AuS-10 Rhyolite - Licence number 12323

Licence Discharge Point 1

The concentration limits stipulated by condition L2.1/L2.4 for EPA Identification Points 1,8, 9, 10 and 11 are deemed not to apply when the discharge from the stormwater control structures (sediment basins) occurs solely as a result of rainfall measured at the premises which exceeds:

a) a total of 44 millimetres of rainfall over any consecutive 5 day period.

Dam 1 - SB1 - EPL Point 1

Guidance range		Range - 6.5 - 8.5	<1500us/cm			Limit <30 mg/l	20	Limit - 10 mg/l		
Month	**Number of Samples**	**pH**	**Electrical Conductivity**	**Turbidity**	**Total Dissolved Solids**	**Total Suspend Solids**	**Oxygen demand**	**Oil/Grease**	**Volume Discharged - KL - Estimated**	**Comment**
20/12/2023	1	7.4	308	834	N/S	812	N/S	<5	**2000**	**97mm of rain - 7am 19.12.2023 to 7am 20.12.2023** N/S - Not Sampled
21/12/2023	1	7.7	228	1400	N/S	1070	N/S	<5	**2000**	**Additional 78mm rain recorded 7am 20.12.2023 to 7am 21.12.2023 - total 175mm** N/S - Not Sampled
22/12/2023	1	7.8	291	770	N/S	424	N/S	<5	**1000**	**Total rainfall recorded of 175mm from 7am 19.12.23 to 21.12.2023**
5/01/2024	1	7.3	225	1400	N/S	828	N/S	<5	**2000**	**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2024**
6/01/2024	1	7.5	235	950	N/S	639	N/S	<5	**2000**	**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2025**
7/01/2024	1	7.7	247	550	N/S	172	N/S	<5	**2000**	**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2026**
18/01/2024	1	7.9	414	1350	N/S	655	N/S	<5	**2000**	**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	6.8	236	2000	N/S	999	N/S	<5	**3000**	**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2027**
Total		**60.1**	**2184**	**9254**	**0**	**5599**	**0**	**0**		
	Mean	**7.51**	**273.00**	**1156.75**	**#DIV/0!**	**699.88**	**#DIV/0!**	**#DIV/0!**		
	Lowest	**6.80**	**225.00**	**550.00**	**0.00**	**172.00**	**0.00**	**0.00**		
	Highest	**7.90**	**414.00**	**2000.00**	**0.00**	**1070.00**	**0.00**	**0.00**		

EPL POINT 2 **Range - 6.5 - 8.5**

Upstream Location AQW-1

Month	**Number of Samples**	**pH**	**Electrical Conductivity**	**Turbidity**	**Total Dissolved Solids**	**Total Suspend Solids**	**Oxygen demand**	**Oil/Grease**	**Volume Discharged - KL - Estimated**	**Comment**
18/07/2023	1	8.5	177	1.2	129	<5	<2	<5		**Nil Discharge - Monthly sample**
17/08/2023	1	7.9	280	2.5	125	<5	<2	<5		**Nil Discharge - Monthly sample**
18/09/2023	1	7.7	287	1	172	<5	<2	<5		**Nil Discharge - Monthly sample**
19/10/2023	1	7.1	276	4	132	<5	2	<5		**Nil Discharge - Monthly sample**
17/11/2023	1	8.4	349	1.6	177	<5	<2	<5		**Nil Discharge - Monthly sample**
18/12/2023	1	7.5	335	2	192	<5	<2	<5		**Nil Discharge - Monthly sample**
20/12/2023	1	6.2	243	130	N/S	364	N/S	<5		**97mm of rain - 7am 19.12.2023 to 7am 20.12.2023** N/S - Not Sampled
21/12/2023	1	7.2	319	9.1	N/S	14	N/S	<5		**Additional 78mm rain recorded 7am 20.12.2023 to 7am 21.12.2023 - total 175mm** N/S - Not Sampled
22/12/2023	1	7.8	317	5	N/S	11	N/S	<5		**Total rainfall recorded of 175mm from 7am 19.12.23 to 21.12.2023**
5/01/2024	1	7.3	242	29	N/S	26	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2024**
6/01/2024	1	7.5	275	10	N/S	10	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2025**
7/01/2024	1	7.7	271	8	N/S	8	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2026**
18/01/2024	1	7.9	278	32	N/S	34	N/S	<5		**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	7.2	269	7	N/S	14	N/S	<5		**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	7.9	278	7	148	<5	<2	<5		**Monthly Sample**
20/02/2024	1	6.7	266	2.8	179	5	<2	<5		**Monthly Sample**
Total		**120.5**	**4462**	**252.2**	**1254**	**486**	**2**	**0**		
	Mean	**7.53**	**278.88**	**15.76**	**156.75**	**54.00**	**2.00**	**#DIV/0!**		
	Lowest	**6.20**	**177.00**	**1.00**	**125.00**	**5.00**	**2.00**	**0.00**		
	Highest	**8.50**	**349.00**	**130.00**	**192.00**	**364.00**	**2.00**	**0.00**		

EPL Point 3

COXS RIVER LOWER CROSSING 6/7/2011 - AQW3

Month	**Number of Samples**	**pH**	**Electrical Conductivity**	**Turbidity**	**Total Dissolved Solids**	**Total Suspend Solids**	**Oxygen demand**	**Oil/Grease**	**Volume Discharged - KL - Estimated**	**Comment**
									KL	
18/07/2023	1	7.1	187	1.1	138	<5	<2	<5		**Nil Discharge - Monthly sample**
17/08/2023	1	7.7	235	2.0	131	<5	<2	<5		**Nil Discharge - Monthly sample**
18/09/2023	1	6.9	302	1.6	184	<5	2	<5		**Nil Discharge - Monthly sample**
19/10/2023	1	7.3	280	2	146	<5	<2	<5		**Nil Discharge - Monthly sample**
17/11/2023	1	7.7	338	1.3	475	<5	9	<5		**Nil Discharge - Monthly sample**
18/12/2023	1	7.7	322	1	190	5	<2	<5		**Nil Discharge - Monthly sample**
20/12/2023	1	7.0	204	138	N/S	378	N/S	<5		**97mm of rain - 7am 19.12.2023 to 7am 20.12.2023 - Sampled at Alternative - AQW2** N/S - Not Sampled
21/12/2023	1	7.5	316	8.5	N/S	15	N/S	<5		**Additional 78mm rain recorded 7am 20.12.2023 to 7am 21.12.2023 - total 175mm** N/S - Not Sampled
22/12/2023	1	7.9	318	8	N/S	10	N/S	<5		**Sampled at Alternative - AQW2**
5/01/2024	1	7.4	242	29	N/S	24	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2024 - sampled at AQW2**
6/01/2024	1	7.6	272	13	N/S	16	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2024 - sampled at AQW2**
7/01/2024	1	7.7	277	12	N/S	10	N/S	<5		**95mm of rain recorded between 7.15am 02.01.2024 and 7.00am 05.01.2024 - sampled at AQW2**
18/01/2024	1	7.8	270	22	N/S	34	N/S	<5		**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	7.3	271	7	N/S	10	N/S	<5		**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	7.5	269	8.4	155	8	10	<5		**Monthly Sample**
20/02/2024	1	7.0	263	2.9	144	6	<2	<5		**Monthly Sample**
Total		**119.1**	**1180**	**148.8**	**665**	**408**	**9**	**0**		
	Mean	**7.44**	**272.88**	**16.11**	**195.38**	**46.91**	**7.00**	**#DIV/0!**		**0.00**
	Lowest	**6.90**	**187.00**	**1.00**	**131.00**	**5.00**	**2.00**	**0.00**		**0.00**
	Highest	**7.90**	**338.00**	**138.00**	**475.00**	**378.00**	**10.00**	**0.00**		

Dust Monitoring EPL Point 4

Period	**Month**	**Number of**	**Sawmill**	**Insoluble Solids**	**Combustible Matter**	**Ash**
16/06/2023 - 18/07/2023	Jul-2023	continuous	Sawmill	<0.1	<0.1	<0.1
18/07/2023 - 17/08/2023	Aug-2023	continuous	Sawmill	0.8	0.5	0.3
17/08/2023 - 18/09/2023	Sep-2023	continuous	Sawmill	0.6	0.4	0.2

18/09/2023 - 19/10/2023	Oct-2023	continuous	Sawmill	0.9	0.5	0.4
19/10/2023 - 17/11/2023	Nov-2023	continuous	Sawmill	1.6	0.9	0.7
17/11/2023 - 18/12/2023	Dec-2023	continuous	Sawmill	1.0	0.6	0.4
18/12/2023 - 19/01/2024	Jan-2024	continuous	Sawmill	1.0	0.7	0.3
19/01/2024 - 20/02/2024	Feb-2024	continuous	Sawmill	1.6	1.0	0.6
		continuous	Sawmill			
		continuous	Sawmill			
		continuous	Sawmill			
		continuous	Sawmill			
				7.5	**4.6**	**2.9**
			Mean	**1.07**	**0.66**	**0.41**
			Lowest	**0.6**	**0.4**	**0.2**
			Highest	**1.6**	**1**	**0.7**

Dust Monitoring EPL Point 5

Month	Month	Number of	Baners Lane	Insoluble Solids	Combustible Matter	Ash
16/06/2023 - 18/07/2023	Jul-2023	continuous	Baners Lane	0.3	0.1	0.2
18/07/2023 - 17/08/2023	Aug-2023	continuous	Baners Lane	0.7	0.5	0.2
17/08/2023 - 18/09/2023	Sep-2023	continuous	Baners Lane	0.8	0.5	0.3
18/09/2023 - 19/10/2023	Oct-2023	continuous	Baners Lane	0.2	0.1	0.1
19/10/2023 - 17/11/2023	Nov-2023	continuous	Baners Lane	0.4	0.1	0.3
17/11/2023 - 18/12/2023	Dec-2023	continuous	Baners Lane	0.8	0.6	0.2
18/12/2023 - 19/01/2024	Jan-2024	continuous	Baners Lane	0.7	0.7	<0.1
19/01/2024 - 20/02/2024	Feb-2024	continuous	Baners Lane	0.8	0.7	0.1
		continuous	Baners Lane			
		continuous	Baners Lane			
		continuous	Baners Lane			
		continuous	Baners Lane			
				4.7	**3.3**	**1.4**
			Mean	**0.59**	**0.41**	**0.20**
			Lowest	**0.2**	**0.1**	**0.1**
			Highest	**0.8**	**0.7**	**0.3**

Dust Monitoring EPL Point 6

Month	Month	Number of	Bald Hill	Insoluble Solids	Combustible Matter	Ash
16/06/2023 - 18/07/2023	Jul-2023	continuous	Bald Hill	0.4	0.3	0.1
18/07/2023 - 17/08/2023	Aug-2023	continuous	Bald Hill	0.6	0.5	0.1
17/08/2023 - 18/09/2023	Sep-2023	continuous	Bald Hill	0.5	0.3	0.2
18/09/2023 - 19/10/2023	Oct-2023	continuous	Bald Hill	0.5	0.1	0.4
19/10/2023 - 17/11/2023	Nov-2023	continuous	Bald Hill	0.7	0.2	0.5
17/11/2023 - 18/12/2023	Dec-2023	continuous	Bald Hill	0.5	0.3	0.2
18/12/2023 - 19/01/2024	Jan-2024	continuous	Bald Hill	0.6	0.5	0.1
19/01/2024 - 20/02/2024	Feb-2024	continuous	Bald Hill	1.2	0.8	0.4
		continuous	Bald Hill			
		continuous	Bald Hill			
		continuous	Bald Hill			
		continuous	Bald Hill			
				5	**3**	**2**
			Mean	**0.63**	**0.38**	**0.25**
			Lowest	**0.4**	**0.1**	**0.1**
			Highest	**1.2**	**0.8**	**0.5**

ND - Not Detected

EPL POINT 8

Dam 2 - SB2b **Range - 6.5 - 8.5**

Month	Number of Samples	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids	Total Suspend Solids	Oxygen demand	Oil/Grease	Volume Discharged - KL - Estimated	Comment
31/07/2023	0									**Nil Discharge - NO Sample**
31/08/2023	0									**Nil Discharge - NO Sample**
30/09/2023	0									**Nil Discharge - NO Sample**
31/10/2023	0									**Nil Discharge - NO Sample**
30/11/2023	0									**Nil Discharge - NO Sample**
20/12/2023	1	7	207	1805	N/S	812	N/S	8	**2000**	**97mm of rain - 7am 19.12.2023 to 7am 20.12.2023**
31/01/2024										**Nil Discharge - NO Sample**
29/02/2024										**Nil Discharge - NO Sample**
		7	**207**	**1805**	**0**	**812**	**0**	**8**		
	Mean	**7.00**	**207.00**	**1805.00**	**#DIV/0!**	**812.00**	**#DIV/0!**	**8.00**		
	Lowest	**7.00**	**207.00**	**1805.00**	**0.00**	**812.00**	**0.00**	**8.00**		
	Highest	**7.00**	**207.00**	**1805.00**	**0.00**	**812.00**	**0.00**	**8.00**		

N/S - Not Sampled

EPL POINT 9

South of O/Burden dump

Dam 3 - SB3a **Range - 6.5 - 8.5**

Month	Number of Samples	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids	Total Suspend Solids	Oxygen demand	Oil/Grease	Volume Discharged - KL - Estimated	Comment
31/07/2023	0									**Nil Discharge - NO Sample**
31/08/2023	0									**Nil Discharge - NO Sample**
30/09/2023	0									**Nil Discharge - NO Sample**
31/10/2023	0									**Nil Discharge - NO Sample**
30/11/2023	0									**Nil Discharge - NO Sample**
20/12/2023	0									**97mm of rain - 7am 19.12.2023 to 7am**
21/12/2023	1	7.6	876	101	N/S	33	N/S	<5		**Additional 78mm rain recorded 7am 20.12.2023 to 7am 21.12.2023 - total 175mm**
18/01/2024	1	9.0	271	60	N/S	26	N/S	<5	**2000**	**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
19/01/2024	1	8.3	531	75	N/S	60	N/S	<5	**2000**	**58mm of rain recorded between 7.00am 17.01.2024 and 7.00am 19.01.2026**
29/02/2024										**Nil Discharge - NO Sample**
		24.9	**1678**	**236**	**0**	**119**	**0**	**0**		
	Mean	**8.30**	**559.33**	**78.67**	**#DIV/0!**	**39.67**	**#DIV/0!**	**#DIV/0!**		
	Lowest	**7.60**	**271.00**	**60.00**	**0.00**	**26.00**	**0.00**	**0.00**		
	Highest	**9.00**	**876.00**	**101.00**	**0.00**	**60.00**	**0.00**	**0.00**		

N/S - Not Sampled

EPL POINT 10

Storage Dam 4

Dam 4 - SD2 **Range - 6.5 - 8.5**

Month	Number of Samples	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids	Total Suspend Solids	Oxygen demand	Oil/Grease	Volume Discharged - KL - Estimated	Comment
31/07/2023	0									**Nil Discharge - NO Sample**
31/08/2023	0									**Nil Discharge - NO Sample**
30/09/2023	0									**Nil Discharge - NO Sample**
31/10/2023	0									**Nil Discharge - NO Sample**
30/11/2023	0									**Nil Discharge - NO Sample**
31/12/2023	0									**Nil Discharge - NO Sample**
31/01/2024	0									**Nil Discharge - NO Sample**
29/02/2024	0									**Nil Discharge - NO Sample**
		0	**0**	**0**	**0**	**0**	**0**	**0**		
	Mean	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**		
	Lowest	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		
	Highest	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		

EPL POINT 11

Dam 5 - SD6 - AQW-8 **Range - 6.5 - 8.5**

Volume Discharged -	Comment

Month	Number of Samples	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids	Total Suspend Solids	Oxygen demand	Oil/Grease	2000	
31/07/2023	0									Nil Discharge - NO Sample
31/08/2023	0									Nil Discharge - NO Sample
30/09/2023	0									Nil Discharge - NO Sample
31/10/2023	0									Nil Discharge - NO Sample
30/11/2023	0									Nil Discharge - NO Sample
31/12/2023	0									Nil Discharge - NO Sample
31/01/2024	0									Nil Discharge - NO Sample
29/02/2024	0									Nil Discharge - NO Sample
		0	0	0	0	0	0	0		
	Mean	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
	Lowest	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Highest	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Weather station results available upon request

AuS-10 Rhyolite - Licence number 12323

Blasting	Frequency	Date	Blast Number	Limits	Units of measure	Results - Hartley Village	2nd Monitor 781 Jenolan Caves Rd	3rd Monitor - South east of quarry	
Ground Vibration	Per Blast	14/06/2023	243	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.44pm
Overpressure	Per Blast	14/06/2023	243	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.44pm
Ground Vibration	Per Blast	3/07/2023	244	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.10pm
Overpressure	Per Blast	3/07/2023	244	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.10pm
Ground Vibration	Per Blast	28/07/2023	245	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	11.33am
Overpressure	Per Blast	28/07/2023	245	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	11.33am
Ground Vibration	Per Blast	9/08/2023	246	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	12.02pm
Overpressure	Per Blast	9/08/2023	246	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	12.02pm
Ground Vibration	Per Blast	1/09/2023	247	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	12.08pm
Overpressure	Per Blast	1/09/2023	247	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	12.08pm
Ground Vibration	Per Blast	13/09/2023	248	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.32pm
Overpressure	Per Blast	13/09/2023	248	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.32pm
Ground Vibration	Per Blast	11/10/2023	249	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	12.13pm
Overpressure	Per Blast	11/10/2023	249	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	12.13pm
Ground Vibration	Per Blast	30/10/2023	250	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.58pm
Overpressure	Per Blast	30/10/2023	250	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.58pm
Ground Vibration	Per Blast	9/11/2023	251	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	11.38am
Overpressure	Per Blast	9/11/2023	251	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	11.38am
Ground Vibration	Per Blast	30/11/2023	252 A & B	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.09pm
Overpressure	Per Blast	30/11/2023	252 A & B	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.09pm
Ground Vibration	Per Blast	6/12/2023	253	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	11.34am
Overpressure	Per Blast	6/12/2023	253	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	11.34am
Ground Vibration	Per Blast	13/12/2023	254	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	1.19pm
Overpressure	Per Blast	13/12/2023	254	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	1.19pm
Ground Vibration	Per Blast	31/01/2024	255	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	11.46am
Overpressure	Per Blast	31/01/2024	255	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	11.46am
Ground Vibration	Per Blast	15/02/2024	256	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	12.26pm
Overpressure	Per Blast	15/02/2024	256	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	12.26pm
Ground Vibration	Per Blast	22/02/2024	257	5mm/s - trigger point >0.51	dB	Nil Trigger	Nil Trigger	Not required	12.17pm
Overpressure	Per Blast	22/02/2024	257	115db - Trigger point <100	dB	Nil Trigger	Nil Trigger	Not required	12.17pm

Grant's Head Quarry - Licence Number 4040

	Pollutant	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	
EPL Point 1 - sump	Units of Measure	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Comment
Month	Number of Samples										
29/05/2023	1	0.477	0.0002	0.0005	0.0009	0.411	0.001	<0.00001	0.0259	0.044	Hy-Tec Qtrly Sample
06/06/2023	1	0.45	<0.001	0.0005	<0.001	0.42	0.001	<0.0001	0.025	0.043	ERM Qtrly sample
29/08/2023	1	0.315	0.0002	0.0004	0.0005	0.304	0.0004	<0.00001	0.0244	0.044	Hy-Tec Qtrly Sample
27/10/2023	1	0.11	<0.001	0.0004	<0.001	0.22	<0.001	<0.0001	0.022	0.043	ERM Qtrly sample
14/11/2023	1	0.545	<0.0002	0.0004	0.001	0.377	0.0004	0.00006	0.0244	0.045	Hy-Tec Qtrly Sample
22/01/2024	1	0.56	<0.001	0.0003	<0.001	0.44	<0.001	<0.0001	0.024	0.045	ERM Qtrly sample
14/02/2024	1	0.815	0.0002	0.0004	0.0009	0.465	0.0005	0.00001	0.0243	0.053	Hy-Tec Qtrly Sample

	Pollutant	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	
Wetland site (new Oct 2018	Units of Measure	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	COMMENTS
Date	No. of samples										
06/06/2023	1	0.07	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	0.006	ERM Qtrly sample
27/10/2023	1	0.22	<0.001	<0.0002	<0.001	0.004	<0.001	<0.0001	0.003	0.044	ERM Qtrly sample
22/01/2024	1	0.12	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	0.034	ERM Qtrly sample

	Pollutant	pH	µS/cm	
Wetland site	Units of Measure	mg/l	mg/l	
06/06/2023		6.03	253.9	ERM Qtrly sample
27/10/2023		4.33	473.1	ERM Qtrly sample
22/01/2024		5.59	368.8	ERM Qtrly sample

	Pollutant								
EPL Point 1 - sump	Units of Measure	pH (wet) Range 5.3 to 7.0	Electrical Conductivity	Turbidity	Total Suspended Solids Max 30 Milligrams per litre	Oil and Grease	Hours of pump operation	Requirement to Monitor Volume or Mass - KL	COMMENTS
Month	Number of	pH	uS/cm	NTU	me/l	Visible	Hours	KL	
29/05/2023	1	6.2	375	2.4	6	<5	24	6,825.6	Qtrly sampling
6/06/2023	1	4.9	396					Nil Discharge - Sample only	ERM Qtrly sample - nil discharge
27/06/2023	1	6.0	369	2.1	7	<5	24	6,825.6	
18/07/2023	1	6.5	382	16	15	<5	24	6,825.6	
24/07/2023	1	6.1	380	5.3	7	<5	24	6,825.6	
29/08/2023	1	6.1	379	1.8	3	<5	24	6,825.6	Qtrly sampling
24/10/2023	1	6.4	409	1.8	3	<5	24	6,825.6	
27/10/2023	1	5.13	316.6					Nil Discharge - Sample only	ERM Qtrly sample - nil discharge
14/11/2023	1	6.1	378	2.7	5	<5	24	6,825.6	Qtrly sampling
5/12/2023	1	5.9	380	4.0	6	<5	24	6,825.6	
18/12/2023	1	6.3	401	5.2	8	<5	24	6,825.6	
9/01/2024	1	6.5	415	2.5	7	<5	24	6,825.6	
22/01/2024	1	4.67	423.7					Nil Discharge - Sample only	ERM Qtrly sample - nil discharge
14/02/2024	1	6.5	408	3.4	10	<5	neil		Qtrly sampling
27/02/2024	1	6.2	394	5.5	10	<5			
	Mean	6.03	387.33	4.57	7.36	#DIV/0!			
	Lowest	4.67	316.60	1.80	3.00	0.00			
	Highest	6.50	423.70	16.00	15.00	0.00			
								61,430.4	

Grant's Head Points 2 & 3		Standing Water Level Meters (mAHD)		Standing Water Level Metres (mAHD)
	Position ID	Quarterly	Position ID	Quarterly
03.06.2022	MW05	4.914	MW06	5.009
17/10/2022	MW05	4.885	MW06	4.944
07/12/2022	MW05	4.823	MW06	4.894
24/02/2023	MW05	4.659	MW06	4.735
06/06/2023	MW05	4.713	MW06	4.773
27/10/2023	MW05	4.814	MW06	4.769
22/01/2024	MW05	4.507	MW06	4.557
	Mean	**4.661**	Mean	**4.663**
	Lowest	**4.507**	Lowest	**4.557**
	Highest	**4.814**	Highest	**4.769**

Grant's Head Point 4	Position ID	Conductivity	pH	Standing Water Level	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
24/02/2023	NW01D	254.7	5.74	-2.324	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	0.006
06/06/2023	NW01D	487.9	7.71	-1.596	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
27/10/2023	NW01D	345.7	5.42	-2.015	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	0.012
22/01/2024	NW01D	530	6.16	-3.087	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
24/02/2023	NW01S	421.9	5.5	-1.45	0.36	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	0.002	0.008
06/06/2023	NW01S	521	8.41	-0.781	0.38	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	0.001	<0.005
27/10/2023	NW01S	395.2	4.7	-2.25	0.39	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	0.002	0.005
22/01/2024	NW01S	423.6	6.27	-2.199	0.41	<0.001	<0.0002	<0.001	0.005	<0.001	<0.0001	<0.001	0.011
	NW01D		Mean	**-2.551**	NW01S		Mean	**-2.225**					
	NW01D		Lowest	**-3.087**	NW01S		Lowest	**-2.250**					
	NW01D		Highest	**-2.015**	NW01S		Highest	**-2.199**					

Grant's Head Point 5	Position ID	Conductivity	pH	Standing Water Level	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
24/02/2023	NW02D	782	6.3	0.804	<0.05	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.009	<0.005
06/06/2023	NW02D	464.7	6.24	0.865	<0.05	0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
27/10/2023	NW02D	661	6.19	-2.015	<0.05	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	0.008
22/01/2024	NW02D	808	6.81	0.757	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
24/02/2023	NW02S	324.7	5.00	-9.012	0.53	<0.001	<0.0002	0.001	0.002	<0.001	<0.0001	<0.001	<0.005
06/06/2023	NW02S	311.7	5.04	-9.059	0.47	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	0.001	<0.005
27/10/2023	NW02S	114	4.28	-5.618	0.17	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	<0.001	0.006
22/01/2024	NW02S	262.6	5.96	-5.7	0.22	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	<0.005
	NW02S		Mean	**-5.659**	NW02D		Mean	**-0.629**					
	NW02S		Lowest	**-5.700**	NW02D		Lowest	**-2.015**					
	NW02S		Highest	**-5.618**	NW02D		Highest	**0.757**					

Grant's Head Point 6	Position ID	Conductivity	pH	Standing Water Level	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
24/02/2023	NW03D-A	970	6.67	-12.346	<0.05	0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
06/06/2023	NW03D-A	321.8	7.24	-12.192	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	0.014
27/10/2023	NW03D-A	500	6.42	-12.168	<0.05	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	0.006
22/01/2024	NW03D-A	911	7.52	-11.97	<0.05	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.004	<0.005
24/02/2023	NW03S-A	276	5.55	-12.038	<0.05	0.005	<0.0002	0.001	<0.001	<0.001	<0.0001	0.003	0.007
06/06/2023	NW03S-A	60.9	7.24	-12.014	0.06	0.004	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	0.022
27/10/2023	NW03S-A	229.7	5.33	-11.955	0.05	0.005	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	0.014
22/01/2024	NW03S-A	494.7	6.45	-11.821	0.13	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	0.008
	NW03D-A		Mean	**-12.069**	NW03S-A		Mean	**-11.888**					
	NW03D-A		Lowest	**-12.168**	NW03S-A		Lowest	**-11.955**					
	NW03D-A		Highest	**-11.970**	NW03S-A		Highest	**-11.821**					

Grant's Head Quarry - Licence Number 4040

Blasting	Frequency	Date	Limits	Units of measure	Results Bonny Hills 1st House	Results - Sherrod Park	Blast No #	
Ground Vibration	Per Blast	17.01.2022	5 - trigger point >0.27	5 - trigger point >0.10	1.41	0.25	#133	
Overpressure	Per Blast	17.01.2022	115 - Trigger point >100	115 - Trigger point >100	101.8	102.8	#133	
Ground Vibration	Per Blast	06/06/2022	5 - trigger point >0.27	5 - trigger point >0.10	2.16	0.13	#134	
Overpressure	Per Blast	06/06/2022	115 - Trigger point >100	115 - Trigger point >100	105.9	101.9	#134	
Ground Vibration	Per Blast	20/09/2022	5 - trigger point >0.27	6 - trigger point >0.10	3.18	0.21	#135	
Overpressure	Per Blast	20/09/2022	115 - Trigger point >100	115 - Trigger point >100	103.5	108.5	#135	
Ground Vibration	Per Blast	21/02/2023	5 - trigger point >0.27	7 - trigger point >0.10	1.44	0.25	#136	12.49pm
Overpressure	Per Blast	21/02/2023	115 - Trigger point >100	115 - Trigger point >100	100.9	108.0	#136	
Ground Vibration	Per Blast	01/05/2023	5 - trigger point >0.27	8 - trigger point >0.10	2.17	0.13	#137	12.55pm
Overpressure	Per Blast	01/05/2023	115 - Trigger point >100	115 - Trigger point >100	111.7	103.5	#137	
Ground Vibration	Per Blast	29/08/2023	5 - trigger point >0.27	8 - trigger point >0.10	2.4	0.13	#138	12.54pm
Overpressure	Per Blast	29/08/2023	115 - Trigger point >100	115 - Trigger point >100	110.0	106.0	#138	
Ground Vibration	Per Blast	12/10/2023	5 - trigger point >0.27	9 - trigger point >0.27	0.57	No Trigger	#139	1.34pm
Overpressure	Per Blast	12/10/2023	115 - Trigger point >100	115 - Trigger point >95	96.8	No Trigger	#139	
Ground Vibration	Per Blast	07/02/2024	5 - trigger point >0.27	9 - trigger point >0.27	0.64	No Trigger	#140	1.13pm
Overpressure	Per Blast	07/02/2024	115 - Trigger point >100	116 - Trigger point >95	100.1	No Trigger	#140	

Tumbulgum EPL 3430

Tumbulgum Point 1	WM 1	Pollutant	OIL and Grease - 10 Milligrams per lt.	Total Suspended Solids Max 50 Milligrams per litre	pH (wet) Range 6.5 to 8.5	Requirement to Monitor Volume or Mass	
Month	Number of Samples	Frequency	Less than 24 hours before Discharge	Less than 24 hours before Discharge	Less than 24 hours before Discharge	Daily when wastes (water) discharged Klitres per day	Why Sampled - Discharge or Random?
Jul-2023	0						Nil Controlled Discharge
Aug-2023	0						Nil Controlled Discharge
Sep-2023	0						Nil Controlled Discharge
Oct-2023	0						Nil Controlled Discharge
Nov-2023	0						Nil Controlled Discharge
Dec-2023	0						Nil Controlled Discharge
Jan-2024	0						Nil Controlled Discharge
Feb-2024	0						Nil Controlled Discharge
Mar-2024							
Apr-2024							
May-2024							
Jun-2024							

Tumbulgum Point 2	WM 2	Pollutant	OIL and Grease - 10 Milligrams per lt.	Total Suspended Solids Max 50 Milligrams per litre	pH (wet) Range 6.5 to 8.5	Requirement to Monitor Volume or Mass	
Month	Number of Samples	Frequency		Monthly during discharge	<24hrs prior to discharge	Daily when wastes (water) discharged Klitres per day	Why Sampled - Discharge or Random?
Jul-2023	0						Nil Controlled Discharge

Aug-2023	0						**Nil Controlled Discharge**
Sep-2023	0						**Nil Controlled Discharge**
Oct-2023	0						**Nil Controlled Discharge**
Nov-2023	0						**Nil Controlled Discharge**
Dec-2023	0						**Nil Controlled Discharge**
Jan-2024	0						**Nil Controlled Discharge**
Feb-2024	0						**Nil Controlled Discharge**
Mar-2024							
Apr-2024							
May-2024							
Jun-2024							

Tumbulgum Additional to EPL requirements testing sites	**Site Location**	**Pollutant**	**OIL and Grease -** 10 Milligrams per lt.	**Total Suspended Solids** Max 50 Milligrams per litre	**pH (wet)** Range 6.5 to 8.5	**Requirement to Monitor Volume or Mass**	
Date	**location**	**Samples**		Monthly during	<24hrs prior to discharge	Daily when	Why Sampled - Discharge

EPL 3430 - Condition L2.5 The concentration limits in the above tables do not apply to any discharge from the final sediment basin arising from rainfall exceeding 82.5mm in total falling over any consecutive five day period

Tumbulgum EPL 3430

Tumbulgum Blast Monitoring results

Blasting	**Frequency**	**Date**	**Limits**	**Units of measure**	**Loc # 1 - 43 Pollard Rd**	**Loc # 2 - 23 Pollard Rd**	**Loc # 3 - 729 - 731 Dulguigan Rd**	**Blast #**	
Ground Vibration	Per Blast	02.03.2023	5 - trigger point >0.26	mm/s	**1.02**	**1.65**	Not required	#103	12.31
Overpressure	Per Blast	02.03.2023	Max 115 - Trigger point >107	dB	**111.20**	**112.80**	Not required	#103	
Ground Vibration	Per Blast	02.03.2023	5 - trigger point >0.26	mm/s	**1.02**	**1.65**	Not required	#104	12.31
Overpressure	Per Blast	02.03.2023	Max 115 - Trigger point >108	dB	**111.20**	**112.80**	Not required	#104	
Ground Vibration	Per Blast	29.05.2023	5 - trigger point >0.26	mm/s	**1.40**	**2.40**	Not required	#105	2.00pm
Overpressure	Per Blast	29.05.2023	Max 115 - Trigger point >108	dB	**114.40**	**113.20**	Not required	#105	
Ground Vibration	Per Blast	29.05.2023	5 - trigger point >0.26	mm/s	**1.40**	**2.40**	Not required	#106	2.00pm
Overpressure	Per Blast	29.05.2023	Max 115 - Trigger point >108	dB	**114.40**	**113.20**	Not required	#106	
Ground Vibration	Per Blast	16.08.2023	5 - trigger point >0.26	mm/s	**1.78**	**Not Required**	Not required	#107	3.15pm
Overpressure	Per Blast	16.08.2023	Max 115 - Trigger point >109	dB	**114.50**	**Not Required**	Not required	#107	
Ground Vibration	Per Blast	16.08.2023	5 - trigger point >0.26	mm/s	**1.78**	**Not Required**	Not required	#108	3.15pm
Overpressure	Per Blast	16.08.2023	Max 115 - Trigger point >110	dB	**114.50**	**Not Required**	Not required	#108	
Ground Vibration	Per Blast	16.08.2023	5 - trigger point >0.26	mm/s	**1.78**	**Not Required**	Not required	#109	3.15pm
Overpressure	Per Blast	16.08.2023	Max 115 - Trigger point >111	dB	**114.50**	**Not Required**	Not required	#109	
Ground Vibration	Per Blast	13/10/2023	5 - trigger point >0.26	mm/s	**0.82**	**Not Required**	Not required	#110	1.49pm
Overpressure	Per Blast	13/10/2023	Max 115 - Trigger point >111	dB	**111.60**	**Not Required**	Not required	#110	
Ground Vibration	Per Blast	13/10/2023	5 - trigger point >0.26	mm/s	**0.82**	**Not Required**	Not required	#111	1.49pm
Overpressure	Per Blast	13/10/2023	Max 115 - Trigger point >111	dB	**111.60**	**Not Required**	Not required	#111	
Ground Vibration	Per Blast	02/02/2024	5 - trigger point >0.26	mm/s	**1.64**	**Not Required**	Not required	#112	2.37pm
Overpressure	Per Blast	02/02/2024	Max 115 - Trigger point >112	dB	**109.10**	**Not Required**	Not required	#112	
Ground Vibration	Per Blast	02/02/2024	5 - trigger point >0.26	mm/s	**1.64**	**Not Required**	Not required	#113	2.37pm
Overpressure	Per Blast	02/02/2024	Max 115 - Trigger point >113	dB	**109.10**	**Not Required**	Not required	#113	

Yarrabee Rd Quarry - Licence Number 11462

M2.3 Note - Special Frequency 1 means sampling once during each discharge event arising from rainfall not exceeding the 90 percentile five day rainevent of 70 mm falling in total over a period of up to five days duration.

Yarrabee Rd Point 3		**Pollutant**	**Total Suspended Solids** Max 50 Milligrams per litre	**pH (wet)** Range 6.5 to 8.5	**Requirement to Monitor Volume or Mass - Estimate**		
Month	**Number of Samples**	**Frequency**	<24hrs prior to discharge	<24hrs prior to discharge	Daily when wastes (water) discharged KiloLitres per day	Rainfall recorded - mm	Comments
06.06.2023	1		51	8.1	0	0	**Nil Discharge / Sample only**
02.02.2024	1		4	7.8	0	0	**Nil Discharge / Sample only**
Number of samples	**2**						
	Mean		**4.00**	**7.80**	**0.00**		
	Lowest		**4.00**	**7.80**	**0.00**		
	Highest		**4.00**	**7.80**	**0.00**		

EPL 11462 - Condition L2.2 The concentration limits in the below table do not apply to any discharge from sediment pond (at Point 3) solely arising from rainfall exceeding 90th percentile (70 mm) 5 day rainevent in total falling over any consecutive five day period

Yarrabee Rd Quarry - Licence Number 11462

Blasting	**Frequency**	**Date**	**Limits**	**Units of measure**	**Results**	**Blast #**	**Blast ID**	
Ground Vibration	Per Blast	07.10.2022	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#105	YRQ-2210	12.49pm
Overpressure	Per Blast	07.10.2022	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#105	YRQ-2210	
Ground Vibration	Per Blast	07.11.2022	5 mm/s - trigger point >0.30	mm/s	**0.78**	#106	YRQ-2211	12.15pm
Overpressure	Per Blast	07.11.2022	Max 115 dB - Trigger point >100dB	dBl	**111.7**	#106	YRQ-2211	
Ground Vibration	Per Blast	25.11.2022	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#107	YRQ-2212	11.00AM
Overpressure	Per Blast	25.11.2022	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#107	YRQ-2212	
Ground Vibration	Per Blast	12/01/2023	5 mm/s - trigger point >0.30	mm/s	**0.70**	#108	YRQ-2301	12.04pm
Overpressure	Per Blast	12/01/2023	Max 115 dB - Trigger point >100dB	dBl	**110.0**	#108	YRQ-2301	
Ground Vibration	Per Blast	23/01/2023	5 mm/s - trigger point >0.30	mm/s	**1.49**	#109	YRQ-2302	12.29pm
Overpressure	Per Blast	23/01/2023	Max 115 dB - Trigger point >100dB	dBl	**103.6**	#109	YRQ-2302	
Ground Vibration	Per Blast	15/02/2023	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#110	YRQ-2303	1.56pm
Overpressure	Per Blast	15/02/2023	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#110	YRQ-2303	
Ground Vibration	Per Blast	08/03/2023	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#111	YRQ-2304	11.06am
Overpressure	Per Blast	08/03/2023	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#111	YRQ-2304	
Ground Vibration	Per Blast	10/03/2023	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#112	YRQ-2305	12.16pm
Overpressure	Per Blast	10/03/2023	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#112	YRQ-2305	
Ground Vibration	Per Blast	09/05/2023	5 mm/s - trigger point >0.30	mm/s	**1.14**	#113	YRQ-2306	12.36pm
Overpressure	Per Blast	09/05/2023	Max 115 dB - Trigger point >100dB	dBl	**103.2**	#113	YRQ-2306	
Ground Vibration	Per Blast	26/06/2023	5 mm/s - trigger point >0.30	mm/s	**Nil Trigger**	#114	YRQ-2307	1.16pm
Overpressure	Per Blast	26/06/2023	Max 115 dB - Trigger point >100dB	dBl	**Nil Trigger**	#114	YRQ-2307	
Ground Vibration	Per Blast	09/08/2023	5 mm/s - trigger point >0.30	mm/s	**0.88**	#115	YRQ-2308	12.21pm
Overpressure	Per Blast	09/08/2023	Max 115 dB - Trigger point >100dB	dBl	**110.9**	#115	YRQ-2308	
Ground Vibration	Per Blast	05/10/2023	5 mm/s - trigger point >0.30	mm/s	**1.16**	#116	YRQ-2309	12.34pm
Overpressure	Per Blast	05/10/2023	Max 115 dB - Trigger point >100dB	dBl	**100.9**	#116	YRQ-2309	
Ground Vibration	Per Blast	01/11/2023	5 mm/s - trigger point >0.30	mm/s	**0.76**	#117	YRQ-2310	12.36pm
Overpressure	Per Blast	01/11/2023	Max 115 dB - Trigger point >100dB	dBl	**106.5**	#117	YRQ-2310	
Ground Vibration	Per Blast	29/11/2023	5 mm/s - trigger point >0.30	mm/s	**1.19**	#118	YRQ-2311	1.02pm
Overpressure	Per Blast	29/11/2023	Max 115 dB - Trigger point >100dB	dBl	**113.5**	#118	YRQ-2311	
Ground Vibration	Per Blast	19/12/2023	5 mm/s - trigger point >0.30	mm/s	**0.80**	#119	YRQ-2312	12.06pm
Overpressure	Per Blast	19/12/2023	Max 115 dB - Trigger point >100dB	dBl	**110.5**	#119	YRQ-2312	
Ground Vibration	Per Blast	12/03/2024	5 mm/s - trigger point >0.30	mm/s	**0.54**	#120	YRQ-2401	12.30pm
Overpressure	Per Blast	12/03/2024	Max 115 dB - Trigger point >100dB	dBl	**112.8**	#120	YRQ-2401	