



Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/07/2018 - 15/07/2018

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								

Site: **Albion Park Quarry** NRR = No Result Recorded

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	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=54925&SYSUID=1&LICID=122

Water												
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												
Site 1	Ash	Monthly		90		7/4/18	Y				33	
Site 2	Ash	Monthly		90		7/4/18	Y				6	
Site 3	Ash	Monthly		90		7/4/18	Y				32	
Site 4	Ash	Monthly		90		7/4/18	Y				6	

Blasting												
Time of Blast												
		Per Blast		5	mm/s		Y				0.19	
		Per Blast		115	dB		Y				116.3	
		Per Blast		5	mm/s		Y				0.32	
		Per Blast		115	dB		Y				106.7	
		Per Blast		5	mm/s		Y				0.6	
		Per Blast		115	dB		Y				79.9	
		Per Blast		5	mm/s		Y				NRR	
		Per Blast		115	dB		Y				NRR	
		Per Blast		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/prpoeoapp/ViewPOEOLlicence.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/prpoeoapp/ViewPOEOLlicence.aspx?DOCID=105521&SYSUID=1&LICID=12939>

Air											
DD 5	Insoluble Solids	Monthly	0	4	mg/m2/month	16/7/18	Y	16/7/18	23/7/18		0.8
DD 8	Insoluble Solids	Monthly	0	4	mg/m2/month	16/7/18	Y	16/7/18	23/7/18		0.3
DD 11	Insoluble Solids	Monthly	0	4	mg/m2/month	16/7/18	Y	16/7/18	23/7/18		0.8
DD 12	Insoluble Solids	Monthly	0	4	mg/m2/month	16/7/18	Y	16/7/18	23/7/18		0.4
DD 13	Insoluble Solids	Monthly	0	4	mg/m2/month	16/7/18	Y	16/7/18	23/7/18		0.3
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	7/6/18	Y	12/7/2018	16/7/18		31.7
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	18/7/18	Y	24/4/18	25/7/18		31.1
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	7/12/18	Y	16/7/18	25/7/18		4.3
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	7/6/18	Y	12/7/2018	16/7/18		17.3
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	18/7/18	Y	24/4/18	25/7/18		31.4
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	7/12/18	Y	16/7/18	28/7/18		12.7

Blasting							Time of Blast				
B1 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B2 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Overpressure	Per Blast	0	115	dB	0/1/00	Y	12:00:00 AM			NRR
B1 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B2 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Overpressure	Per Blast	0	115	dB	0/1/00	Y	12:00:00 AM			NRR
B1 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B2 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Overpressure	Per Blast	0	115	dB	0/1/00	Y	12:00:00 AM			NRR
B1 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B2 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	0/1/00	Y	12:00:00 AM			NRR
B3 - Resident	Overpressure	Per Blast	0	115	dB	0/1/00	Y	12:00:00 AM			NRR
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/6/18	Y	2:00:00 PM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	7/6/18	Y	2:00:00 PM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/6/18	Y	2:00:00 PM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	7/6/18	Y	2:00:00 PM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	7/6/18	Y	2:00:00 PM			1.02
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	7/6/18	Y	2:00:00 PM			1.02

B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/9/18	Y	10:43:00 AM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	7/9/18	Y	10:43:00 AM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/9/18	Y	10:43:00 AM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	7/9/18	Y	10:43:00 AM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	7/9/18	Y	10:43:00 AM			0
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	7/9/18	Y	10:43:00 AM			0
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/10/18	Y	11:29:00 AM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	7/10/18	Y	11:29:00 AM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/10/18	Y	11:29:00 AM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	7/10/18	Y	11:29:00 AM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	7/10/18	Y	11:29:00 AM			0
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	7/10/18	Y	11:29:00 AM			0
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/11/18	Y	12:54:00 PM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	7/11/18	Y	12:54:00 PM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/11/18	Y	12:54:00 PM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	7/11/18	Y	12:54:00 PM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	7/11/18	Y	12:54:00 PM			0
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	7/11/18	Y	12:54:00 PM			0
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/12/18	Y	12:00:00 PM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	7/12/18	Y	12:00:00 PM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	7/12/18	Y	12:00:00 PM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	7/12/18	Y	12:00:00 PM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	7/12/18	Y	12:00:00 PM			0.8
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	7/12/18	Y	12:00:00 PM			0.8
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	13/07/2018	Y	1:54:00 PM			0
B4 - Resident	Overpressure	Per Blast	0	115	dB	13/07/2018	Y	1:54:00 PM			0
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	13/07/2018	Y	1:54:00 PM			0
B5 - Resident	Overpressure	Per Blast	0	115	dB	13/07/2018	Y	1:54:00 PM			0
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	13/07/2018	Y	1:54:00 PM			0
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	13/07/2018	Y	1:54:00 PM			0

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	http://app.epa.nsw.gov.au/prpsoapp/ViewPOEOLlicence.aspx?DOCID=32932&SYSUID=1&LCID=1453

Water											
Barracks Creek	pH	Monthly	6.5	8.5	pH	7/6/18	Y				7.6
	Total O&G	Monthly	0	10	mg/L	7/6/18	Y				<1
	Susp. Solids	Monthly	0	50	mg/L	7/6/18	Y				<2
Blasting											
Time of Blast											
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
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	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=42179&SYSUID=1&LICID=2212

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	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=134905&SYSUID=1&LICID=13077

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	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 4)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 5)*	0	50	mg/L	0/1/00	Y				NRR	0
	Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0
	Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0
	Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0
Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
Dredge Pond discharge monitoring point	Discharge pH	<24 hours prior to overflow event*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH	0/1/00	Y				NRR	0
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 4)*	0	50	mg/L	0/1/00	Y				NRR	0
	Discharge TSS	Overflow (Day 5)*	0	50	mg/L	0/1/00	Y				NRR	0
	Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0
	Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0
	Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0

0	Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
0	Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
0	Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible	0/1/00	Y				NRR	0	
Groundwater													
DLP1	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
DLP2	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
DLP3	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
DLP5	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
DLP6	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
DLP7	Ammonia	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Chloride	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Electrical conductivity	Yearly	-	-	µm/cm	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Oil and Grease	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	pH	Yearly	-	-	pH	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Standing Water Level	Yearly	-	-	m	0/1/00	Y			0/1/00	0/1/00	NRR	0
0	Sulfate	Yearly	-	-	mg/L	0/1/00	Y			0/1/00	0/1/00	NRR	0

Site: Humes - Blacktown

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	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=35038&SYSUID=1&LICID=1310

Water

Sediment Basin	TSS	Daily During Discharge		50	mg/L	7/9/18	Y				16
	pH	Daily During Discharge	6.5	8.5	pH	7/9/18	Y				7.25
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.	3293
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	http://app.epa.nsw.gov.au/prpocapp/ViewPOEOlicence.aspx?DOCID=85921&SYSUID=1&LICID=3293

Water		Time of Blast									
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH	7/6/18	Y				7
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible	7/6/18	Y				0
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L	7/6/18	Y				3
Licensed Discharge Point	pH	Special Frequency 1	6.5	8.5	pH	7/9/18	Y				7.3
Licensed Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible	7/9/18	Y				0
Licensed Discharge Point	TSS	Special Frequency 1	0	50	mg/L	7/9/18	Y				3
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

Noise											
168 Weir's Road, 17even (or Receiver No. 2 in Caswell)	Daytime - LAeq (15 min)	Yearly	0	37	dB (A)		Y				NRR
168 Weir's Road, 17even (or Receiver No. 2 in Caswell)	Evening (8am-10pm Mon-Sun) - LAeq (15 min)	Yearly	0	35	dB (A)		Y				NRR

Blasting											
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.	7094
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	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=108484&SYSUID=1&LICID=7094

Blasting (M4 & L2.1 - To determine compliance with L3, measurements to be taken at any point within 1 metre of residential boundary)												
RL110	Overpressure	Per blast	0	120	dB	7/10/18	Y	0/1/00	7/10/18		105.3	Shot 196
RL110	Vibration	Per blast	0	10	mm/s	7/10/18	Y	0/1/00	7/10/18		1.88	Shot 196
	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.	13359
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 H20 "Lake 1"	Arsenic	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.001
	Conductivity	Quarterly	0		µS/cm	7/3/18	Y	7/3/18	7/12/18		159
	Copper	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		<0.001
	Iron	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.26
	pH	Quarterly	0		pH	7/3/18	Y	7/3/18	7/12/18		7.1
	Zinc	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.036
	ID#3 Surface H20 "Lake 2"	Arsenic	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18	
Conductivity		Quarterly	0		µS/cm	7/3/18	Y	7/3/18	7/12/18		254
Copper		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		<0.001
Iron		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.06
pH		Quarterly	0		pH	7/3/18	Y	7/3/18	7/12/18		7.1
Zinc		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.036
ID#4 Surface H20 "Lake 3"		Arsenic	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18	
	Conductivity	Quarterly	0		µS/cm	7/3/18	Y	7/3/18	7/12/18		286
	Copper	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		<0.001
	Iron	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		<0.05
	pH	Quarterly	0		pH	7/3/18	Y	7/3/18	7/12/18		7.5
	Zinc	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.081
	ID#5 Surface H20 "Lake 4"	Arsenic	Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18	
Conductivity		Quarterly	0		µS/cm	7/3/18	Y	7/3/18	7/12/18		344
Copper		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		<0.001
Iron		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.07
pH		Quarterly	0		pH	7/3/18	Y	7/3/18	7/12/18		7.6
Zinc		Quarterly	0		mg/L	7/3/18	Y	7/3/18	7/12/18		0.025
Air											
ID #1	Deposited Matter	Monthly	0	4	g/m2/month	7/3/18	Y	7/3/18	7/12/18		5

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		Y				NRR
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR
DD 1	Insoluble Solids	Monthly	0	4							
DD 2	Insoluble Solids	Monthly	0	4	mg/m2/month	7/3/18	Y	7/3/18	7/11/18		0.4
DD 3	Insoluble Solids	Monthly	0	4	mg/m2/month	7/3/18	Y	7/3/18	7/11/18		0.2
DD 4	Insoluble Solids	Monthly	0	4	mg/m2/month	7/3/18	Y	7/3/18	7/11/18		0.4
HVAS 1	Insoluble Solids	Monthly	0	4	mg/m2/month	7/3/18	Y	7/3/18	7/11/18		0.3

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