



Quarry Solutions Blast Monitoring Results

Woodburn Quarry

Brickella Road Woodburn NSW 2472

EPL no. 20718 <http://www.epa.nsw.gov.au/prpoeoapp>

June 2016 to August 2020

Monthly Blasting - Monitoring 1

Sample Point	Monitoring Date	Airblast Overpressure dB (Lin peak) <120 or <115 for 95% blasts in annual reporting period	Ground Vibration (mm/sec) <10 or <5 for 95% blasts in annual reporting period	Exceedance (Y/N)	Monitoring Frequency
Monitoring 1	28/06/2016	119.6	2.185	N	All Blasts
Monitoring 1	20/07/2016	101.9	1.783	N	All Blasts
Monitoring 1	16/08/2016	NT	NT	N	All Blasts
Monitoring 1	15/09/2016	108.8	1.783	N	All Blasts
Monitoring 1	27/09/2016	NT	NT	N	All Blasts
Monitoring 1	7/10/2016	112.6	1.345	N	All Blasts
Monitoring 1	17/10/2016	108.7	0.567	N	All Blasts
Monitoring 1	28/10/2016	<88	1.746	N	All Blasts
Monitoring 1	1/11/2016	109.9	0.992	N	All Blasts
Monitoring 1	18/11/2016	111.2	1.332	N	All Blasts
Monitoring 1	14/12/2016	109.6	1.370	N	All Blasts
Monitoring 1	20/12/2016	<88	1.276	N	All Blasts
Monitoring 1	17/01/2017	110.2	1.826	N	All Blasts
Monitoring 1	23/01/2017	112.0	3.074	N	All Blasts
Monitoring 1	1/02/2017	109.4	1.828	N	All Blasts
Monitoring 1	15/02/2017	107.5	0.813	N	All Blasts
Monitoring 1	20/02/2017	<88	1.675	N	All Blasts
Monitoring 1	8/03/2017	110.9	1.470	N	All Blasts
Monitoring 1	27/03/2017	111.2	4.872	N	All Blasts
Monitoring 1	10/04/2017	114.4	0.967	N	All Blasts
Monitoring 1	24/04/2017	105.5	1.205	N	All Blasts
Monitoring 1	27/04/2017	99.01	2.26	N	All Blasts
Monitoring 1	3/05/2017	NT	NT	N	All Blasts

Monitoring 1	9/05/2017	NT	NT	N	All Blasts
Monitoring 1	15/05/2017	106.5	2.396	N	All Blasts
Monitoring 1	22/05/2017	NT	NT	N	All Blasts
Monitoring 1	30/05/2017	NT	NT	N	All Blasts
Monitoring 1	8/06/2017	112.6	4.403	N	All Blasts
Monitoring 1	3/07/2017	108.0	1.814	N	All Blasts
Monitoring 1	14/07/2017	91.48	2.178	N	All Blasts
Monitoring 1	18/07/2017	105.8	1.592	N	All Blasts
Monitoring 1	26/07/2017	107.0	1.746	N	All Blasts
Monitoring 1	3/08/2017	NT	NT	N	All Blasts
Monitoring 1	4/08/2017	NT	NT	N	All Blasts
Monitoring 1	8/08/2017	98.84	1.508	N	All Blasts
Monitoring 1	15/08/2017	112.3	1.713	N	All Blasts
Monitoring 1	22/08/2017	NT	NT	N	All Blasts
Monitoring 1	29/08/2017	109.3	1.814	N	All Blasts
Monitoring 1	6/09/2017	NT	NT	N	All Blasts
Monitoring 1	12/09/2017	NT	NT	N	All Blasts
Monitoring 1	19/09/2017	NT	NT	N	All Blasts
Monitoring 1	21/09/2017	NT	NT	N	All Blasts
Monitoring 1	26/09/2017	NT	NT	N	All Blasts
Monitoring 1	30/10/2017	91.42	1.040	N	All Blasts
Monitoring 1	21/11/2017	114.2	0.925	N	All Blasts
Monitoring 1	14/12/2017	118.8	0.539	N	All Blasts
Monitoring 1	2/03/2018	97.44	4.773	N	All Blasts
Monitoring 1	19/03/2018	88	0.697	N	All Blasts
Monitoring 1	26/04/2018	88.42	1.186	N	All Blasts
Monitoring 1	7/05/2018	111.2	1.332	N	All Blasts
Monitoring 1	30/05/2018	110.6	0.852	N	All Blasts
Monitoring 1	19/06/2018	91.48	1.403	N	All Blasts
Monitoring 1	26/07/2018	91.48	0.813	N	All Blasts
Monitoring 1	6/08/2018	88	1.574	N	All Blasts
Monitoring 1	28/08/2018	111.2	4.443	N	All Blasts
Monitoring 1	14/09/2018	88	1.596	N	All Blasts
Monitoring 1	10/10/2018	114.0	1.939	N	All Blasts

Monitoring 1	1/11/2018	111.8	1.295	N	All Blasts
Monitoring 1	2/11/2018	97.5	2.163	N	All Blasts
Monitoring 1	26/11/2018	TBA	TBA	N	All Blasts
Monitoring 1	19/12/2018	101.7	3.403	N	All Blasts
Monitoring 1	30/01/2019	NT	NT	N	All Blasts
Monitoring 1	07/02/2019	96.78	1.02	N	All Blasts
Monitoring 1	25/02/2019	114.2	4.56	N	All Blasts
Monitoring 1	12/03/2019	108.0	4.74	N	All Blasts
Monitoring 1	28/03/2019	103.5	4.66	N	All Blasts
Monitoring 1	4/04/2019	108.2	1.88	N	All Blasts
Monitoring 1	16/04/2019	100.7	4.52	N	All Blasts
Monitoring 1	6/05/2019	<88	1.148	N	All Blasts
Monitoring 1	21/05/2019	<88	0.93	N	All Blasts
Monitoring 1	4/06/2019	<88	3.66	N	All Blasts
Monitoring 1	18/06/2019	<88	2.67	N	All Blasts
Monitoring 1	10/07/2019	<88	4.14	N	All Blasts
Monitoring 1	14/08/2019	<88	2.12	N	All Blasts
Monitoring 1	1/10/2019	93.6	3.404	N	All Blasts
Monitoring 1	21/10/2019	97.3	2.351	N	All Blasts
Monitoring 1	16/12/2019	103.3	4.590	N	All Blasts
Monitoring 1	3/02/2020	102.6	2.474	N	All Blasts
Monitoring 1	3/03/2020	100.1	0.618	N	All Blasts
Monitoring 1	23/03/2020	104.6	4.920	N	All Blasts
Monitoring 1	26/06/2020	95.6	2.20	N	All Blasts
Monitoring 1	21/08/2020	107.0	2.646	N	All Blasts

Annual Blast Summary – Monitoring 1

Year	Pollutant	Unit of Measure	Monitoring Frequency required by License	No. of times measured during year	Min Value	Max Value	100 Percentile Limit	100 Percentile Value	95 Percentile value	95 Percentile limit	Exceedance
2016	Overpressure	dB (Lin peak)	All Blasts	12	NT	119.6	<120	119.6	117.15	<115	Y
	Ground Vibration	mm/sec	All Blasts	12	NT	2.185	<10	2.185	2.004	<5	N
2017	Overpressure	dB (Lin peak)	All Blasts	34	NT	118.8	<120	118.8	114.3	<115	N
	Ground Vibration	mm/sec	All Blasts	34	NT	4.872	<10	4.872	4.336	<5	N
2018	Overpressure	dB (Lin peak)	All Blasts	15	88	114.0	<120	114.0	112.57	<115	N
	Ground Vibration	mm/sec	All Blasts	15	0.697	4.773	<10	4.773	4.559	<5	N
2019	Overpressure	dB (Lin peak)	All Blasts	16	NT	114.2	<120	114.2	111.8	<115	N
	Ground Vibration	mm/sec	All Blasts	16	NT	4.74	<10	4.74	4.684	<5	N
2020	Overpressure	dB (Lin peak)	All Blasts	5	95.6	107.0	<120	107.0	106.52	<115	N
	Ground Vibration	mm/sec	All Blasts	5	0.618	4.92	<10	4.92	4.465	<5	N

Monthly Blast Summary – Monitoring 2

Sample Point	Monitoring Date	Airblast Overpressure dB (Lin peak) <120 or <115 for 95% blasts in annual reporting period	Ground Vibration (mm/sec) <10 or <5 for 95% blasts in annual reporting period	Exceedance (Y/N)	Monitoring Frequency
Monitoring 2	28/06/2016	119.0	1.143	N	All Blasts
Monitoring 2	20/07/2016	98.84	0.976	N	All Blasts
Monitoring 2	16/08/2016	NT	NT	N	All Blasts
Monitoring 2	15/09/2016	<88	0.823	N	All Blasts
Monitoring 2	27/09/2016	NT	NT	N	All Blasts
Monitoring 2	7/10/2016	110.2	0.539	N	All Blasts
Monitoring 2	17/10/2016	NT	NT	N	All Blasts
Monitoring 2	18/11/2016	100.0	0.648	N	All Blasts
Monitoring 2	14/12/2016	114.8	0.95	N	All Blasts
Monitoring 2	20/12/2016	NT	NT	N	All Blasts
Monitoring 2	17/01/2017	105.5	0.861	N	All Blasts
Monitoring 2	23/01/2017	104.2	1.596	N	All Blasts
Monitoring 2	1/02/2017	NT	NT	N	All Blasts
Monitoring 2	15/02/2017	NT	NT	N	All Blasts
Monitoring 2	20/02/2017	NT	NT	N	All Blasts
Monitoring 2	8/03/2017	112.0	1.178	N	All Blasts
Monitoring 2	27/03/2017	112.3	2.119	N	All Blasts
Monitoring 2	10/04/2017	113.1	0.904	N	All Blasts
Monitoring 2	24/04/2017	NT	NT	N	All Blasts
Monitoring 2	27/04/2017	NT	NT	N	All Blasts
Monitoring 2	3/05/2017	NT	NT	N	All Blasts
Monitoring 2	9/05/2017	NT	NT	N	All Blasts
Monitoring 2	15/05/2017	105.5	1.713	N	All Blasts

Monitoring 2	22/05/2017	NT	NT	N	All Blasts
Monitoring 2	30/05/2017	NT	NT	N	All Blasts
Monitoring 2	8/06/2017	NT	NT	N	All Blasts
Monitoring 2	3/07/2017	103.6	1.728	N	All Blasts
Monitoring 2	14/07/2017	102.0	1.646	N	All Blasts
Monitoring 2	18/07/2017	109.9	1.301	N	All Blasts
Monitoring 2	26/07/2017	108.4	1.656	N	All Blasts
Monitoring 2	3/08/2017	NT	NT	N	All Blasts
Monitoring 2	4/08/2017	NT	NT	N	All Blasts
Monitoring 2	8/08/2017	102.7	1.167	N	All Blasts
Monitoring 2	15/08/2017	112.8	1.746	N	All Blasts
Monitoring 2	22/08/2017	NT	NT	N	All Blasts
Monitoring 2	29/08/2017	88	1.732	N	All Blasts
Monitoring 2	6/09/2017	NT	NT	N	All Blasts
Monitoring 2	12/09/2017	NT	NT	N	All Blasts
Monitoring 2	19/09/2017	NT	NT	N	All Blasts
Monitoring 2	21/09/2017	NT	NT	N	All Blasts
Monitoring 2	26/09/2017	NT	NT	N	All Blasts
Monitoring 2	30/10/2017	NT	NT	N	All Blasts
Monitoring 2	21/11/2017	106.2	0.739	N	All Blasts
Monitoring 2	14/12/2017	NT	NT	N	All Blasts
Monitoring 2	2/03/2018	109.4	0.680	N	All Blasts
Monitoring 2	19/03/2018	112.3	2.75	N	All Blasts
Monitoring 2	19/06/2018	88	1.745	N	All Blasts
Monitoring 2	26/07/2018	114.0	0.66	N	All Blasts
Monitoring 2	6/08/2018	93.98	0.622	N	All Blasts
Monitoring 2	28/08/2018	101.0	0.762	N	All Blasts
Monitoring 2	14/09/2018	91.48	1.032	N	All Blasts
Monitoring 2	10/10/2018	NT	NT	N	All Blasts
Monitoring 2	1/11/2018	94.32	1.013	N	All Blasts
Monitoring 2	19/12/2018	106.0	1.136	N	All Blasts
Monitoring 2	30/01/2019	NT	NT	N	All Blasts
Monitoring 2	07/02/2019	92.6	1.77	N	All Blasts
Monitoring 2	25/02/2019	108.4	0.992	N	All Blasts

Monitoring 2	12/03/2019	114.4	1.01	N	All Blasts
Monitoring 2	28/03/2019	112.8	0.61	N	All Blasts
Monitoring 2	4/04/2019	103.7	1.48	N	All Blasts
Monitoring 2	16/04/2019	114.0	0.92	N	All Blasts
Monitoring 2	6/05/2019	96.5	2.5	N	All Blasts
Monitoring 2	21/05/2019	111.1	1.76	N	All Blasts
Monitoring 2	4/06/2019	<88	2.99	N	All Blasts
Monitoring 2	18/06/2019	NT	NT	N	All Blasts
Monitoring 2	10/07/2019	109.5	4.17	N	All Blasts
Monitoring 2	1/10/2019	NT	NT	N	All Blasts
Monitoring 2	21/10/2019	NT	NT	N	All Blasts
Monitoring 2	14/11/2019	98.5	2.725	N	All Blasts
Monitoring 2	16/12/2019	114.6	0.98	N	All Blasts
Monitoring 2	3/02/2020	106.0	0.852	N	All Blasts
Monitoring 2	3/03/2020	102.9	0.581	N	All Blasts
Monitoring 2	23/03/2020	114.9	1.192	N	All Blasts
Monitoring 2	26/06/2020	104.6	0.80	N	All Blasts
Monitoring 2	21/08/2020	NT	NT	N	All Blasts

Annual Blast Summary – Monitoring 2

Year	Pollutant	Unit of Measure	Monitoring Frequency required by License	No. of times measured during year	Min Value	Max Value	100 Percentile Limit	100 Percentile Value	95 Percentile value	95 Percentile limit	Exceedance
2016	Overpressure	dB (Lin peak)	All Blasts	10	NT	119.0	<120	119.0	118.16	<115	Y
	Ground Vibration	mm/sec	All Blasts	10	NT	1.143	<10	1.143	1.101	<5	N
2017	Overpressure	dB (Lin peak)	All Blasts	34	NT	113.1	<120	113.1	112.9	<115	N
	Ground Vibration	mm/sec	All Blasts	34	NT	2.119	<10	2.119	1.876	<5	N
2018	Overpressure	dB (Lin peak)	All Blasts	10	NT	114.0	<120	114.0	113.3	<115	N
	Ground Vibration	mm/sec	All Blasts	10	NT	2.75	<10	2.75	2.348	<5	N
2019	Overpressure	dB (Lin peak)	All Blasts	16	NT	114.6	<120	114.6	114.5	<115	N
	Ground Vibration	mm/sec	All Blasts	16	NT	4.17	<10	4.17	3.521	<5	N
2020	Overpressure	dB (Lin peak)	All Blasts	5	NT	114.9	<120	114.9	113.6	<115	N
	Ground Vibration	mm/sec	All Blasts	5	NT	1.19	<10	1.19	1.141	<5	N

Monthly Blast Summary – Monitoring 3

Sample Point	Monitoring Date	Airblast Overpressure dB (Lin peak) <120 or <115 for 95% blasts in annual reporting period	Ground Vibration (mm/sec) <10 or <5 for 95% blasts in annual reporting period	Exceedance (Y/N)	Monitoring Frequency
Monitoring 3	28/06/2016	116.3	0.539	N	All Blasts
Monitoring 3	23/01/2017	111.2	1.114	N	All Blasts
Monitoring 3	1/02/2017	NT	NT	N	All Blasts
Monitoring 3	15/02/2017	NT	NT	N	All Blasts
Monitoring 3	20/02/2017	NT	NT	N	All Blasts
Monitoring 3	8/03/2017	110.9	1.122	N	All Blasts
Monitoring 3	27/03/2017	111.5	2.148	N	All Blasts
Monitoring 3	10/04/2017	113.9	0.817	N	All Blasts
Monitoring 3	24/04/2017	NT	NT	N	All Blasts
Monitoring 3	24/04/2017	NT	NT	N	All Blasts
Monitoring 3	27/04/2017	NT	NT	N	All Blasts
Monitoring 3	3/05/2017	NT	NT	N	All Blasts
Monitoring 3	9/05/2017	NT	NT	N	All Blasts
Monitoring 3	15/05/2017	107.0	1.694	N	All Blasts
Monitoring 3	22/05/2017	NT	NT	N	All Blasts
Monitoring 3	30/05/2017	NT	NT	N	All Blasts
Monitoring 3	8/06/2017	NT	NT	N	All Blasts
Monitoring 3	3/07/2017	<88	1.555	N	All Blasts
Monitoring 3	14/07/2017	<88	1.475	N	All Blasts
Monitoring 3	18/07/2017	106.2	1.443	N	All Blasts
Monitoring 3	26/07/2017	NT	NT	N	All Blasts
Monitoring 3	26/07/2017	NT	NT	N	All Blasts
Monitoring 3	26/07/2017	NT	NT	N	All Blasts
Monitoring 3	3/08/2017	NT	NT	N	All Blasts

Monitoring 3	4/08/2017	NT	NT	N	All Blasts
Monitoring 3	8/08/2017	NT	NT	N	All Blasts
Monitoring 3	15/08/2017	NT	NT	N	All Blasts
Monitoring 3	22/08/2017	NT	NT	N	All Blasts
Monitoring 3	29/08/2017	NT	NT	N	All Blasts
Monitoring 3	14/12/2017	NT	NT	N	All Blasts
Monitoring 3	2/03/2018	NT	NT	N	All Blasts
Monitoring 3	19/03/2018	NT	NT	N	All Blasts
Monitoring 3	29/03/2018	NT	NT	N	All Blasts
Monitoring 3	28/08/2018	111.2	1.040	N	All Blasts
Monitoring 3	14/09/2018	NT	NT	N	All Blasts
Monitoring 3	6/05/2019	111.2	0.56	N	All Blasts
Monitoring 3	21/05/2019	NT	NT	N	All Blasts
Monitoring 3	4/06/2019	109.9	0.64	N	All Blasts
Monitoring 3	18/06/2019	108.8	0.64	N	All Blasts
Monitoring 3	10/07/2019	<88	4.14	N	All Blasts
Monitoring 3	14/08/2019	114.7	0.56	N	All Blasts
Monitoring 3	24/09/2019	108.0	1.481	N	All Blasts
Monitoring 3	1/10/2019	NT	NT	N	All Blasts
Monitoring 3	21/10/2019	NT	NT	N	All Blasts
Monitoring 3	14/11/2019	108.8	0.66	N	All Blasts
Monitoring 3	16/12/2019	114.1	1.092	N	All Blasts
Monitoring 3	3/02/2020	111.3	0.565	N	All Blasts
Monitoring 3	3/03/2020	113.3	2.222	N	All Blasts
Monitoring 3	23/03/2020	114.9	0.898	N	All Blasts
Monitoring 3	26/06/2020	113.3	0.80	N	All Blasts
Monitoring 3	21/08/2020	NT	NT	N	All Blasts

Annual Blast Summary - Monitoring 3

Year	Pollutant	Unit of Measure	Monitoring Frequency required by License	No. of times measured during year	Min Value	Max Value	100 Percentile Limit	100 Percentile Value	95 Percentile value	95 Percentile limit	Exceedance
2016	Overpressure	dB (Lin peak)	All Blasts	1	116.3	116.3	<120	116.3	116.3	<115	Y
	Ground Vibration	mm/sec	All Blasts	1	0.539	0.539	<10	0.539	0.539	<5	N
2017	Overpressure	dB (Lin peak)	All Blasts	29	NT	113.9	<120	113.9	113.3	<115	N
	Ground Vibration	mm/sec	All Blasts	29	NT	2.148	<10	2.148	1.989	<5	N
2018	Overpressure	dB (Lin peak)	All Blasts	5	NT	111.2	<120	111.2	111.2	<115	N
	Ground Vibration	mm/sec	All Blasts	5	NT	1.04	<10	1.04	1.04	<5	N
2019	Overpressure	dB (Lin peak)	All Blasts	11	NT	114.7	<120	114.7	114.5	<115	N
	Ground Vibration	mm/sec	All Blasts	11	NT	4.14	<10	4.14	3.209	<5	N
2020	Overpressure	dB (Lin peak)	All Blasts	5	NT	114.9	<120	114.9	114.6	<115	N
	Ground Vibration	mm/sec	All Blasts	5	NT	2.222	<10	2.222	2.0234	<5	N

Monthly Blast Summary - Monitoring 4

Sample Point	Monitoring Date	Airblast Overpressure dB (Lin peak) <120 or <115 for 95% blasts in annual reporting period	Ground Vibration (mm/sec) <10 or <5 for 95% blasts in annual reporting period	Exceedance (Y/N)	Monitoring Frequency
Monitoring 4	28/06/2016	NT	NT	N	All Blasts
Monitoring 4	4/06/2019	<88	0.66	N	All Blasts
Monitoring 4	18/06/2019	NT	NT	N	All Blasts
Monitoring 4	10/07/2019	94.0	0.91	N	All Blasts
Monitoring 4	14/08/2019	103.5	1.37	N	All Blasts
Monitoring 4	24/09/2019	114.6	0.696	N	All Blasts
Monitoring 4	1/10/2019	105.5	2.304	N	All Blasts
Monitoring 4	21/10/2019	107.5	1.591	N	All Blasts
Monitoring 4	14/11/2019	111.8	1.231	N	All Blasts
Monitoring 4	16/12/2019	106.0	1.737	N	All Blasts
Monitoring 4	3/02/2020	108.0	4.054	N	All Blasts

Annual Blast Summary - Monitoring 4

Year	Pollutant	Unit of Measure	Monitoring Frequency required by License	No. of times measured during year	Min Value	Max Value	100 Percentile Limit	100 Percentile Value	95 Percentile value	95 Percentile limit	Exceedance
2016	Overpressure	dB (Lin peak)	All Blasts	1	NT	NT	<120	NT	NT	<115	N
	Ground Vibration	mm/sec	All Blasts	1	NT	NT	<10	NT	NT	<5	N
2019	Overpressure	dB (Lin peak)	All Blasts	9	NT	114.6	<120	114.6	113.76	<115	N
	Ground Vibration	mm/sec	All Blasts	9	NT	2.304	<10	2.304	2.105	<5	N
2020	Overpressure	dB (Lin peak)	All Blasts	1	108.0	108.0	<120	108.0	108.0	<115	N
	Ground Vibration	mm/sec	All Blasts	1	4.054	4.054	<10	4.054	4.054	<5	N

Monthly Blast Summary - Monitoring 5

Sample Point	Monitoring Date	Airblast Overpressure dB (Lin peak) <120 or <115 for 95% blasts in annual reporting period	Ground Vibration (mm/sec) <10 or <5 for 95% blasts in annual reporting period	Exceedance (Y/N)	Monitoring Frequency
Monitoring 5	24/09/2019	NT	NT	N	All Blasts
Monitoring 5	14/11/2019	114.9	0.582	N	All Blasts

Annual Blast Summary - Monitoring 5

Year	Pollutant	Unit of Measure	Monitoring Frequency required by License	No. of times measured during year	Min Value	Max Value	100 Percentile Limit	100 Percentile Value	95 Percentile value	95 Percentile limit	Exceedance
2019	Overpressure	dB (Lin peak)	All Blasts	2	NT	114.9	<120	114.9	114.9	<115	N
	Ground Vibration	mm/sec	All Blasts	2	NT	0.582	<10	0.582	0.582	<5	N

Notes

NT = Not triggered

For statistical analysis, 105dB has been assumed for NT

Where no data has been published, it indicates no monitoring was undertaken at that point