

Brisbane

Integrating
Environmental
Management

Into your Daily and
Weekly Activities

Orange

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Good Environmental management and Good Health

Requires Management on a..

- * Daily
- * Weekly
- * Monthly
- * 6-monthly
- * Annual
- * Event-related basis

Good Environmental management at your Quarry

- Inductions
- Toolbox Talks
- JSEAs
- Record Keeping



Inductions - Objectives

- To understand all relevant activities on site and their potential environmental impacts.
- To appreciate the local environment around the quarry – neighbours, creeks, protected vegetation etc.
- To understand what environmental procedures are in place and what they contain.





Inductions – Do's

- Invest the time at the beginning.
- Support inductions with good documentation.
- Emphasise the Company's commitment to Good Environmental Management.
- Stress every employee has a role in Good Environmental Management.



Inductions – Don'ts

- Forget re-inductions are important (every 1 or 2 years) or when a new approval or licence is issued).
- Leave it to supervisors or other staff to conduct inductions (Inductions are best done by Managers/Deputy Managers displaying emphasis on Environmental Management is promoted from the top).





Toolbox Talks-Objectives

- To assist managers and supervisors to deliver safety and environment related information to the workforce on a regular basis.
- To re-inforce the Company's expectations for everyone's role in Environmental Management.
- To inform the workforce about incidents, changes in approval or licence conditions.





Toolbox Talk – Do's

- Prepare well for talks.
- Keep talks short and informative.
- Ensure environmental issues are raised at appropriate intervals (re-inforcing critical issues).
- Encourage workforce input to discussions.
- Keep good records of meetings.



Toolbox Talks – Don'ts

- Assume everybody understands all issues.
- Adopt a lecture approach to workforce.
- Forget to engage with suppliers for brief talks.
- Put off / postpone talks.





JSEAs- Objectives

- All employees should understand and be reminded about the activities on site that can impact on the environment.
- JSEAs are assigned to activities that are conducted within a quarry regardless of whether they are new or undertaken in a new area.
- To ensure and identify all hazards and risks are assigned to those activities that can impact on the environment.
- To identify the controls and resources required.



JSEAs– Do's

- Analyse the risks in a structured manner (a form) before every relevant activity is conducted.
- Identify personnel and identify suitable equipment required for the activity.
- Identify hazards associated with the specific activity (a form).
- Document evidence of checking and approval (a form).



JSEAs– Don'ts

- Just focus on safety issues.
- Leave it until just before an activity is due to commence.
- Rush in and use the wrong personnel and equipment.
- Skip consideration of any requirements.

Key Quarry Activities Requiring a JSEA

- Road Construction
- Vegetation Clearing
- Soil Clearing
- Dam/Sediment Pond Construction
- Equipment Maintenance
- Environmental Monitoring

Examples of Environmental Issues to be Managed (for coverage in JSEAs)

1. Are all approvals in place?
2. Does the proposed area of disturbance need to be surveyed/marked out?
3. Where will cleared vegetation and topsoil be placed?
4. What is the correct equipment (and size) for the job?
5. Is there a wet weather plan?

Examples of Environmental Issues to be Managed (for coverage in JSEAs)

6. Are waste/recycling skips/containers available during maintenance/upgrade?
7. Is silt-stop fencing or drainage diversions required?
8. Is monitoring required during the activity?
9. Are before/during/after photographs required/advisable?
10. Do neighbours need to be notified?



Daily Records – Do you keep...

- Weather data

TABLE 9: RAINFALL RECORDED (mm) 2009/2010 (Condition 24)

	2009						2010						
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
1	/	/	/	/	/	4.0	/	2.1	2.5	3.5	/	5.8	5.8
2	/	/	/	/	/	1	/	.5	10.5	/	/	2	2
3	/	/	/	/	/	0.5	/	/	.5	/	0	2.5	2.5
4	/	/	4	/	/	/	3.1	1.1	2.5	/	4.0	3.85	3.85
5	/	/	/	/	/	/	/	3.5	0.5	/	2.5	2.5	2.5
6	/	/	/	3.0	5.8	/	/	/	/	6.2	/	/	35
7	/	/	/	/	/	/	/	/	/	8	0	3.5	3.5
8	6	/	2	/	/	/	1.5	9	3.2	2.2	/	0	0
9	7	/	/	/	8.0	/	4.3	.5	/	/	/	0	0
10	1.3	/	/	/	/	/	/	3	/	/	0	0	0
11	/	/	/	/	/	/	0.5	/	2.7	/	0	0	0
12	3	.1	/	5.5	/	/	1.2	/	1.7	0	0	0	0
13	/	/	/	/	/	/	/	/	/	0	0	0	0
14	/	/	/	/	/	/	0.25	/	/	0	0	0	0
15	/	/	/	/	/	2.0	0.75	2.5	2.9	0	/	2 1/4	2.25
16	/	/	/	/	/	0.5	↓	4	/	0	/	0	0
17	3	/	/	/	/	/	↓	/	/	/	0	0	0
18	/	/	/	/	/	/	10.25	/	/	/	0	1 1/2	1.5
19	/	/	/	1	/	/	/	2.0	0	10	11 1/2	/	/
20	/	/	/	/	/	/	3.5	1	0	4 1/2	5	/	/
21	/	/	/	/	/	3.5	/	0.5	0	1	0	0	0
22	/	/	/	/	/	3.5	3.5	/	0	0	/	3	3
23	/	/	/	/	/	0.25	/	/	0	0	/	6	6
24	/	/	/	/	28.5	/	/	/	0	/	11 1/2	1	1
25	/	/	/	/	/	/	/	0.8	0	/	1 1/2	0	0
26	2	/	/	4.0	/	↓	1.5	0	/	/	2.0	/	/
27	/	/	/	7.0	/	/	4	/	/	7	19 1/2	/	/
28	/	/	5	/	↓	.5	/	/	/	1/4	3.0	5	5
29	/	/	/	/	/	4.7	14.5	/	/	0	/	0	0
30	/	/	/	/	/	2.9	/	/	/	0	/	0	0
31	/	/	/	/	/	3.7	/	/	5.0	W	11.5	/	/
Total	34	1	6	150.5	16.5	159.5	124.45	59	156.2	118.25	25.7	102.5	1192.4

114.50



Daily Records – Do you keep...

- Records of Operating Hours and Maintenance.

TABLE 1: HOURS OF OPERATIONS (Condition 9)

MONTH: OCTOBER 2007

Date	Time Gate Opened	Quarry Activities		Processing		Maintenance *	
		Start	Finish	Start	Finish	Start	Finish
MON 1							
TUE 2	6.30	6.30	3.00	8.00	3.00		
WED 3	6.30	6.30	5.00	8.00	5.00		
THU 4	6.30	6.30	5.00	8.00	5.00		
FRI 5	6.30	6.30	5.00	8.00	5.00		
SAT 6	7.00	7.00	1.00	N/A			
SUN 7							
MON 8	6.30	6.30	5.00	8.00	5.00		
TUE 9	6.30	6.30	5.00	8.00	3.00		
WED 10	6.30	6.30	5.00	8.00	3.00		
THU 11	6.30	6.30	5.00	8.00	3.00		
FRI 12	6.30	6.30	3.00	N/A			
SAT 13	7.00	7.00	1.00	N/A			
SUN 14							
MON 15	6.30	6.30	3.00	8.00	3.00		
TUE 16	6.30	6.30	3.00	8.00	3.00		
WED 17	6.30	6.30	3.00	8.00	3.00		
THU 18	6.30	6.30	3.00	8.00	3.00		
FRI 19	6.30	6.30	3.00	8.00	2.00		
SAT 20	7.00	7.00	1.00	N/A			
SUN 21							
MON 22	6.30	6.30	3.00	8.00	3.00		
TUE 23	6.30	6.30	3.00	8.00	3.00		
WED 24	6.30	6.30	3.00	8.00	3.00		
THU 25	6.30	6.30	3.00	8.00	3.00		
FRI 26	6.30	6.30	3.00	8.00	3.00		
SAT 27	7.00	7.00	1.00	N/A			
SUN 28							
MON 29	6.30	6.30	3.00	8.00	3.00		
TUE 30	6.30	6.30	3.00	8.00	3.00		
WED 31	6.30	6.30	3.00	N/A			

* Outside 6.30 am to 6.00 pm Monday to Friday, and 7.00 am to 3.00 pm Saturday



Daily Records – Do you keep...

- Waste and Recycling.
- Weed spraying (and maps / photos).
- Soil Inventory.
- Complaints Register.
- Revegetation Programs.
- Truck Movements
- Blast Records
- Internal Audit

Don't just put it in a diary!

Create and Maintain a spreadsheet.





Blasting Records

TABLE 3: RECORD OF BLASTS (Conditions 11 & 12)

(Period: 1 July 2008 to 30 June 2009)

Date	Time	Location		Orientation *	No. of Holes	Explosives (kg)
		Area	Bench			
11-7-08	2-07	A	120	S-W	67	
	2-07	B	130	S	172	11,140
29/8/08	1-38	B	120	N	63	3400
21/10/08	9-35	B	120	N	152	7000
4/12/08	1-53	A	120	S	134	NO BLAST REPORT.
9/1/09	12-11	A	120	S-W		NO BLAST REPORT
27/1/09	12-30	A	110	E	35	"
10/3/09	1-02	A	110	S	49	5320
25/3/09	3-03	A	100	Box CUT	68	4740
3/4/09	2-06	A	100	W	58	4560
23/4/09	12-42	A	100	W	174	NO BLAST REPORT
11/5/09	1-00	A	100	W		REPORT
14/5/09	1-00	A	100	W	112	8180
16/6/09	1-58	A	100	N	149	9620

* Direction of Throw

TABLE 3: RECORD OF BLASTS (Conditions 11 & 12)

(Period: 1 July 2009 to 30 June 2010)

Date	Time	Location		Orientation *	No. of Holes	Explosives (kg)
		Area	Bench			
17/7/09	12-20	B	130/120	N	194	9520
3/8/09	2-20	A	100	W	96	7600
23/10/09	1-34	A	100	N-S	128	10068
4/12/09	11-24	B	125/120	N	96	9820
2/5/10	2-30	B	130/120	N	66	9300
5/3/10	11-37	B	130	E	66	6720
20/4/10	2-16	B	110	N-E	112	7350

* Direction of Throw





Take-backs

- Is your induction documentation appropriate?
- Can you provide better coverage of environmental issues at toolbox meetings?
- Do you have JSEA's and are they site specific?
- Please customise your documentation.

ENJOY YOUR GOOD HEALTH AND ENVIRONMENTAL MANAGEMENT!