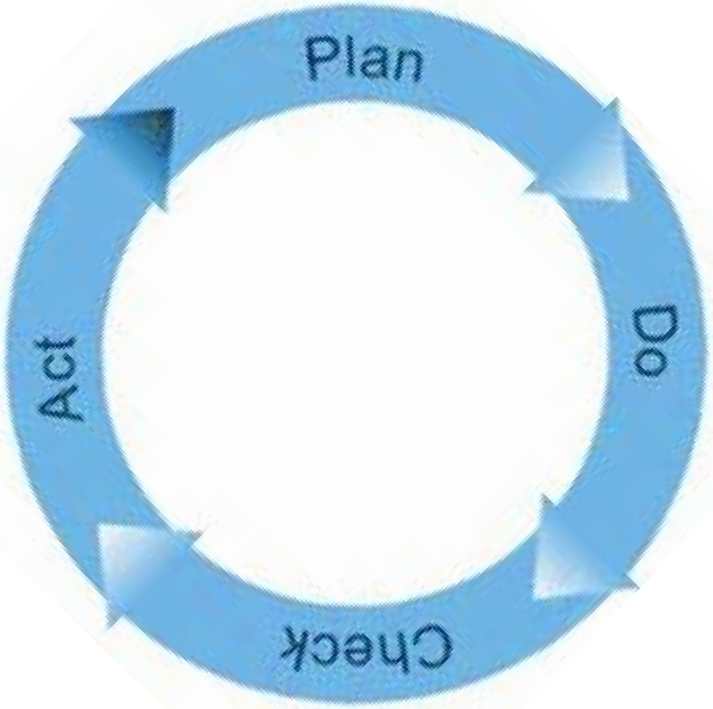
Risk Management Journey

- **What BRL had in place for risk start of 2013?**
  - ***BRL Risk Policy***
  - ***BRL Board Sub Committee in Risk and Audit***
  - ***Job Safety Analysis Tool***
  - ***Formal Risk Assessments for larger projects***
  - ***Each site used their own risk matrix for risk assessments***

Risk Management Journey

- **Determined our goal**
  - ***To transform the existing health and safety culture of mine workers to systematically adopt risk management into their everyday work practices in a pragmatic way***

Health and Safety Management System



Stages in AS/NZS 4804:2001 (Occupational health and safety management systems— General guidelines on principles, systems and supporting techniques)

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Management Incorporating Risk Management

Plan to Manage Risks

Investigate Incidents & Audit

Adopted from NSW Dept of Industry and Investment, *MDG 10 Minerals Industry Safety and Health Risk Management Guideline* January 2011

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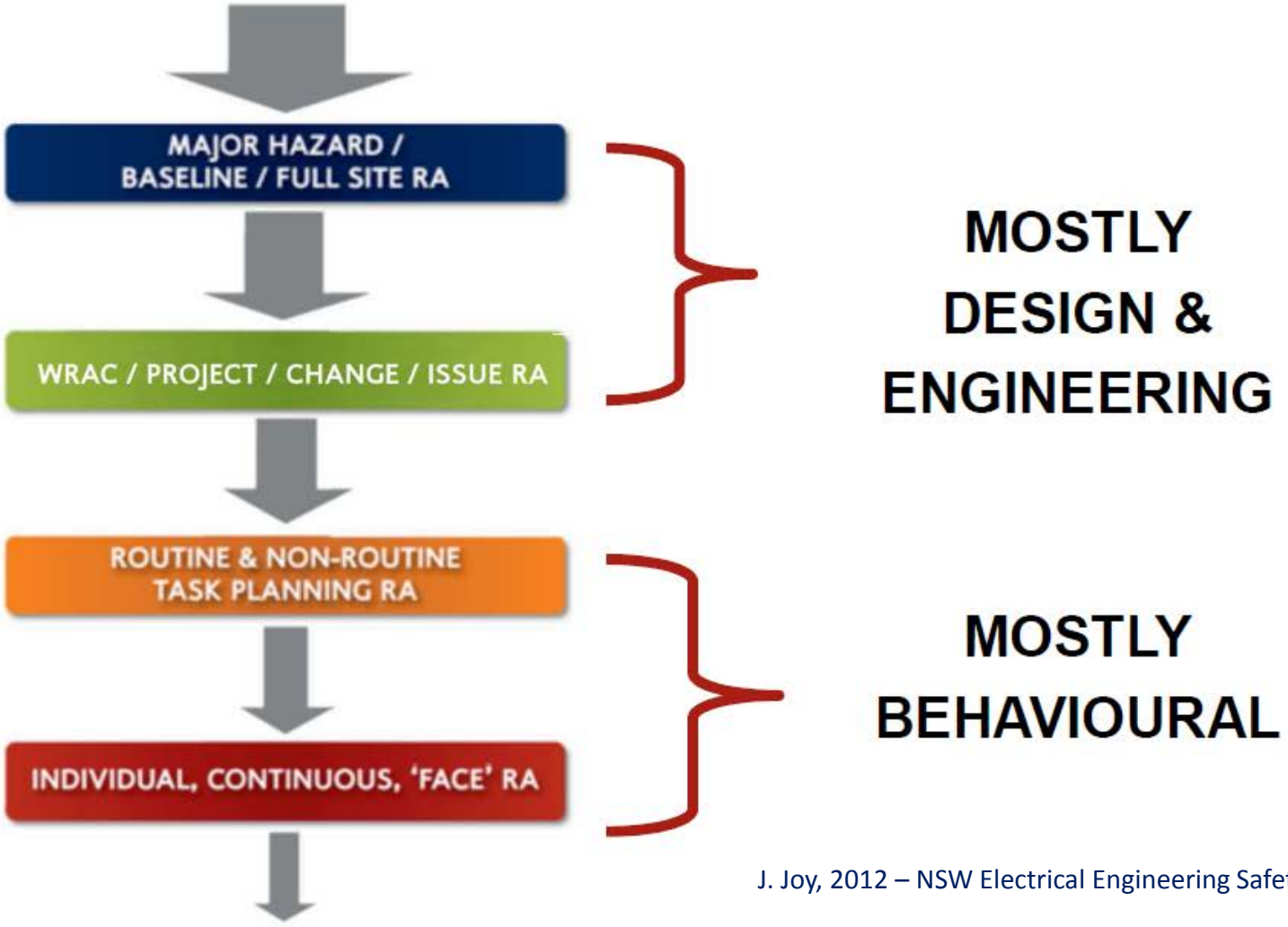
Layered Risk Assessment Planning



J. Joy, 2012 – NSW Electrical Engineering Safety Seminar

Risk Assessment Enablers

- **WHAT ENABLERS DID WE NEED TO CREATE?**
  - ***Bathurst Group level standards to cover the risk elements of the HSMS***
  - ***Associated Procedures and Tools***
  - ***Training***

BRL Standards with Risk Management Processes

- ***Risk Management Standard***
- ***Incident Investigation and Notification Standard***
- ***Work Area Inspections Standard***
- ***Change Management Standard***
- ***Non-conformance and Corrective Action Standard***
- ***Fatigue Standard***
- ***Project Evaluation Standard***
- ***Control of Energy PCP***
- ***Worker Health PCP***
- ***Personal Conduct and Accountability Standard***

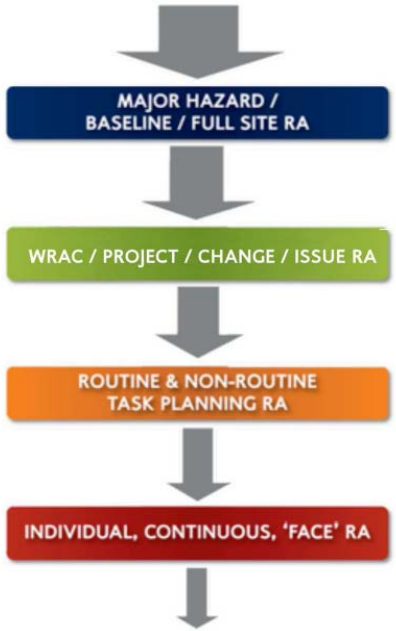
Risk Management Standard

- **Risk Matrix – 5 by 5 matrix as per AS/NZS ISO 31001**
  - ***Developing company specific definitions for likelihood and consequence***
  - ***Risk Matrix has been used as the basis for incident rating matrix to use during an incident – what level is the incident –who do I notify, what do I do now, what level investigation is required***

LIKELIHOOD RATING						
	A	15	10	6	3	1
	B	19	14	9	5	2
	C	22	18	13	8	4
	D	24	21	17	12	7
	E	25	23	20	16	11
		5	4	3	2	1
		CONSEQUENCE RATING				

Risk Management Standard

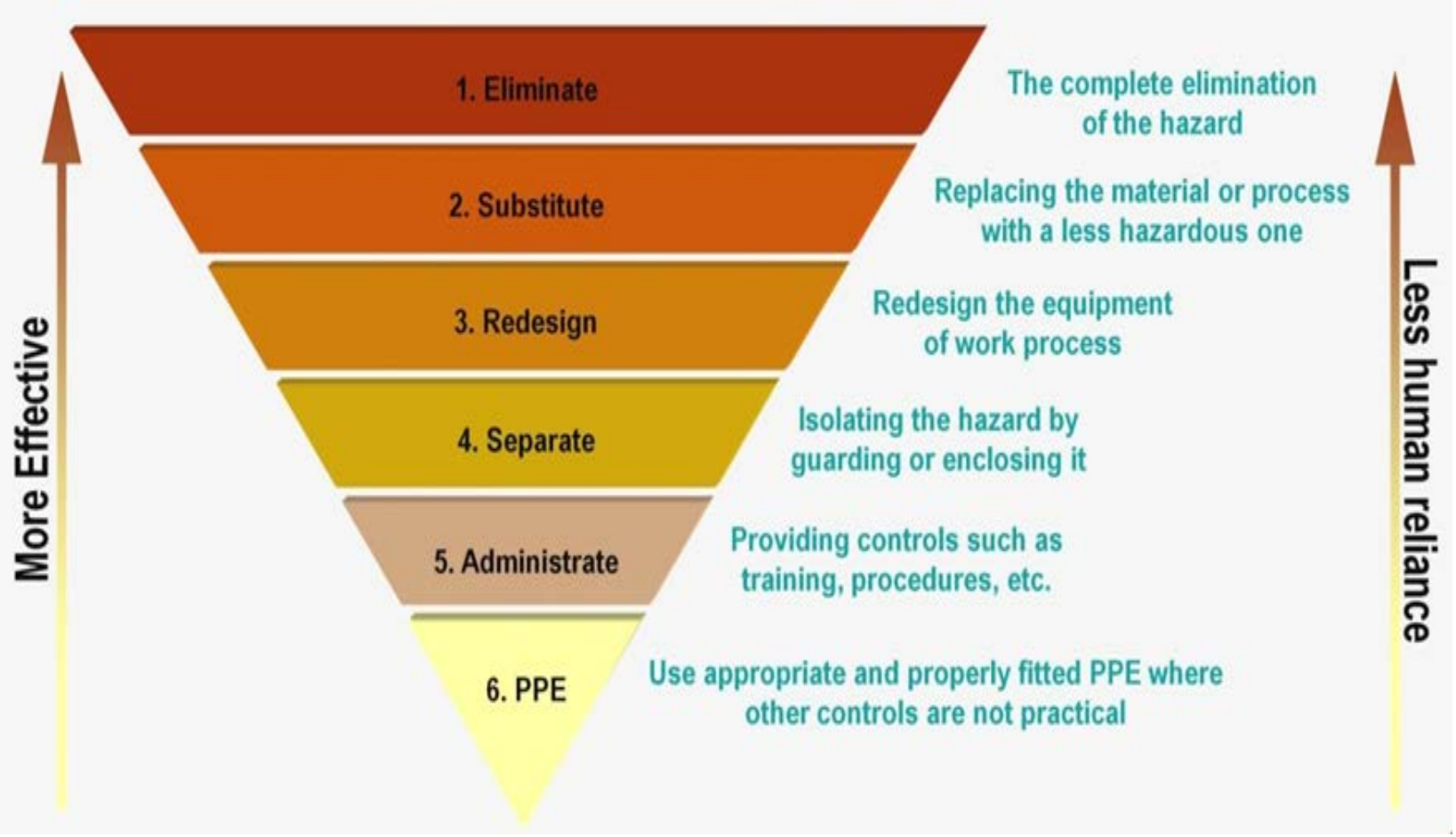
- **Four level approach to risk assessment**
  - ***Broadbrush Risk Assessment***
  - ***Formal risk assessment for complex tasks (Workplace Risk Assessment and Control (WRAC))***
  - ***Job Safety Environment Analysis (Group Hazard Assessment)***
  - ***Take 5s (Personal Hazard)***



Risk Management Standard

- **Developed Tools and Templates for the four level approach**
- **Complementary to HSE Act "eliminate-isolate-minimise"**
  - ***Selected to use six level hierarchy of controls to further explain to mine workers how effective the risk controls are they are selecting***

Risk Management Standard



BRL Risk Management Standard 2015

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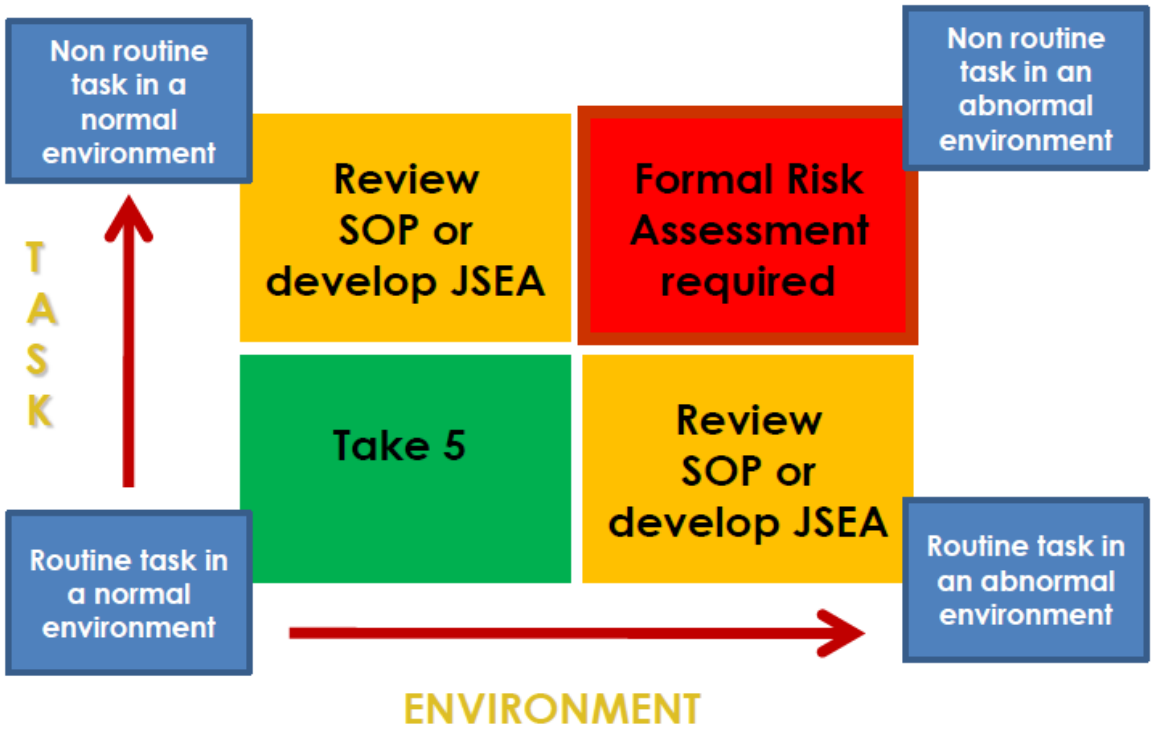
Risk Management Standard – Key Tool Adopted

When should a Risk Assessment/JSEA be conducted?



BRL Risk Management Standard 2015

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Operational Risk Assessment Roll Out

- **Whole of Enterprise Risk Assessment**
  - ***Risks feed into corporate intent documentation to align and focus our keys risks with our corporate strategy and annual budgeting – key in challenging market conditions***
- **Principal Hazard Risk Assessments**
  - ***38 days in 2014 - PHMP BBRA and Individual Principal Hazard Risk Assessments with employee representatives and safety reps***
- **JSEAs and Take 5 in common use**

Key Learnings Risk Assessment Process

- **Get risk matrix developed ASAP**
- **Important to settle on a written risk methodology that you can live by**
  - ***We chose no raw ranking and or no re-ranking***
- **Ensure that the risk rating doesn't take over the action you were trying to achieve – sets a priority for what you need to do first**
- **Respect the original ranking and go about actioning additional controls based on this priority**
- **Broad cross section of attendees**

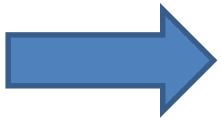
Key Learnings Risk Assessment Process

- **Understand the limitation of WRAC**
  - ***Where the rest of the world is talking risk control effectiveness we are working at its first introductory steps under the new regs ….lets identify our existing controls and additional controls***
  - ***Positive opportunities difficult to capture effectively***
  - ***Once we are more confident on risk control effectiveness (RCE), look at changing risk methodology e.g. bowtie***

Operational Risk Processes – Current Training

- **Staged training roll out 27 BRL standards to all mine workers. Priorities - risk, incident, personal conduct, work area inspections, consultation/communication, control of energy**
- **31% of employees have completed NZQA 26856 *Carry out the risk management processes at an extractive site***
- **Next week - Senior Site Executives and General Managers NZQA 23547 *Establish the risk management system at an extractive site***
- **Supervisor Safety Leadership Training**

Where to Next for Operational Risk Management Training?

- **Feedback from initial training provides direction**
  - ***More work on hazard vs risk***
  - ***Risk control effectiveness – managing risk is all about control***
  - ***Develop risk management processes one day training package for remaining 70% of workforce***
  - ***Importance of scoping in risk assessments***
  - ***As Low As Reasonably Practicable (ALARP)***
  - ***Further incident investigation***
  - ***Implementation by practice***  ***"safety mindset"***