

## RESULTS OF WATER ANALYSIS

9 samples supplied by Ground Water Data Collection Service on 6/04/18. Lab Job No.G9108

Samples submitted by Mathew Baker. Your Job: Blakebrook Quarry GW

2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9
		BQSI-S	BQDI-I	BQSI-D	BQN1-B	BQN1-A	BQN1-D	BQN2-B	BQN2-A	BQN2-D
	Job No.	G9108/1	G9108/2	G9108/3	G9108/4	G9108/5	G9108/6	G9108/7	G9108/8	G9108/9
pH	APHA 4500-H <sup>+</sup> -B	6.65	7.93	8.27	7.07	9.94	8.71	11.01	8.23	8.81
Conductivity (EC) (dS/m)	APHA 2510-B	0.354	1.559	1.790	1.148	1.825	1.417	1.135	0.808	1.004
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	241	1,060	1,217	781	1,241	964	772	549	683
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	28	20	78	3	164	36	65	16	15
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<1	<1	<1	4	<1	4	<1	<1	<1
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.039	0.042	0.046	<0.005	0.110	0.014	0.222	0.085	0.060
Silver (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.240	0.107	0.343	<0.005	0.948	0.424	0.213	0.102	0.079
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	0.001	0.001	0.002	0.001	0.003	0.004	0.002	0.002
Cadmium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.002	<0.001	0.002	<0.001	0.004	0.003	<0.001	0.002	<0.001
Copper (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.005	0.002	0.003	<0.001	0.005	0.103	0.001	0.013	0.002
Iron (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.792	0.382	1.021	1.891	0.899	1.342	0.073	0.187	0.129
Manganese (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.142	0.112	0.045	0.152	0.077	0.029	0.005	0.030	0.015
Nickel (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.010	0.005	0.009	<0.001	0.005	0.005	0.001	0.023	<0.001
Lead (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.001	<0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Selenium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.024	0.038	0.048	0.005	0.017	0.031	0.010	0.027	0.012
Mercury (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<b>BTEX</b>										
Benzene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<1	<1	<1	<1	<1	<1	<1	<1	<1
m-p-Xylene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-Xylene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene (µg/L or ppb)	Subcontracted: Envirolab report 189065	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Total Recoverable Hydrocarbons (TRH)</b>										
C6-C9 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10-C14 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<100	<100	<100	<100	<100	<100	<100	<100	<100
C10-C16 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<50	<50	<50	<50	<50	<50	<50	<50	<50
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<50	<50	<50	<50	<50	<50	<50	<50	<50
C16-C34 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<100	<100	<100	<100	<100	<100	<100	<100	<100
C34-C40 Fraction (µg/L or ppb)	Subcontracted: Envirolab report 189065	<100	<100	<100	<100	<100	<100	<100	<100	<100

### Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2  
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
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## RESULTS OF WATER ANALYSIS

9 samples supplied by Ground Water Data Collection Service on 28/06/18. Lab Job No.H1879  
 Samples submitted by Mathew Baker. Your Job: Blakebrook Quarry  
 Your Client: Lismore City Council  
 2 Tildon Drive, CLINES NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9
		BQSI-S 27.06.18 11:00	BQSI-I 27.06.18 11:50	BQSI-D 27.06.18 13:00	BQNI-B 27.06.18 14:45	BQNI-A 27.06.18 15:30	BQNI-D 28.06.18 10:15	BQN2-B 28.06.18 12:00	BQN2-A 28.06.18 12:15	BQN2-D 28.06.18 13:20
	Job No.	H1879/1	H1879/2	H1879/3	H1879/4	H1879/5	H1879/6	H1879/7	H1879/8	H1879/9
pH	APHA 4500-H <sup>+</sup> -B	6.81	8.12	8.30	7.13	11.34	9.10	11.07	8.13	8.85
Conductivity (EC) (dS/m)	APHA 2510-B	0.399	1.58	1.81	1.14	2.07	1.38	1.11	1.20	1.01
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	271	1,075	1,227	778	1,408	938	753	817	685
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	25	540	207	6	125	21	101	45	773
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	8	4	3	4	<2	3	3	8	4
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.036	0.019	0.077	<0.005	0.356	0.068	0.277	0.147	0.072
Silver (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.188	1.084	0.599	0.003	1.936	0.476	0.947	0.189	0.559
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	<0.001	0.001	0.001	0.003	0.001	0.003	0.004	0.004	0.002
Cadmium (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.002	0.002	0.002	<0.001	0.008	0.005	0.001	0.003	0.001
Copper (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.004	0.003	0.003	0.002	0.019	0.043	0.006	0.010	0.013
Iron (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	1.292	5.811	2.155	2.104	2.062	1.749	0.535	0.301	4.528
Manganese (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.175	0.180	0.059	0.150	0.113	0.033	0.026	0.039	0.065
Nickel (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.008	0.011	0.009	<0.001	0.037	0.009	0.005	0.011	0.008
Lead (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.001	0.005	0.004	<0.001	0.002	<0.001	0.001	0.001	0.005
Selenium (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	0.027	0.143	0.080	0.011	0.041	0.040	0.045	0.021	0.169
Mercury (mg/L)	Total Available - APHA 3125 ICPMS <sup>7000 182</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<b>BTEX</b>										
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE 181024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Total Recoverable Hydrocarbons (TRH)</b>										
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<40	<40	<40	<40	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<200	<200	<200	<200	<200	<200	<200	<200	<200
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<200	<200	<200	<200	<200	<200	<200	<200	<200
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<60	<60	<60	<60	<60	<60	<60	<60	<60
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<500	<500	<500	<500	<500	<500	<500	<500	<500
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 181024	<500	<500	<500	<500	<500	<500	<500	<500	<500

### Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2  
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
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## RESULTS OF WATER ANALYSIS

9 samples supplied by Ground Water Data Collection Service on 20th September, 2018. Lab Job No.H4213

Samples submitted by Mathew Baker. Your Job: Blakebrook Quarry

2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9
		BQSI-S	BQSI-I	BQSI-D	BQNI-B	BQNI-A	BQNI-D	BQN2-B	BQN2-A	BQN2-D
	Job No.	H4213/1	H4213/2	H4213/3	H4213/4	H4213/5	H4213/6	H4213/7	H4213/8	H4213/9
pH	APHA 4500-H <sup>+</sup> -B	7.12	8.10	8.43	7.22	9.53	9.06	11.22	8.05	8.94
Conductivity (EC) (dS/m)	APHA 2510-B	0.512	1.580	1.820	1.160	1.950	1.440	1.110	0.894	0.962
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	348	1,074	1,238	789	1,326	979	755	608	654
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	541	205	436	2	132	3,100	107	13	30
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	4.3	5.0	7.4	3.7	1.7	2.9	1.5	1.6	1.5
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.049	0.046	0.044	<0.005	0.076	0.040	0.268	0.081	0.054
Silver (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.634	0.310	0.961	<0.005	0.536	44.5	0.181	0.059	0.077
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	0.001	0.001	0.002	0.001	0.009	0.003	0.002	0.002
Cadmium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.001	0.001	0.003	<0.001	0.004	0.102	0.001	0.001	<0.001
Copper (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.003	0.003	0.003	<0.001	0.003	0.796	0.001	0.009	0.003
Iron (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	2.73	0.678	3.93	1.74	0.500	158	0.097	0.157	0.120
Manganese (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.151	0.097	0.079	0.150	0.049	1.315	0.004	0.039	0.007
Nickel (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.008	0.004	0.010	<0.001	0.003	0.300	0.001	0.013	0.001
Lead (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.004	0.002	0.005	<0.001	0.001	0.007	<0.001	<0.001	<0.001
Selenium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002
Zinc (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.096	0.052	0.125	0.003	0.009	1.23	0.006	0.012	0.010
Mercury (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<b>BTEX</b>										
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE 184351	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Total Recoverable Hydrocarbons (TRH)</b>										
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<40	<40	<40	<40	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<200	<200	<200	<200	<200	<200	<200	<200	<200
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<200	<200	<200	<200	<200	<200	<200	<200	<200
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<60	<60	<60	<60	<60	<60	<60	<60	<60
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<500	<500	<500	<500	<500	<500	<500	<500	<500
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 184351	<500	<500	<500	<500	<500	<500	<500	<500	<500

### Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2  
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
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## RESULTS OF WATER ANALYSIS

12 samples collected for Ground Water Data Collection Service on the 7th December, 2018 - Lab. Job No. H6673  
 Analysis requested by Mathew Baker. Your Project: PO 68163 Blakebrook Quarry - GW and SW  
 2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		BQS1-S	BQS1-I	BQS1-D	BQN1-B	BQN1-A
Job No.		H6673/1	H6673/2	H6673/3	H6673/4	H6673/5
pH	APHA 4500-H <sup>+</sup> -B	6.84	8.16	8.29	7.04	9.7
Conductivity (EC) (dS/m)	APHA 2510-B	0.45	1.554	1.777	1.126	1.917
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	306	1057	1208	766	1304
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	252	448	264	20.5	151
Turbidity (NTU)	APHA 2130	..	..	..	..	..
Dissolved Oxygen (mg/L O <sub>2</sub> )	Onsite	..	..	..	..	..
Alkalinity (mg/L CaCO <sub>3</sub> )	** Total Alkalinity - APHA 2320	..	..	..	..	..
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<2	<2	<2	<2	<2
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.03	<0.005	0.075	<0.005	0.374
Silver (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.487	0.804	0.356	<0.005	0.952
Arsenic (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	0.001	0.001	0.003	0.001
Cadmium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.001	0.001	0.001	<0.001	0.004
Copper (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.004	0.006	0.005	<0.001	0.006
Iron (mg/L)	Total - APHA 3125 ICPMS*note 1&2	2.627	4.888	1.102	1.705	0.940
Manganese (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.151	0.157	0.049	0.148	0.066
Nickel (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.008	0.007	0.010	<0.001	0.004
Lead (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.002	0.004	0.004	<0.001	0.001
Selenium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.043	0.142	0.048	0.003	0.016
Mercury (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silver (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Arsenic (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Cadmium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Chromium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Copper (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Iron (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Nickel (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Lead (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Selenium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Zinc (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
Mercury (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	..
<b>BTEX</b>						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
m-p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Total Recoverable Hydrocarbons (TRH)</b>						
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200	<200	<200	<200
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200	<200	<200	<200
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500	<500	<500	<500
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500	<500	<500	<500

**Notes:**

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2  
 Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
- \*\* NATA accreditation does not cover the performance of this service.
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## RESULTS OF WATER ANALYSIS

12 samples collected for Ground Water Data Collection Service on the 7th December, 20  
 Analysis requested by Mathew Baker. Your Project: PO 68163 Blakebrook Quarry - GW a  
 2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
		BQN1-D	BQN2-B	BQN2-A	BQN2-D	BQSW1
	Job No.	H6673/6	H6673/7	H6673/8	H6673/9	H6673/10
pH	APHA 4500-H <sup>+</sup> -B	8.9	9.21	8.01	8.92	7.47
Conductivity (EC) (dS/m)	APHA 2510-B	1.413	1.149	1.54	0.965	0.906
Total Dissolved Solids (mg/L)	** Calculation using EC x 680	961	781	1047	656	616
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	88.5	16.5	344	470	223
Turbidity (NTU)	APHA 2130	..	..	..	..	67
Dissolved Oxygen (mg/L O <sub>2</sub> )	Onsite	..	..	..	..	0.17
Alkalinity (mg/L CaCO <sub>3</sub> )	** Total Alkalinity - APHA 2320	..	..	..	..	..
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<2	2	3	3	3
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.096	0.068	0.023	0.073	<0.005
Silver (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	1.112	0.094	0.451	0.228	0.324
Arsenic (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.004	0.003	0.005	0.002	0.004
Cadmium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.005	<0.001	<0.001	<0.001	<0.001
Copper (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.119	0.002	0.007	0.005	0.002
Iron (mg/L)	Total - APHA 3125 ICPMS*note 1&2	4.069	0.059	1.484	1.526	5.470
Manganese (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.074	0.013	0.110	0.036	8.272
Nickel (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.010	0.001	0.009	0.003	0.004
Lead (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.001	<0.001	0.002	0.002	<0.001
Selenium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.066	0.004	0.020	0.057	0.011
Mercury (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silver (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.001
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	0.005
Arsenic (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	0.003
Cadmium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.001
Chromium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.001
Copper (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.001
Iron (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	1.064
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	8.461
Nickel (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	0.002
Lead (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.001
Selenium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.002
Zinc (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	0.016
Mercury (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	..	..	..	..	<0.0005
<b>BTEX</b>						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
m-p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Total Recoverable Hydrocarbons (TRH)</b>						
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200	<200	<200	<200
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200	<200	<200	<200
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500	<500	<500	<500
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500	<500	<500	<500

**Notes:**

- Total metals - samples digested with nitric acid; Total available (acid soluble/ ex Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per l
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination
- Analysis conducted between sample arrival date and reporting date.
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## RESULTS OF WATER ANALYSIS

12 samples collected for Ground Water Data Collection Service on the 7th December, 20  
Analysis requested by Mathew Baker. Your Project: PO 68163 Blakebrook Quarry - GW a  
2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 11	Sample 12
		BQSW2	BQSW3
	<i>Job No.</i>	H6673/11	H6673/12
pH	APHA 4500-H <sup>+</sup> -B	7.63	7.72
Conductivity (EC) (dS/m)	APHA 2510-B	0.203	0.2
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	138	136
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	10.5	11
Turbidity (NTU)	APHA 2130	10.9	10.9
Dissolved Oxygen (mg/L O <sub>2</sub> )	Onsite	7.32	8.16
Alkalinity (mg/L CaCO <sub>3</sub> )	** Total Alkalinity - APHA 2320	..	..
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	3	<2
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> <sup>-</sup> -F	<0.005	<0.005
Silver (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Aluminium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.109	0.109
Arsenic (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Cadmium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Chromium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Copper (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.001	0.001
Iron (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.810	0.712
Manganese (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.054	0.061
Nickel (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.001	0.001
Lead (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Selenium (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.002	<0.002
Zinc (mg/L)	Total - APHA 3125 ICPMS*note 1&2	0.002	0.004
Mercury (mg/L)	Total - APHA 3125 ICPMS*note 1&2	<0.0005	<0.0005
Silver (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.071	0.069
Arsenic (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Cadmium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Chromium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Copper (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.001	0.001
Iron (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.565	0.505
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.015	0.005
Nickel (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.001	0.001
Lead (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001
Selenium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.002	<0.002
Zinc (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.003	0.003
Mercury (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.0005	<0.0005
<b>BTEX</b>			
Benzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE187233	<0.5	<0.5
<b>Total Recoverable Hydrocarbons (TRH)</b>			
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<200	<200
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE187233	<500	<500

### Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ ex Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per l)
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
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