



# Attachment 4.1H - Environmental Monitoring Worksheet

Period: **16/06/2018** - **30/06/2018**

Location	Test	Freq	Limit		Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max								

NRR = No Result Recorded

**Site: Albion Park Quarry**

Environment Protection Licence No.	122
Site Name (As it appears on the licence)	Albion Park Quarry
Site Address (As it appears on the licence)	Albion Park Quarry Woollybutt Drive ALBION PARK RAIL NSW 2527
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOELicence.aspx?DOCID=54925&amp;SYSUID=1&amp;LICID=122">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOELicence.aspx?DOCID=54925&amp;SYSUID=1&amp;LICID=122</a>

**Water**

Point	Test	Frequency	Min Limit	Max Limit	Units	Requirement	Transferred	Received	Download	Result	Comments
Point 1	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	
Point 2	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	
Point 1	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	
Point 2	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	
Point 1	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	
Point 2	pH	After 90mm rain	6.5	8.5	pH	Y				NRR	
	Oil and Grease	After 90mm rain	0	0	Visible	Y				NRR	
	TSS	After 90mm rain		50	mg/L	Y				NRR	

**Air**

Point	Test	Frequency	Min Limit	Max Limit	Units	Requirement	Transferred	Received	Download	Result	Comments
Point 3	Ash	Monthly	0	90		Y				NRR	
Point 4	Ash	Monthly	0	90		Y				NRR	
Point 5	Ash	Monthly	0	90		Y				NRR	
Point 6	Ash	Monthly	0	90		Y				NRR	

**Blasting**

		Time of Blast		Units	Requirement	Transferred	Received	Download	Result	Comments
	Per Blast	0	5	mm/s	Y				NRR	
	Per Blast	0	115	dB	Y				NRR	
	Per Blast	0	5	mm/s	Y				NRR	
	Per Blast	0	115	dB	Y				NRR	
	Per Blast	0	5	mm/s	Y				NRR	
	Per Blast	0	115	dB	Y				NRR	
	Per Blast	0	5	mm/s	Y				NRR	
	Per Blast	0	115	dB	Y				NRR	
	Per Blast	0	5	mm/s	Y				NRR	

**Site: "Johnniefields" Marulan Quarry**

Environment Protection Licence No.	1371
Site Name (As it appears on the licence)	Marulan Quarry
Site Address (As it appears on the licence)	Marulan Quarry Brayton Road MARULAN NSW 2579

Link to Licence on EPA Website

<http://app.epa.nsw.gov.au/prpocapp/ViewPOEOLicence.aspx?DOCID=32923&SYSUID=1&LICID=1371>

Blasting										Time of Blast	
Underdowns	Overpressure	Per Blast		115	dB		Y				NRR
	Vibration	Per Blast		5	mm/s		Y				NRR
Underdowns	Overpressure	Per Blast		115	dB		Y				NRR
	Vibration	Per Blast		5	mm/s		Y				NRR
Underdowns	Overpressure	Per Blast		115	dB		Y				NRR
	Vibration	Per Blast		5	mm/s		Y				NRR
Underdowns	Overpressure	Per Blast		115	dB		Y				NRR
	Vibration	Per Blast		5	mm/s		Y				NRR
Underdowns	Overpressure	Per Blast		115	dB		Y				NRR
	Vibration	Per Blast		5	mm/s		Y				NRR

**Site: Lynwood Quarry**

Environment Protection Licence No.

12939

Site Name (As it appears on the licence)

Lynwood Quarry

Site Address (As it appears on the licence)

Lynwood Quarry 278 Stoney Creek Road, MARULAN NSW 2579

Link to Licence on EPA Website

<http://app.epa.nsw.gov.au/prpocapp/ViewPOEOLicence.aspx?DOCID=105521&SYSUID=1&LICID=12939>

Air											
DD 5	Insoluble Solids	Monthly	0	4	mg/m2/month	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
DD 8	Insoluble Solids	Monthly	0	4	mg/m2/month	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
DD 11	Insoluble Solids	Monthly	0	4	mg/m2/month	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
DD 12	Insoluble Solids	Monthly	0	4	mg/m2/month	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
DD 13	Insoluble Solids	Monthly	0	4	mg/m2/month	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	24/6/18	Y	26/6/18	29/6/18		5.50
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	30/6/18	Y	12:00:00 AM	12:00:00 AM		0.00
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	24/6/18	Y	26/6/18	29/6/18		6.20
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	30/6/18	Y	12:00:00 AM	12:00:00 AM		2.70
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	0/1/00	Y	12:00:00 AM	12:00:00 AM		NRR

Blasting										Time of Blast	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	19/06/2018	Y	4:18:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	19/06/2018	Y	4:18:00 PM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	19/06/2018	Y	4:18:00 PM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	19/06/2018	Y	4:18:00 PM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	19/06/2018	Y	4:18:00 PM			0.00
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	19/06/2018	Y	4:18:00 PM			0.00
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	21/06/2018	Y	12:27:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	21/06/2018	Y	12:27:00 PM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	21/06/2018	Y	12:27:00 PM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	21/06/2018	Y	12:27:00 PM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	21/06/2018	Y	12:27:00 PM			0.52
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	21/06/2018	Y	12:27:00 PM			0.52
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	22/06/2018	Y	12:23:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	22/06/2018	Y	12:23:00 PM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	22/06/2018	Y	12:23:00 PM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	22/06/2018	Y	12:23:00 PM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	22/06/2018	Y	12:23:00 PM			0.00
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	22/06/2018	Y	12:23:00 PM			0.00
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	26/06/2018	Y	12:20:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	26/06/2018	Y	12:20:00 PM			0.00
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	26/06/2018	Y	12:20:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	26/06/2018	Y	12:20:00 PM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	26/06/2018	Y	12:20:00 PM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	26/06/2018	Y	12:20:00 PM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	26/06/2018	Y	12:20:00 PM			1.00
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	26/06/2018	Y	12:20:00 PM			1.00

B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	27/06/2018	Y	11:28:00 AM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	27/06/2018	Y	11:28:00 AM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	27/06/2018	Y	11:28:00 AM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	27/06/2018	Y	11:28:00 AM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	27/06/2018	Y	11:28:00 AM			0.00
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	27/06/2018	Y	11:28:00 AM			0.00
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	28/06/2018	Y	11:36:00 AM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	28/06/2018	Y	11:36:00 AM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	28/06/2018	Y	11:36:00 AM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	28/06/2018	Y	11:36:00 AM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	28/06/2018	Y	11:36:00 AM			0.00
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	28/06/2018	Y	11:36:00 AM			0.00
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	29/06/2018	Y	3:49:00 PM			0.00
B4 - Resident	Overpressure	Per Blast	0	115	dB	29/06/2018	Y	3:49:00 PM			0.00
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	29/06/2018	Y	3:49:00 PM			0.00
B5 - Resident	Overpressure	Per Blast	0	115	dB	29/06/2018	Y	3:49:00 PM			0.00
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	29/06/2018	Y	3:49:00 PM			0.58
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	29/06/2018	Y	3:49:00 PM			0.58
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	01/00	Y	12:00:00 AM			NRR
B4 - Resident	Overpressure	Per Blast	0	115	dB	01/00	Y	12:00:00 AM			NRR
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0	Y	12:00:00 AM			NRR
B5 - Resident	Overpressure	Per Blast	0	115	dB	01/00	Y	12:00:00 AM			NRR
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	0	Y	12:00:00 AM			NRR
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0	Y	12:00:00 AM			NRR
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	01/00	Y	12:00:00 AM			NRR
B4 - Resident	Overpressure	Per Blast	0	115	dB	01/00	Y	12:00:00 AM			NRR
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0	Y	12:00:00 AM			NRR
B5 - Resident	Overpressure	Per Blast	0	115	dB	01/00	Y	12:00:00 AM			NRR
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	01/00	Y	12:00:00 AM			NRR
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0	Y	12:00:00 AM			NRR

**Site: Cooma Road Quarry**

Environment Protection Licence No.	1453
Site Name (As it appears on the licence)	Cooma Road Quarry
Site Address (As it appears on the licence)	Cooma Road Quarry Cooma Road Queanbeyan NSW 2620
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOELicence.aspx?DOCID=32932&amp;SYSUID=1&amp;LICID=1453">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOELicence.aspx?DOCID=32932&amp;SYSUID=1&amp;LICID=1453</a>

Water											
Barracks Creek	pH	Monthly	6.5	8.5	pH		Y				NRR
	Total O&G	Monthly	0	10	mg/L		Y				NRR
	Susp. Solids	Monthly	0	50	mg/L		Y				NRR
Blasting											
<b>Time of Blast</b>											
Heffernans House	Overpressure	Per blast	0	115	dB	19/6/2018	Y	2:25:00 PM			92.2
	Vibration	Per blast	0	5	mm/s	19/6/2019	Y	2:25:00 PM			0.47
Heffernans House	Overpressure	Per blast	0	115	dB	29/6/2018	Y	12:18:00 PM			113.5
	Vibration	Per blast	0	5	mm/s	29/6/2019	Y	12:18:00 PM			0.65
Heffernans House	Overpressure	Per blast	0	115	dB		Y				NRR
	Vibration	Per blast	0	5	mm/s		Y				NRR
Heffernans House	Overpressure	Per blast	0	115	dB		Y				NRR
	Vibration	Per blast	0	5	mm/s		Y				NRR

**Site: Dubbo Quarry**

Environment Protection Licence No.	2212
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Site Name (As it appears on the licence)	Dubbo Quarry
Site Address (As it appears on the licence)	Sheraton Road, Dubbo, NSW,2830
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=42179&amp;SYSUID=1&amp;LICID=2212">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=42179&amp;SYSUID=1&amp;LICID=2212</a>

Blasting											Time of Blast	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	

**Site: Dunloe Sands Quarry**

Environment Protection Licence No.	13077
Site Name (As it appears on the licence)	Dunloe Sands Quarry
Site Address (As it appears on the licence)	Pottsville-Mooball Road, Mooball NSW 2483
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=134905&amp;SYSUID=1&amp;LICID=13077">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=134905&amp;SYSUID=1&amp;LICID=13077</a>

**Water - \*Frequency is as per 'Special Frequency 1' referred to in Condition M2.3 of EPL**

Silt Pond discharge monitoring point	Discharge pH	<24 hours prior to overflow event*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L	no discharge	Y				NRR	0
Discharge TSS	Overflow (Day 4)*	0	50	mg/L	no discharge	Y				NRR	0	
Discharge TSS	Overflow (Day 5)*	0	50	mg/L	no discharge	Y				NRR	0	
Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Dredge Pond discharge monitoring point	Discharge pH	<24 hours prior to overflow event*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH	no discharge	Y				NRR	0
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L	no discharge	Y				NRR	0
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L	no discharge	Y				NRR	0
Discharge TSS	Overflow (Day 4)*	0	50	mg/L	no discharge	Y				NRR	0	
Discharge TSS	Overflow (Day 5)*	0	50	mg/L	no discharge	Y				NRR	0	
Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	
Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0	

0	Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0
0	Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0
0	Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible	no discharge	Y				NRR	0
<b>Groundwater</b>												
0	Ammonia	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	01/00	0
0	Chloride	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	19/1/00	0
0	Electrical conductivity	Yearly	-	-	µm/cm	13/06/2018	Y		13/06/2018	26/07/2018	15/6/00	0
0	Oil and Grease	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	<5	0
0	pH	Yearly	-	-	pH	13/06/2018	Y		13/06/2018	26/07/2018	4/1/00	0
0	Standing Water Level	Yearly	-	-	m	13/06/2018	Y		13/06/2018	26/07/2018	1/1/00	0
0	Sulfate	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	28/1/00	0
DLP3	Ammonia	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	2/1/00	0
0	Chloride	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	18/4/06	0
0	Electrical conductivity	Yearly	-	-	µm/cm	13/06/2018	Y		13/06/2018	26/07/2018	16/9/21	0
0	Oil and Grease	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	<5	0
0	pH	Yearly	-	-	pH	13/06/2018	Y		13/06/2018	26/07/2018	6/1/00	0
0	Standing Water Level	Yearly	-	-	m	13/06/2018	Y		13/06/2018	26/07/2018	1/1/00	0
0	Sulfate	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	28/6/00	0
DLP5	Ammonia	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	0/1/00	0
0	Chloride	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	5/4/00	0
0	Electrical conductivity	Yearly	-	-	µm/cm	13/06/2018	Y		13/06/2018	26/07/2018	9/2/01	0
0	Oil and Grease	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	<5	0
0	pH	Yearly	-	-	pH	13/06/2018	Y		13/06/2018	26/07/2018	4/1/00	0
0	Standing Water Level	Yearly	-	-	m	13/06/2018	Y		13/06/2018	26/07/2018	1/1/00	0
0	Sulfate	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	15/1/00	0
DLP6	Ammonia	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	0/1/00	0
0	Chloride	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	25/1/00	0
0	Electrical conductivity	Yearly	-	-	µm/cm	13/06/2018	Y		13/06/2018	26/07/2018	16/6/01	0
0	Oil and Grease	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	<5	0
0	pH	Yearly	-	-	pH	13/06/2018	Y		13/06/2018	26/07/2018	3/1/00	0
0	Standing Water Level	Yearly	-	-	m	13/06/2018	Y		13/06/2018	26/07/2018	1/1/00	0
0	Sulfate	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	15/11/00	0
DLP7	Ammonia	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	2/1/00	0
0	Chloride	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	10/11/01	0
0	Electrical conductivity	Yearly	-	-	µm/cm	13/06/2018	Y		13/06/2018	26/07/2018	9/10/09	0
0	Oil and Grease	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	<5	0
0	pH	Yearly	-	-	pH	13/06/2018	Y		13/06/2018	26/07/2018	6/1/00	0
0	Standing Water Level	Yearly	-	-	m	13/06/2018	Y		13/06/2018	26/07/2018	1/1/00	0
0	Sulfate	Yearly	-	-	mg/L	13/06/2018	Y		13/06/2018	26/07/2018	16/9/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0
0	0	0	-	-	0	0/1/00	Y		0/1/00	0/1/00	0/1/00	0

<b>Site:</b>		<b>Humes - Blacktown</b>	
Environment Protection Licence No.	1310		
Site Name (As it appears on the licence)	Humes Blacktown		
Site Address (As it appears on the licence)	Humes Blacktown Lot 1 Woodstock Ave ROOTY HILL NSW 2766		
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=35038&amp;SYSUID=1&amp;LICID=1310">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=35038&amp;SYSUID=1&amp;LICID=1310</a>		
<b>Water</b>			

Sediment Basin	TSS	Daily During Discharge		50	mg/L	26/6	Y				39
	pH	Daily During Discharge	6.5	8.5	pH	26/6	Y				7.96
Sediment Basin	TSS	Daily During Discharge		50	mg/L	27/6	Y				20
	pH	Daily During Discharge	6.5	8.5	pH	27/6	Y				7.24
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				NRR
	pH	Daily During Discharge	6.5	8.5	pH		Y				NRR

**Site: Teven Quarry**

Environment Protection Licence No.	<b>3293</b>
Site Name (As it appears on the licence)	Readymix Teven Quarry
Site Address (As it appears on the licence)	Stokers Lane Teven NSW 2478
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpocapp/ViewPOEOLicence.aspx?DOCID=85921&amp;SYSUID=1&amp;LICID=3293">http://app.epa.nsw.gov.au/prpocapp/ViewPOEOLicence.aspx?DOCID=85921&amp;SYSUID=1&amp;LICID=3293</a>

Water											
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH	22/6/18	Y				7.69
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible	22/6/18	Y				0
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L	22/6/18	Y				2
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR

Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR

<b>Noise</b>											
165 Weiler's Road, Teven (or Receiver No. 2 in Coorambie)	Daytime - LAeq (15 min)	Yearly	0	37	dB (A)		Y				NRR
165 Weiler's Road, Teven (or Receiver No. 2 in Coorambie)	8am-10pm Mon - Sun) - LAeq	Yearly	0	35	dB (A)		Y				NRR

<b>Blasting</b>											
											<b>Time of Blast</b>
Any point < 1 metre or any affected residential	Overpressure	Per Blast	0	115	dB		Y				NRR
Any point < 1 metre or any affected residential	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				NRR
Any point < 1 metre or any affected residential	Overpressure	Per Blast	0	115	dB		Y				NRR
Any point < 1 metre or any affected residential	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				NRR

**Site: Boambee Quarry**

Environment Protection Licence No.	<b>7094</b>
Site Name (As it appears on the licence)	Boambee Quarry
Site Address (As it appears on the licence)	Boambee Quarry North Boambee Road BOAMBE NSW 2450
Link to Licence on EPA Website	<a href="http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=108484&amp;SYSUID=1&amp;LICID=7094">http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=108484&amp;SYSUID=1&amp;LICID=7094</a>

<b>Blasting (M4 &amp; L2.1 - To determine compliance with L3, measurements to be taken at any point within 1 metre of residential boundary)</b>											
											<b>Time of Blast</b>
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR

**Site: Tuncurry Sand**

Environment Protection Licence No.	<b>13359</b>
Site Name (As it appears on the licence)	Tuncurry Sand Quarry
Site Address (As it appears on the licence)	Tip Road Tuncurry NSW 2428

Link to Licence on EPA Website

<http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=47350&SYSUID=1&LICID=13359>

Water											
ID#2 Surface H2O "Lake 1"	Arsenic	Quarterly	0		mg/L		Y				NRR
	Conductivity	Quarterly	0		µS/cm		Y				NRR
	Copper	Quarterly	0		mg/L		Y				NRR
	Iron	Quarterly	0		mg/L		Y				NRR
	pH	Quarterly	0		pH		Y				NRR
	Zinc	Quarterly	0		mg/L		Y				NRR
ID#3 Surface H2O "Lake 2"	Arsenic	Quarterly	0		mg/L		Y				NRR
	Conductivity	Quarterly	0		µS/cm		Y				NRR
	Copper	Quarterly	0		mg/L		Y				NRR
	Iron	Quarterly	0		mg/L		Y				NRR
	pH	Quarterly	0		pH		Y				NRR
	Zinc	Quarterly	0		mg/L		Y				NRR
ID#4 Surface H2O "Lake 3"	Arsenic	Quarterly	0		mg/L		Y				NRR
	Conductivity	Quarterly	0		µS/cm		Y				NRR
	Copper	Quarterly	0		mg/L		Y				NRR
	Iron	Quarterly	0		mg/L		Y				NRR
	pH	Quarterly	0		pH		Y				NRR
	Zinc	Quarterly	0		mg/L		Y				NRR
ID#5 Surface H2O "Lake 4"	Arsenic	Quarterly	0		mg/L		Y				NRR
	Conductivity	Quarterly	0		µS/cm		Y				NRR
	Copper	Quarterly	0		mg/L		Y				NRR
	Iron	Quarterly	0		mg/L		Y				NRR
	pH	Quarterly	0		pH		Y				NRR
	Zinc	Quarterly	0		mg/L		Y				NRR
Air											
ID #1	Deposited Matter	Monthly	0	4	g/m2/month		Y				NRR

**Site: Jandra Quarry**

Environment Protection Licence No.

2796

Site Name (As it appears on the licence)

Jandra Quarry

Site Address (As it appears on the licence)

Pacific Highway Possum Brush NSW 2430

Link to Licence on EPA Website

<http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=87197&SYSUID=1&LICID=2796>

Water												
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH	18/06/2018	Y	18/06/2018	19/06/2018		8.3	6013/2
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L	18/06/2018	Y	18/06/2018	19/06/2018		12	6013/1
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L	18/06/2018	Y	18/06/2018	19/06/2018		4	6013/2
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu	18/06/2018	Y	18/06/2018	19/06/2018		6.9	6013/1
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu	18/06/2018	Y	18/06/2018	19/06/2018		5.2	6013/2
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH						NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L						NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L						NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu						NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu						NRR	
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR	
DD 1	Insoluble Solids	Monthly	0	4			Y				NRR	
DD 2	Insoluble Solids	Monthly	0	4	mg/m2/month		Y				NRR	
DD 3	Insoluble Solids	Monthly	0	4	mg/m2/month		Y				NRR	
DD 4	Insoluble Solids	Monthly	0	4	mg/m2/month		Y				NRR	
HVAS 1	Insoluble Solids	Monthly	0	4	mg/m2/month		Y				NRR	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	6/7/18	Y	7/3/18	7/10/18		7	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	13/06/2018	Y	7/3/18	7/10/18		6	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	19/06/2018	Y	7/3/18	7/10/18		<2	



HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	25/06/2018	Y	7/3/18	7/10/18		<2
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	7/1/18	Y	7/3/18	7/10/18		<2
<b>Blasting</b> (To determine compliance with L3, measurements to be taken at any point within 1 metre of residential boundary)											
<b>Time of Blast</b>											
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
	Overpressure	Per blast	0	120	dB		Y				NRR
	Vibration	Per blast	0	10	mm/s		Y				NRR
<b>Annual Blasting Requirements ( Calculated each month on a cumulative basis)</b>											
	Overpressure	Monthly (Cumulative)	115	120	dB		Y				NRR
	Vibration	Monthly (Cumulative)	5	10	mm/s		Y				NRR