

BMA Safe: From 42 different tools to 1.

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Background:

Between 2000 and 2003 eight BMA sites independently developed and implemented their own site specific pre-task risk management tool (e.g. SAM, Take 5). The intent of the tool was to ensure all personnel stopped and assessed the risks of any operational task they were about to undertake.

In August 2008 it was recognised that BMA had 42 different pre-task risk management tools in use across its operations. This situation created a multitude of issues (Table 1), particularly for personnel required to work across multiple BMA sites.

Table 1: Issues created by the use of different pre-task risk management tools and processes across BMA.

Confusion for personnel working at multiple sites.	Site tools using different risk matrix's, consequence and likelihood definitions.
Different tools across BMA created inefficiencies in training, printing and supply.	Some tools had evolved into a control audit process as opposed to a hazard identification and control tool.
Knowledge gap in objective of tool and its role in the risk management process.	Inconsistent link to risk management process.
Some tools were too complex in relation to intent.	Hazard checklists not aligned with risk profile.

Project Initiation:

To align with the One BMA strategy in September 2008 a project was initiated to develop one pre-task risk management tool for all operations.

Deliverables:

In July 2009 a One BMA pre-task risk management tool named BMA Safe was implemented across BMA. A One BMA training and assessment package for all sites was also delivered.

The BMA Safe booklet consists of the following items;

- Hazard prompt list,
- Hazard checklist,
- Hazard / Near miss form,
- Change management form,
- Risk matrix,
- Consequence and Likelihood tables,
- BMA lifesaving rules,
- Vinyl cover,
- Booklet as a removable insert, and,
- The booklet is made from waterproof paper and is pocket sized.

See appendix 1 for further detail on the above items.

For BMA, the BMA Safe booklet contains a number of innovations including;

- The items in the hazard checklist and associated prompt list are based on analysis of injury and significant incident data.
- There is a clear link to the Job Step Analysis process.
- There is accountability for the person completing the hazard checklist.
- The hazard checklist and associated hazard prompt list uses injury mechanism language (e.g. "Can I be injured by being caught in, on or between anything?") and is therefore relevant to any BMA work activity.
- The BMA Safe booklet has become a repository for the majority of the 'on the job' risk management tools required by BMA personnel during normal operations.
- The tool aligns with its original intent (Identify, Assess and Control hazards), as opposed to what it had become; a control audit tool.

One BMA:

Simply defined, One BMA from a HSEC perspective is about standardisation of processes across the group. Even though a relatively simple project, BMA Safe was the first significant One BMA safety project.

To ensure alignment to this strategy the project team were directed by a number of One BMA guiding principles which are outlined below;

- We will always remember the end user;
- We will work on a One BMA solution.
- We will not be looking to protect site based processes.
- We will be looking for a 'best for business' solution.
- When we agree, we will implement without attempting to get site variation for 'special needs'.
- We will consider the different situations across BMA.
- Once we agree that is the process.

- We will challenge existing thinking.

Project Methodology:

It was critical that all project activities were robust, credible and transparent to ensure;

- Alignment to One BMA guiding principles,
- Compliance with Legislative and Corporate requirements, and
- Potential organisational impacts were effectively managed.

It is a credit to the project plan and project team that all deliverables were completed within required timeframes and the transition from site specific tools to BMA Safe went relatively smoothly.

While all project activities were important, the key items that positively impacted on the project are listed below;

- Strong project team structure which ensured coverage across all sites and levels of the organisation. The project team consisted of;
 - Site and contractor representatives (Steering Committee),
 - BMA Site Senior Executive (Project Sponsor),
 - BMA OHS Principal (Project Manager).
 - Minor stakeholder groups (supply personnel, printing contractor, site HSEC Managers, training personnel).
- Thorough data review to define the problem prior to tool development (examination of site tools and processes - features, strengths and weaknesses).
- Draft BMA Safe booklet used 'on the job' during consultation phase.
- Site representatives performed all site consultation activities.
- Early and regular formal and informal project communication (including draft tool distribution).
- Regular communications to other BMA Site Senior Executives by project sponsor.

Benefits / Effects:

Post implementation a number of the expected benefits were realised, the majority of which relate to the elimination of the issues identified in Table 1.

The project also delivered a number of unexpected benefits which are listed below;

- Demonstrated that One BMA strategy is the right strategy.
- Created a belief that One BMA projects are achievable and add value.
- Prepared the workforce for the next risk management projects which are;

- One BMA Job Step Analysis Process, and,
- One BMA Facilitated Risk Assessment Process.
- Continued to break down of the mind set of ‘ours is best’ and ‘it can’t be done’.
- Allowed site representatives to contribute to a strategic safety project.
- Sites owned BMA Safe due to early and ongoing project involvement.
- Broke down barriers between safety personnel across sites ‘can now put a face to a name’.

Key Learning’s:

The learning’s from this project are relevant to any safety project, within any industry, and, at any level of an organisation. The key learning’s that BMA obtained from this project are detailed in the table below.

Table 2: BMA Safe project key learning’s.

Key Learning	Specific Example
Change management is an evolving process and needs to be regularly reviewed throughout the project.	The change management initiated at the start of process did not foresee all of the change issues and had to be revisited prior to site implementations.
Early involvement of printing organisation will significantly reduce time and effort.	An A4 word document for each page was all that was required to allow the printing organisation to develop a prototype.
Designating a single point of accountability for site feedback and a feedback template reduces time and effort.	Feedback from consultation activities was relatively unstructured resulting the project manager receiving feedback via a mixture of edited BMA Safes, emails, phone messages and word documents
Consultation activities such as using the tool in operations and obtaining tool double as effective project communications and develop ownership.	When BMA Safe was finally implemented the preceding consultation activities contributed to a smooth transition.
Using the final product (as close as possible) during consultation focuses feedback.	By using a full booklet (including hard cover) the project decreased the potential for non value adding feedback (e.g. how thick is the booklet going to be?).
Project team must be willing to concede on deliverable design to obtain final approval.	The final BMA Safe agreed to by the project team required minor amendment to obtain Site Senior Executive endorsement.
The question ‘Is this issue a show stopper?’ is an excellent way to prioritise feedback.	This question was used to prioritise feedback and was particularly useful as the BMA Safe neared final design.
Line management sponsor is critical for success.	Having a Site Senior Executive sponsor the project ensured that all BMA Site Senior Executives were aware of the project and supported it where necessary.

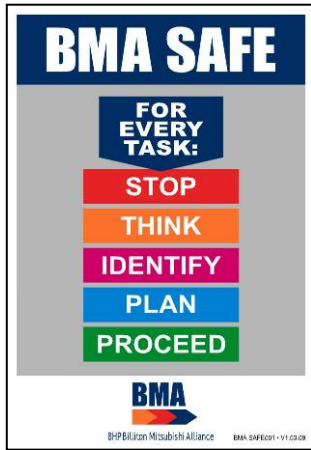
Summary:

In summary BMA undertook a project to develop one pre-task risk management tool which resulted in the development of BMA Safe. For BMA the project was innovative because it was the first significant One BMA Safety project.

BMA Safe was successfully implemented across BMA operations due to the robust, credible and transparent project activities that were utilised. The issues that were in existence prior to BMA Safe created by the use of different site specific tools were largely eliminated as a result of the project. A number of other unexpected benefits also resulted from the project one of which is that personnel within the organisation now believe that One BMA is possible.

A variety of key learning's resulted from the project which BMA will ensure are incorporated into future safety projects, and, we hope are of use to other organisations to assist them on the journey towards Zero Harm.

Appendix 1 – BMA Safe Pages



Front Cover

Checklist

Name: _____ Date: _____ Time: _____ am/pm

Job Location: _____

Job Description: _____

Tick if applicable	Can I manage this hazard?	YES	NO
1. <input type="checkbox"/>	Can I be injured by being caught in, on or between anything?	<input type="checkbox"/>	<input type="checkbox"/>
2. <input type="checkbox"/>	Can I strain or overexert myself?	<input type="checkbox"/>	<input type="checkbox"/>
3. <input type="checkbox"/>	Can I fall onto or from anything?	<input type="checkbox"/>	<input type="checkbox"/>
4. <input type="checkbox"/>	Can I slip or trip on anything?	<input type="checkbox"/>	<input type="checkbox"/>
5. <input type="checkbox"/>	Can I be struck by a moving object?	<input type="checkbox"/>	<input type="checkbox"/>
6. <input type="checkbox"/>	Can I come into contact with or be exposed to something that may harm me? (electricity, heat, gas, hazardous substances or stored energy)	<input type="checkbox"/>	<input type="checkbox"/>
7. <input type="checkbox"/>	Does anything need to be isolated and tested for dead?	<input type="checkbox"/>	<input type="checkbox"/>
8. <input type="checkbox"/>	Can something fall on me or can I cause something to fall onto someone else?	<input type="checkbox"/>	<input type="checkbox"/>
9. <input type="checkbox"/>	Can I be injured by nearby activities or can my activities injure others nearby?	<input type="checkbox"/>	<input type="checkbox"/>
10. <input type="checkbox"/>	Could there be any uncontrolled movement, like ground movement, machine movement?	<input type="checkbox"/>	<input type="checkbox"/>
11. <input type="checkbox"/>	Can I spill or pollute something?	<input type="checkbox"/>	<input type="checkbox"/>
12. <input type="checkbox"/>	Can weather conditions, work environment or poor lighting affect job safety?	<input type="checkbox"/>	<input type="checkbox"/>
13. <input type="checkbox"/>	Do I need a permit?	<input type="checkbox"/>	<input type="checkbox"/>
14. <input type="checkbox"/>	Will I be working below, on or near a highwall or crest? (if yes, complete Change Management Form 1)	<input type="checkbox"/>	<input type="checkbox"/>
15. <input type="checkbox"/>	Are there any other hazards present?	<input type="checkbox"/>	<input type="checkbox"/>

Is the task a change to a current process, procedure or design? If yes, complete Change Management Form 1.

Where hazards are managed, write the controls on the back of this sheet.

If you ticked NO to managing a hazard, or YES to question 13 or 14, contact your Supervisor as a JSA will be required.

Hazard Checklist

Hazard Prompts

- Can I be injured by being caught in, on or between anything?
 - Pinch points, rotating machinery, conveyors, caught between vehicles or machinery, roof and r/o conditions.
- Can I strain or overexert myself?
 - Does the task require repetitive movement, pushing, pulling, lifting, awkward postures, sustained postures.
- Can I fall onto, into or from anything?
 - Working above 1.8m, fall onto sharp objects, fall from machinery.
- Can I slip or trip on anything?
 - Tools/equipment, wet/slippery surfaces, poor housekeeping, uneven surfaces.
- Can I be struck by a moving object?
 - Moving vehicles, projectiles, moving machinery.
- Can I come into contact with or be exposed to something that may harm me? (electricity, heat, gas, hazardous substances, or stored energy)
 - Electricity, pneumatics, or gasses, acids.
- Does anything need to be isolated and tested for dead?
 - Electrical, water, hydraulic.
- Can something fall on me or can I cause something to fall onto someone else?
 - Falling tools / equipment, can I drop tools / equipment, people working above / below me.
- Can I be injured by nearby activities or can my activities injure others nearby?
 - People working above / below me, dust or fumes, noise, sparks, projectiles.
- Could there be any uncontrolled movement, like ground movement, machine movement?
 - Ground failure, high wall / low wall failure, roof / r/o failure, runaway vehicle.
- Can I spill or pollute something?
 - Oil spill, release into stormwater, pollutant release.
- Can weather conditions, work environment or poor lighting affect job safety?
 - Extreme temperatures, lack of lighting, fog, storm.
- Do I need a permit?
 - Hot work, confined space, slugging / excavation, land disturbance, working at height, working under / near power lines, cultural heritage.
- Will I be working below, on or near a highwall or crest? (if yes refer to site geotechnical guidelines).
 - Within 5m of the crest, 10m of the toe of a 40m continuous highwall slope or 15m of the toe of a 30m continuous highwall slope in an open pit.

Hazard Prompt List

Event Type:	HAZARD	NEAR MISS	FPE Event No:
Consequence Severity	Please select potential consequence level		
Potential Investigation	Level 1	Level 2	Level 3
Reported By:	Reported Time:		
Reported Date:	Supervisor at time of event:		
Location of event:	Equipment involved (if any):		
Person involved (if any):	Work activity being performed:		
Brief Description of event:			
Immediate Action Taken and Recommendations:			

Change Management Form

USING THE MATRIX BELOW DETERMINE THE RISK CATEGORY

PROBABILITY FACTOR	CONSEQUENCE SEVERITY				
	Level 1 Low	Level 2 Minor	Level 3 Moderate	Level 4 Major	Level 5 Critical
A Happens often	High	High	Extreme	Extreme	Extreme
B Could easily happen	Moderate	High	High	Extreme	Extreme
C Could happen and has occurred here or elsewhere	Low	Moderate	High	Extreme	Extreme
D Haven't happened yet but could	Low	Low	Moderate	High	Extreme
E Conceivable, but only in extreme circumstances	Low	Low	Moderate	High	High
	UNDESIRABLE	ALARM	ALARM	UNDESIRABLE	UNDESIRABLE

Change Management Form

ESTABLISH THE CONSEQUENCE OR SEVERITY & ASSIGN A RATING OF LEVEL 1 TO 5

Consequence	Injury	Property Damage or Process Loss	Environmental Impact
Level 1 Low	Very low (less than 1 per 100,000)	Low financial loss ($100,000$)	Unlimited damage to minimal scale of the significance
Level 2 Minor	Inevitable disability or permanent full duration and short term loss ($3\text{ to }6\text{ hours}$)	Medium financial loss ($500,000 - 5,000,000$)	Minor effects on landscape or physical environment
Level 3 Moderate	Moderate irreversible disability or permanent full duration and short term loss ($3\text{ to }6\text{ hours}$)	High financial loss ($5,000,000 - 50,000,000$)	Moderate short term effects but not affecting core system
Level 4 Major	Single fatality and/or severe irreversible disability (>10M)	Major financial loss (>$50,000,000$)	Severe medium term environmental effects
Level 5 Critical	Multiple fatalities and/or significant irreversible effects (>$50,000$ people)	Financial loss (>$500M$)	Very serious long term environmental impact or escalation

ESTABLISH THE PROBABILITY OF THE EVENT OCCURRING ASSOCIATED WITH THE SELECTED EVENT SEVERITY

Description	Frequency examples
A Almost Certain	Happens often More than 1 event per month
B Likely	Could easily happen More than 1 event per year
C Possible	Could happen and has occurred here or elsewhere 1 event per 10 to 30 years
D Unlikely	Haven't happened yet but could 1 event per 10 to 100 years (eg within a single mine life)
E Rare	Conceivable, but only in extreme circumstances Less than 1 event per 100 years (eg within life of mine)

BMA Lifesaving Rules

Change Management FORM 1

Assessing for Significant Change

Task/Activity: _____ Date: _____

Department: _____

Click any points noted below relevant to the change.

Process Conditions

- Temperature
- Composition
- Flow
- Pressure
- Procedure
- Phase Change
- Level
- Pressure
- Air/Water
- Other

Operational Methods

- Route/Inspect
- Route/Oper
- Shutdown
- Prep for Maint
- Positioning of Pits
- Emergency Oper
- Weight
- Procedure
- Positioning of Cuts
- Accessorial Oper
- Isolation
- Start up
- Training Req.
- Other

Emergency Equipment/Procedures

- Fire Protection
- First Aid/First Responder
- Rescue
- Fire Detection sys
- Safety Equipment
- Site Utilities
- Emergency Proc.
- Means of Escape
- Other

Mechanical/Structural/Equipment/Facilities

- Loads and Strength of
- Foundations
- Structures
- Vessels
- Design Pressure
- Hoisting Equip.
- Hydrants
- Pipeline Support
- Control Materials
- Modifications
- Design Temp.
- Rate of Corrosion
- New Equipment
- Rate of Erosion
- Plant Layout
- Leakage Prevention
- Spores of Leak
- Other

Electrical/Instrumental

- Static Electricity
- Lightning Proc.
- Energy Use
- Isolation
- PH Distribution
- Control System Unavailability
- Redundancy
- Modified Equipment
- New Equipment
- Intro to Haz. Area
- Start up
- Other

Access

- Operation
- Maintenance
- Ladders
- Vehicles
- Manual Tasks
- Means of Escape
- Fire Fighting
- Plant
- Falls from Heights
- Falling Objects
- Confined Space
- Crown Points
- Other

Change Management Form

BMA Life Saving Rules

Your life depends on them.

- Apply a personal isolation lock and 'test for dead' before working on equipment.
- Protect yourself against a fall and falling objects if working above 1.8m, within 2m of an edge and before approaching high-walls, low-walls and operating faces.
- Never stand, walk or work under a suspended load or unsupported roofs (underground).
- Use safety protection devices correctly, without interference.
- Establish positive contact with operating heavy equipment before approaching.
- Park equipment securely so that it cannot move in an uncontrolled way.
- Only operate equipment for which you are trained, assessed and authorised.

BMA Lifesaving Rules