RESULTS OF WATER ANALYSIS

10 samples supplied by Ground Water Data Collection Service on 14th March, 2019. Lab Job No.H9585
Samples submitted by Mathew Baker. Your Job: PO 68163
2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 1 BQS1-S	Sample 2 BQS1-I	Sample 3 BQS1-D	Sample 4 BQN1-A	Sample 5 BQN1-B	Sample 6 BQN1-D	Sample 7 BQN2-B	Sample 8 BQN2-A	Sample 9 BQN2-D	Sample 10 BQLPD-1
	Job No.	*H9585/1*	*H9585/2*	*H9585/3*	*H9585/4*	*H9585/5*	*H9585/6*	*H9585/7*	*H9585/8*	*H9585/9*	*H9585/10*
pH	APHA 4500-H^+-B	7.08	8.22	8.18	9.57	7.17	8.87	10.41	7.98	8.99	..
Conductivity (EC) (dS/m)	APHA 2510-B	0.502	1.604	1.841	2.023	1.157	1.472	1.103	1.110	0.980	..
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	341	1,091	1,252	1,376	787	1,001	750	755	666	..
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	413	317	239	166	1	34	87	13	24	3
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<2	6	9	9	9	4	3	5	2	<2
Nitrate (mg/L N)	APHA 4500 NO_3-F	0.022	0.005	0.016	0.143	<0.005	0.015	0.201	0.072	0.108	1.950
Silver (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	1.77	0.696	0.518	2.19	0.003	0.923	0.615	0.097	0.128	0.037
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.001	0.001	0.001	0.001	0.002	0.004	0.003	0.003	0.002	<0.001
Cadmium (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.001	<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*note 1&2	0.003	0.001	0.002	0.007	<0.001	0.004	0.003	0.001	0.001	<0.001
Copper (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.008	0.004	0.004	0.012	0.003	0.151	0.005	0.007	0.005	0.002
Iron (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	7.17	2.34	1.63	2.29	1.91	3.52	0.526	0.253	0.294	0.082
Manganese (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.249	0.123	0.050	0.115	0.156	0.048	0.024	0.066	0.019	0.279
Nickel (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.014	0.003	0.007	0.007	<0.001	0.008	0.003	0.007	0.003	0.007
Lead (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.003	0.002	0.003	0.002	<0.001	0.001	0.001	0.001	<0.001	<0.001
Selenium (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.002	<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*note 1&2	0.047	0.075	0.049	0.031	0.005	0.050	0.025	0.019	0.027	0.004
Mercury (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BTEX											
Benzene (µg/L or ppb)	Subcontracted: SGS report SE190511	<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 SE190511	<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 SE190511	<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 SE190511	<1	<1	<1	<1	<1	<1	<1	<1	<1	..
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE190511	<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 SE190511	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	..
Total Xylenes (µg/L or ppb)	Subcontracted: SGS report SE190511	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	..
Total BTEX (µg/L or ppb)	Subcontracted: SGS report SE190511	<3	<3	<3	<3	<3	<3	<3	<3	<3	..
Total Recoverable Hydrocarbons (TRH)											
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<50	<50	<50	<50	<50	<50	<50	<50	<50	..
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<100	<100	<100	<100	<100	<100	<100	<100	<100	..
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<50	<50	<50	<50	<50	<50	<50	<50	<50	..
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<60	<60	<60	<60	<60	<60	<60	<60	<60	..
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<60	<60	<60	<60	<60	<60	<60	<60	<60	..
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<200	<200	<200	<200	<200	<200	<200	<200	<200	..
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<100	<100	<100	<100	<100	<100	<100	<100	<100	..
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE190511	<100	<100	<100	<100	<100	<100	<100	<100	<100	..

Notes:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
4. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
5. Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
6. Analysis conducted between sample arrival date and reporting date.
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checked: .....
Graham Lancaster
Laboratory Manager

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checked: .....
Graham Lancaster
Laboratory Manager

RESULTS OF WATER ANALYSIS

9 samples supplied by Ground Water Data Collection Service on 13th June, 2019. Lab Job No.i2770
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
		BQS1-S	BQS1-I	BQS1-D	BQN1-B	BQN1-A	BQN1-D	BQN2-B	BQN2-A	BQN2-D
	Job No.	*i2770/1*	*i2770/2*	*i2770/3*	*i2770/4*	*i2770/5*	*i2770/6*	*i2770/7*	*i2770/8*	*i2770/9*
pH	APHA 4500-H^+-B	6.87	8.16	8.22	7.12	9.53	8.90	11.02	8.00	8.93
Conductivity (EC) (dS/m)	APHA 2510-B	0.363	1.373	1.608	1.022	1.738	1.269	1.019	0.823	0.885
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	247	934	1,093	695	1,182	863	693	560	602
Bicarbonate (Alkalinity) (mg/L $CaCO_3$ equivalent)	** Total Alkalinity - APHA 2320	178	195	136	231	108	123	106	197	351
Water Hardness (mg/L $CaCO_3$ equivalent)	** Using Ca and Mg calculation	90	120	70	146	226	29	124	112	27
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<2	<2	3	<2	<2	3	<2	3	4
Total Nitrogen (mg/L N)	In house method W4	0.06	0.13	1.03	<0.01	0.23	0.13	0.55	0.28	0.21
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN – NOx	0.03	0.12	0.54	<0.01	0.09	0.09	0.45	0.25	0.13
Nitrate (mg/L N)	APHA 4500 NO_3-F	0.028	0.010	0.472	<0.005	0.133	0.037	0.029	0.031	0.077
Nitrite (mg/L N)	APHA 4500 NO_2-I	<0.005	<0.005	0.019	<0.005	0.008	<0.005	0.062	0.005	<0.005
Phosphate (mg/L P)	APHA 4500 P-G	0.036	0.020	0.020	0.217	0.007	0.023	0.030	0.184	0.087
Ammonia (mg/L N)	APHA 4500 NH_3-H	0.020	0.060	0.077	0.040	0.086	0.087	0.103	0.136	0.134
Sodium (mg/L)	APHA 3125 ICPMS*note 1&2	55.9	258.3	345.2	172.6	350.2	270.4	185.2	142.9	217.0
Potassium (mg/L)	APHA 3125 ICPMS*note 1&2	3.6	6.2	4.7	4.3	8.3	2.8	8.1	9.3	2.3
Calcium (mg/L)	APHA 3125 ICPMS*note 1&2	22.1	36.6	19.7	28.9	75.1	9.3	42.1	29.3	8.0
Magnesium (mg/L)	APHA 3125 ICPMS*note 1&2	8.4	7.1	5.0	18.0	9.2	1.5	4.5	9.4	1.8
Sodium Absorption Ratio (SAR)	** By calculation	2.6	10.2	18.0	6.2	10.1	21.6	7.2	5.9	18.0
Chloride (mg/L)	APHA 3125 ICPMS*note 1&2	16	300	383	204	475	299	219	124	101
Sulfate (mg/L SO_4^{2-})	APHA 3125 ICPMS*note 1&2	6.9	23.1	42.9	8.5	21.8	36.3	38.2	41.5	19.6
Chloride/Sulfate Ratio	** Calculation	2.3	13.0	8.9	23.9	21.8	8.2	5.7	3.0	5.2
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.271	0.354	1.843	<0.005	2.661	0.581	0.521	0.112	0.648
Iron (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	1.208	0.818	8.452	1.881	2.822	2.182	0.237	0.201	2.043
Manganese (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.180	0.097	0.134	0.150	0.116	0.040	0.013	0.043	0.036
Lead (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	<0.001	0.001	0.006	<0.001	0.002	<0.001	<0.001	<0.001	0.002
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.018	<0.005	0.023	<0.005	0.009	0.012	0.018	0.012	0.030
Iron (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.190	<0.005	0.012	0.028	<0.005	<0.005	0.007	0.047	0.014
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.170	0.052	0.023	0.147	<0.001	0.009	<0.001	0.040	<0.001
Lead (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BTEX										
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 194219	<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 194219	<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 194219	<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 194219	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 194219	<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 194219	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)										
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	110	<100	<100	<100	<100	240	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	120	<50	110	70	52	340	78	56	60
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	210	<200	<200	<200	<200	500	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	<100	<100	<100	<100	<100	120	<100	<100	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 194219	230	<100	110	<100	<100	580	<100	<100	<100

Notes:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
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14. This report was issued on 01/07/2019.

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Graham Lancaster
Laboratory Manager

Hydrographs

Groundwater Stations

Blakebrook Quarry

September 2019

Mathew Baker
Groundwater Data Collection Services Pty Ltd
ABN:16 083 771 242
2 Tildon Drive
Clunes NSW 2480

Phone: 0418 104 234
Email: mat.baker@gdcs.com.au

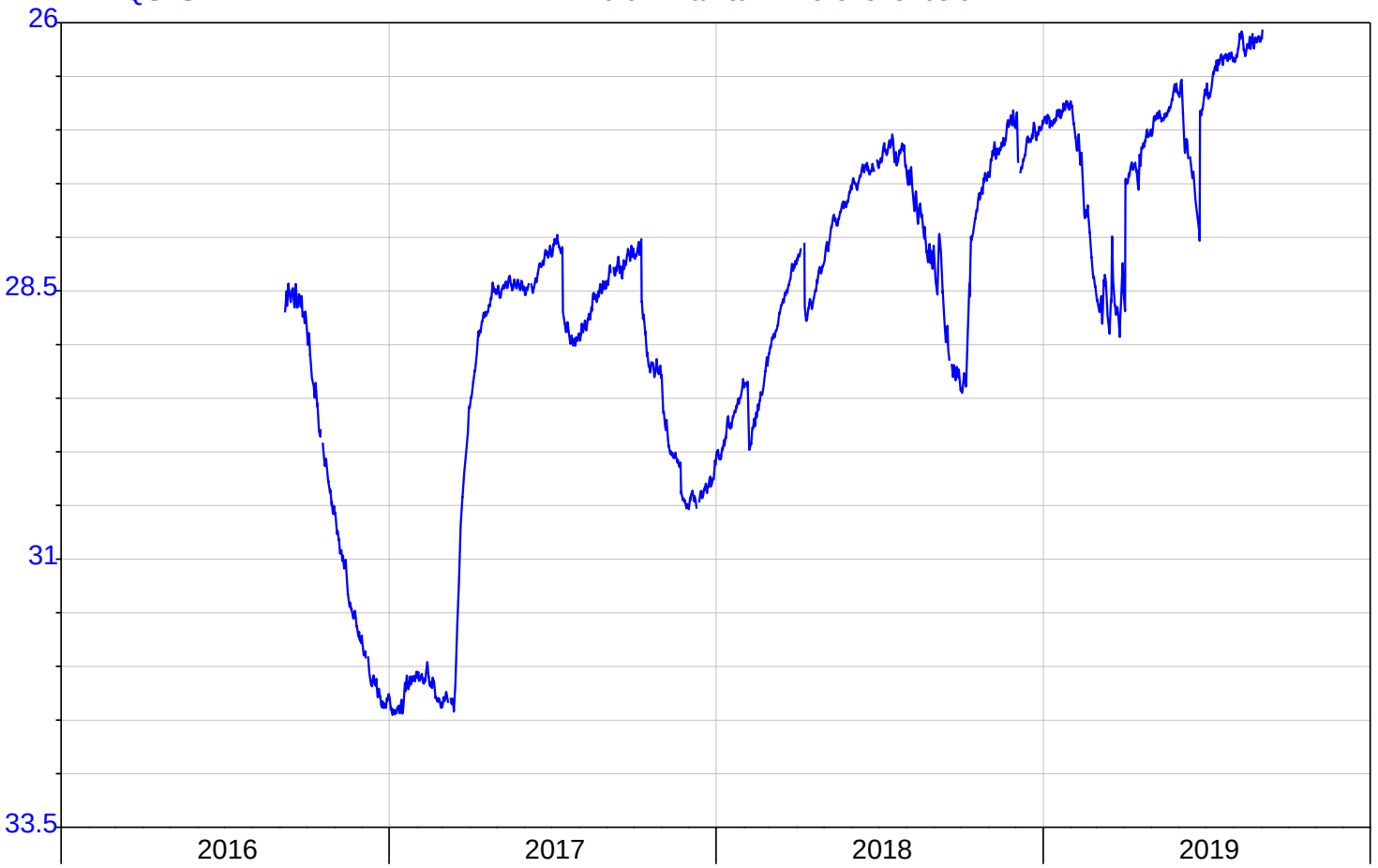
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Year Plot Start 00:00_01/01/2016 2016-20

Interval 2 Day Plot End 00:00_01/01/2020

— BQS1S 110.01 Max & Min Bore level below MP



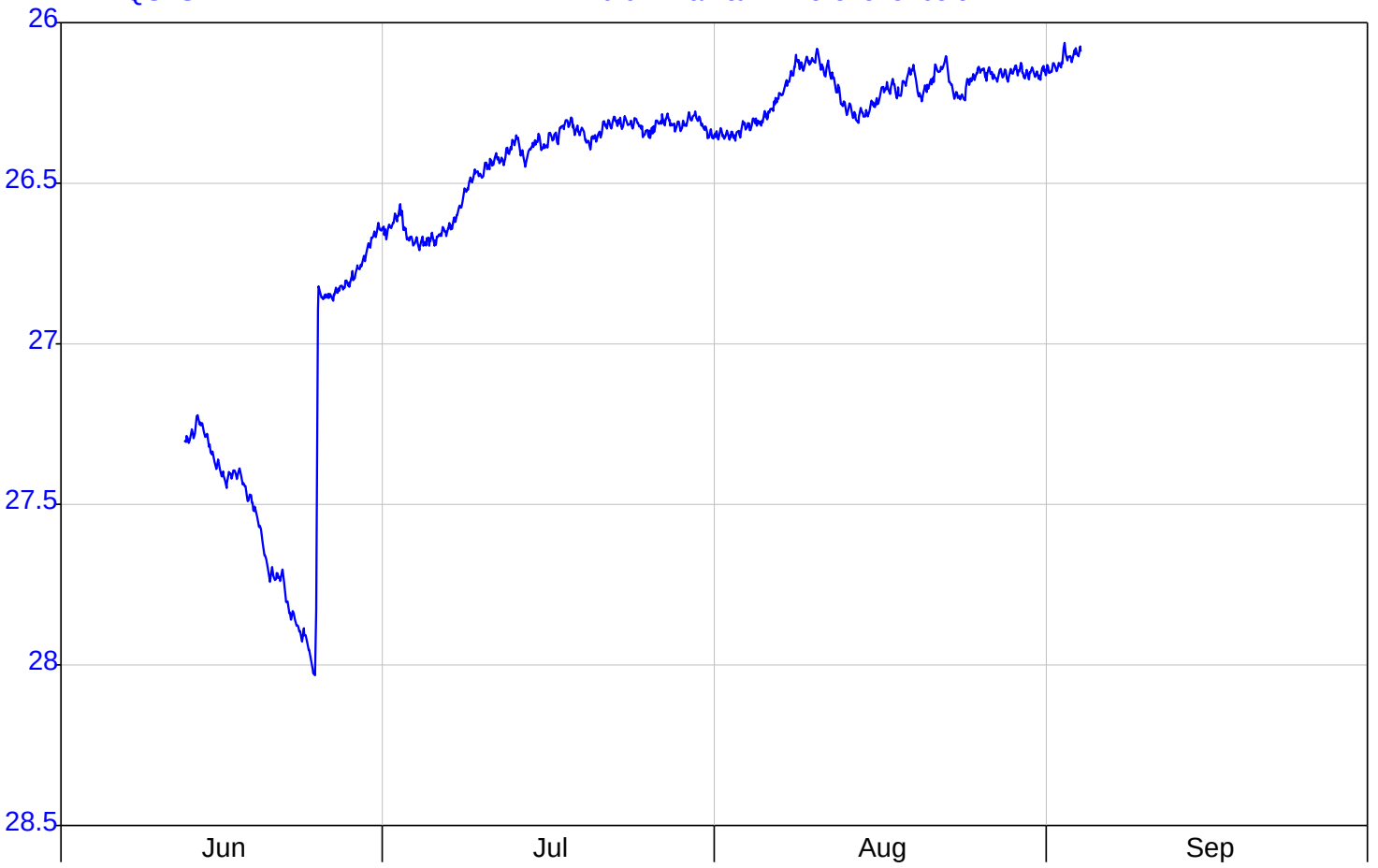
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019

Interval 4 Hour Plot End 00:00_01/10/2019

— BQS1S 110.01 Max & Min Bore level below MP B



Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Year Plot Start 00:00_01/01/2016 2016-20

Interval 2 Day Plot End 00:00_01/01/2020

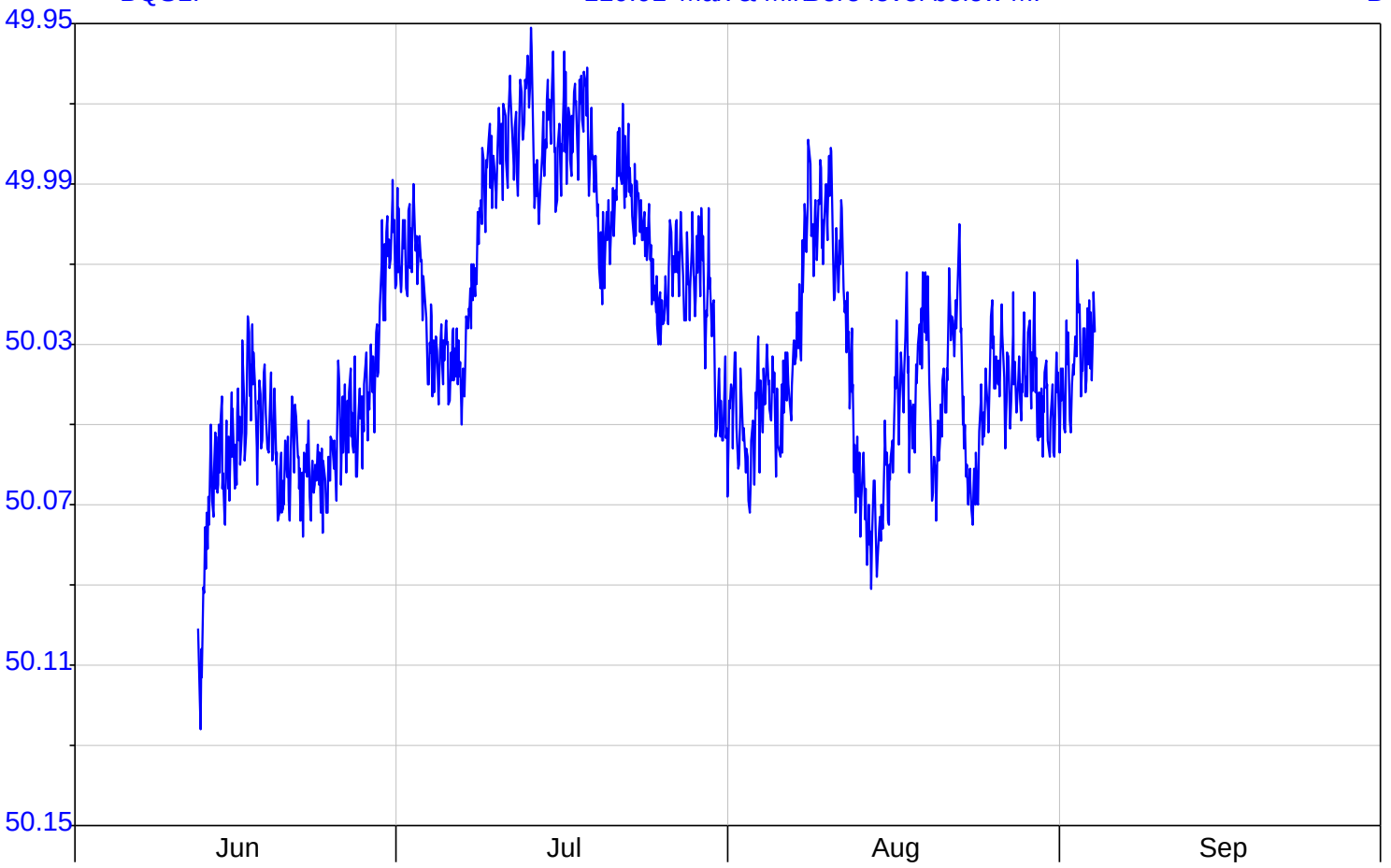
— BQS1I 110.01 Max & Min Bore level below MP

Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019
Interval 4 Hour Plot End 00:00_01/10/2019

— BQS1I 110.01 Max & Min Bore level below MP B



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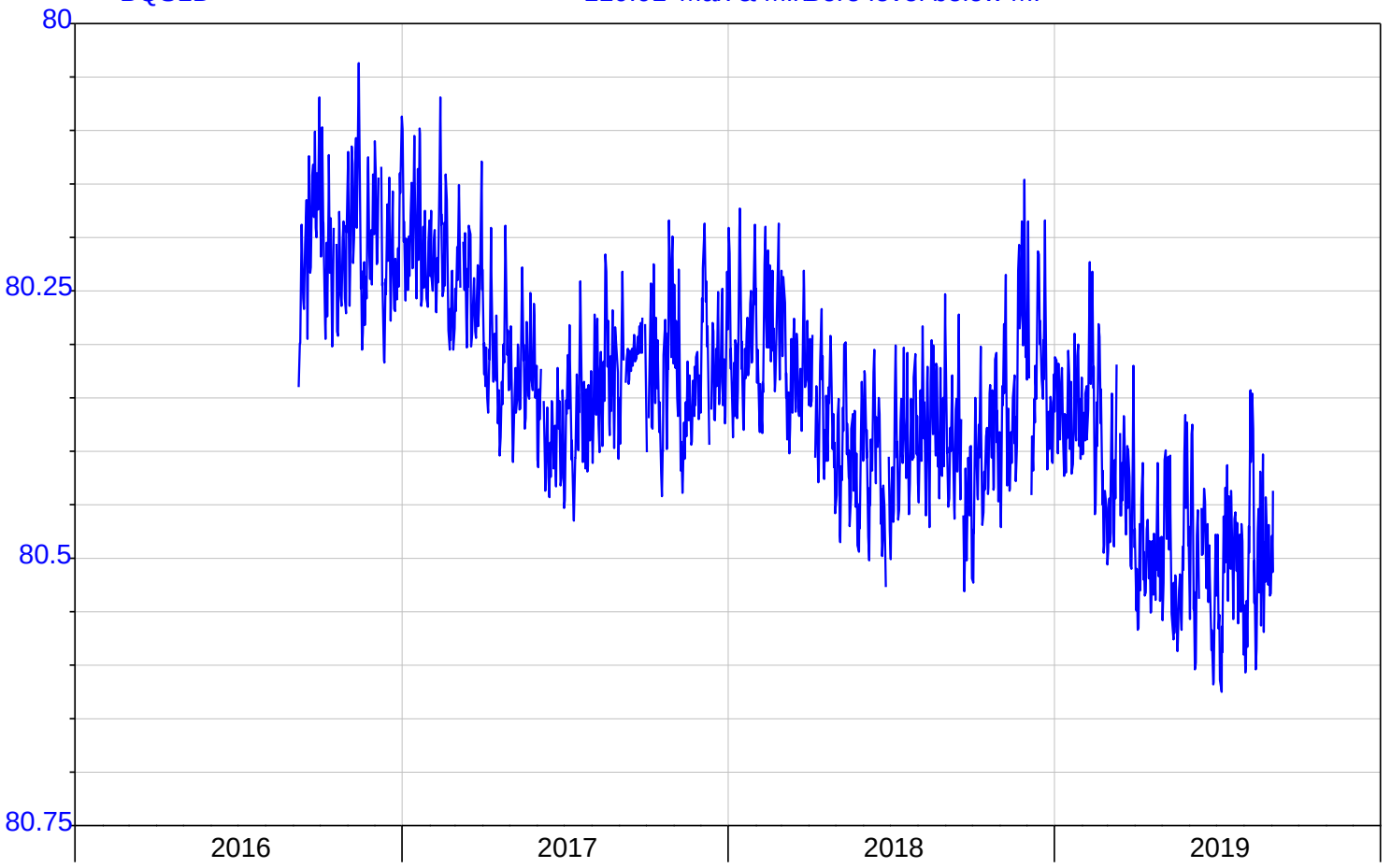
HYPLOT V133 Output 11/09/2019

Period 4 Year Plot Start 00:00_01/01/2016 2016-20

Interval 2 Day Plot End 00:00_01/01/2020

— BQS1D 110.01 Max & Min Bore level below MP



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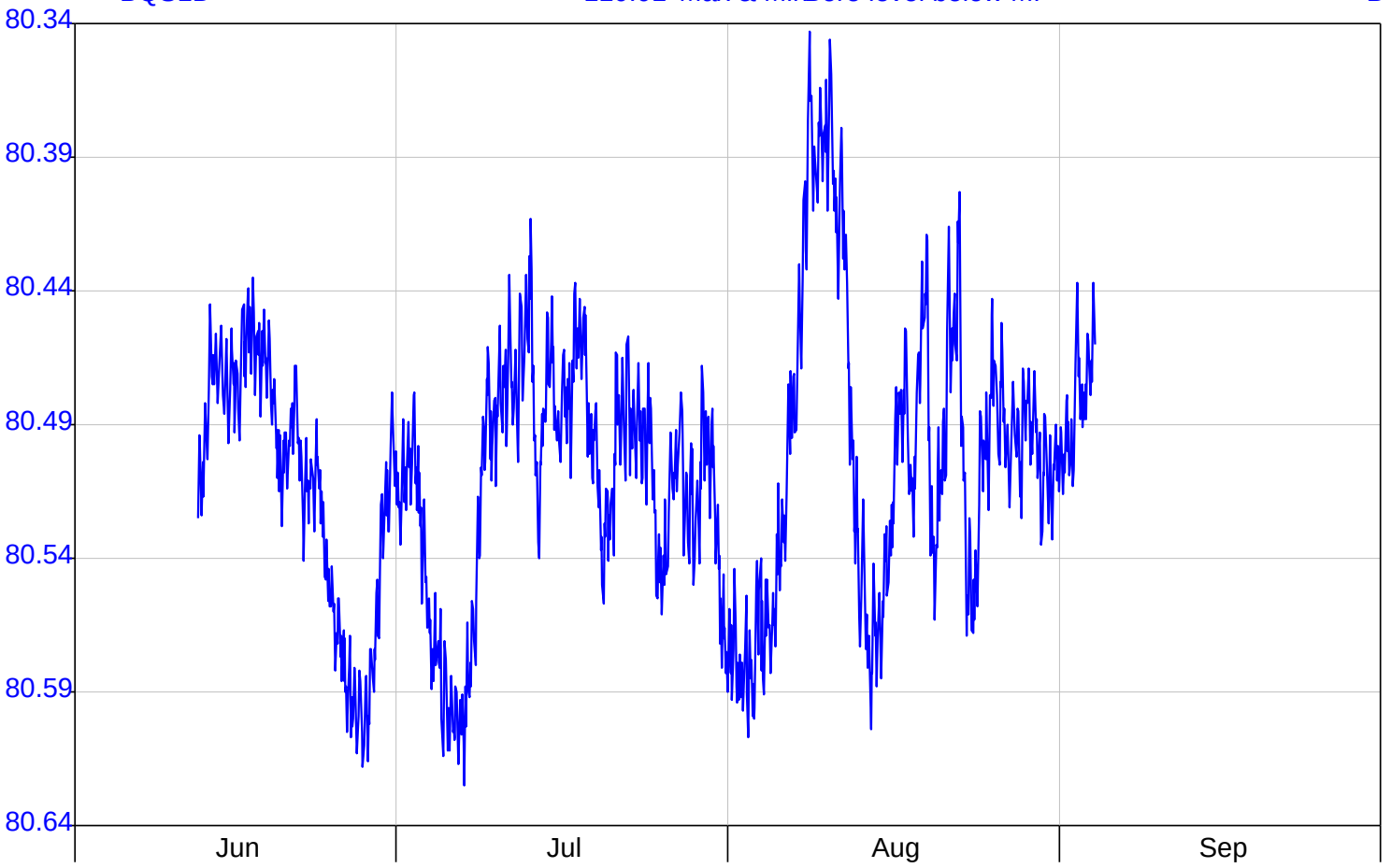
HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019
Interval 4 Hour Plot End 00:00_01/10/2019

— BQS1D 110.01 Max & Min Bore level below MP B



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HYPLOT V133 Output 11/09/2019

Period 7 Year Plot Start 00:00_01/01/2013 2013-20

Interval 5 Day Plot End 00:00_01/01/2020

— BQN1B 110.01 Max & Min Bore level below MP

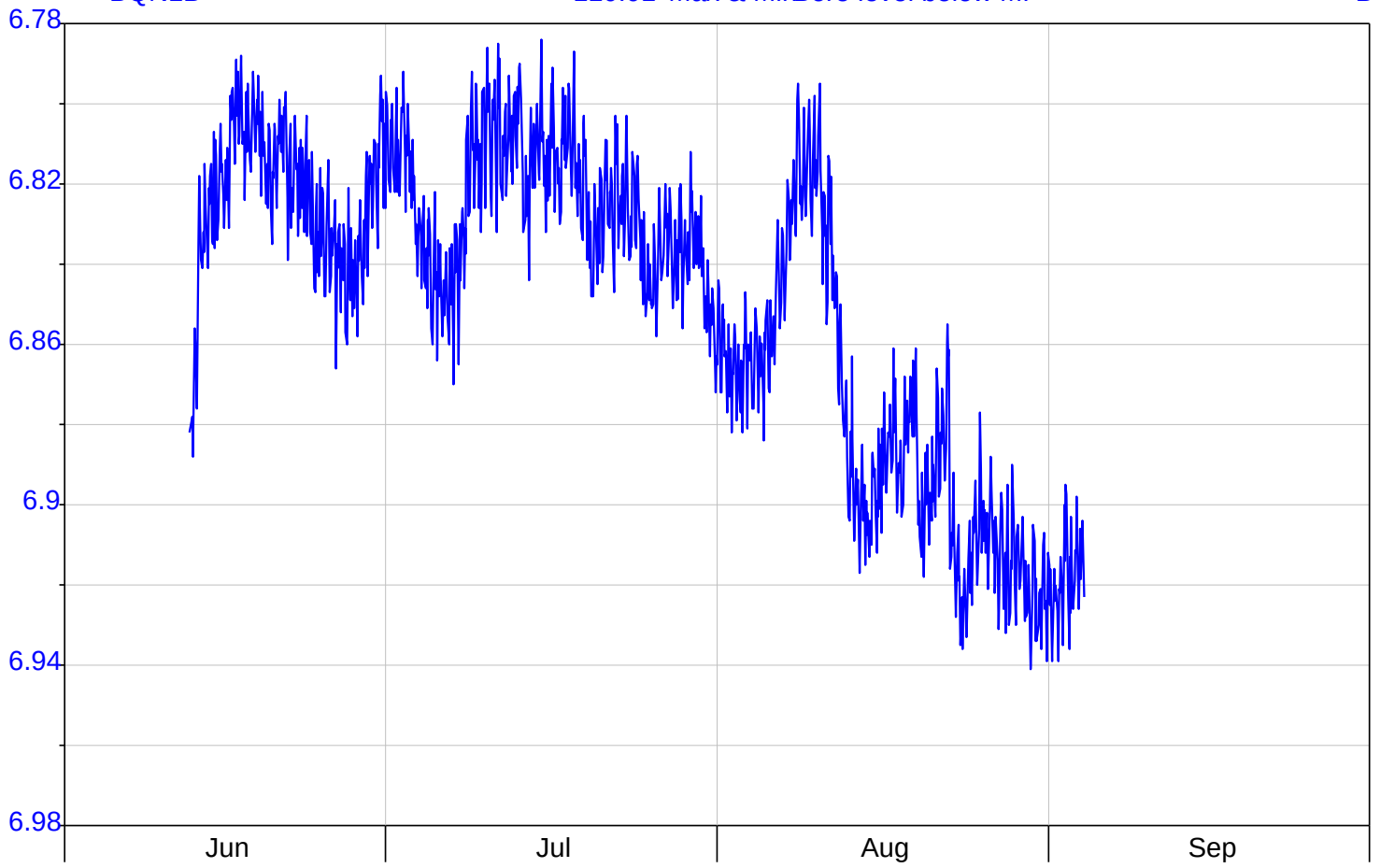
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019

Interval 4 Hour Plot End 00:00_01/10/2019

— BQN1B 110.01 Max & Min Bore level below MP B



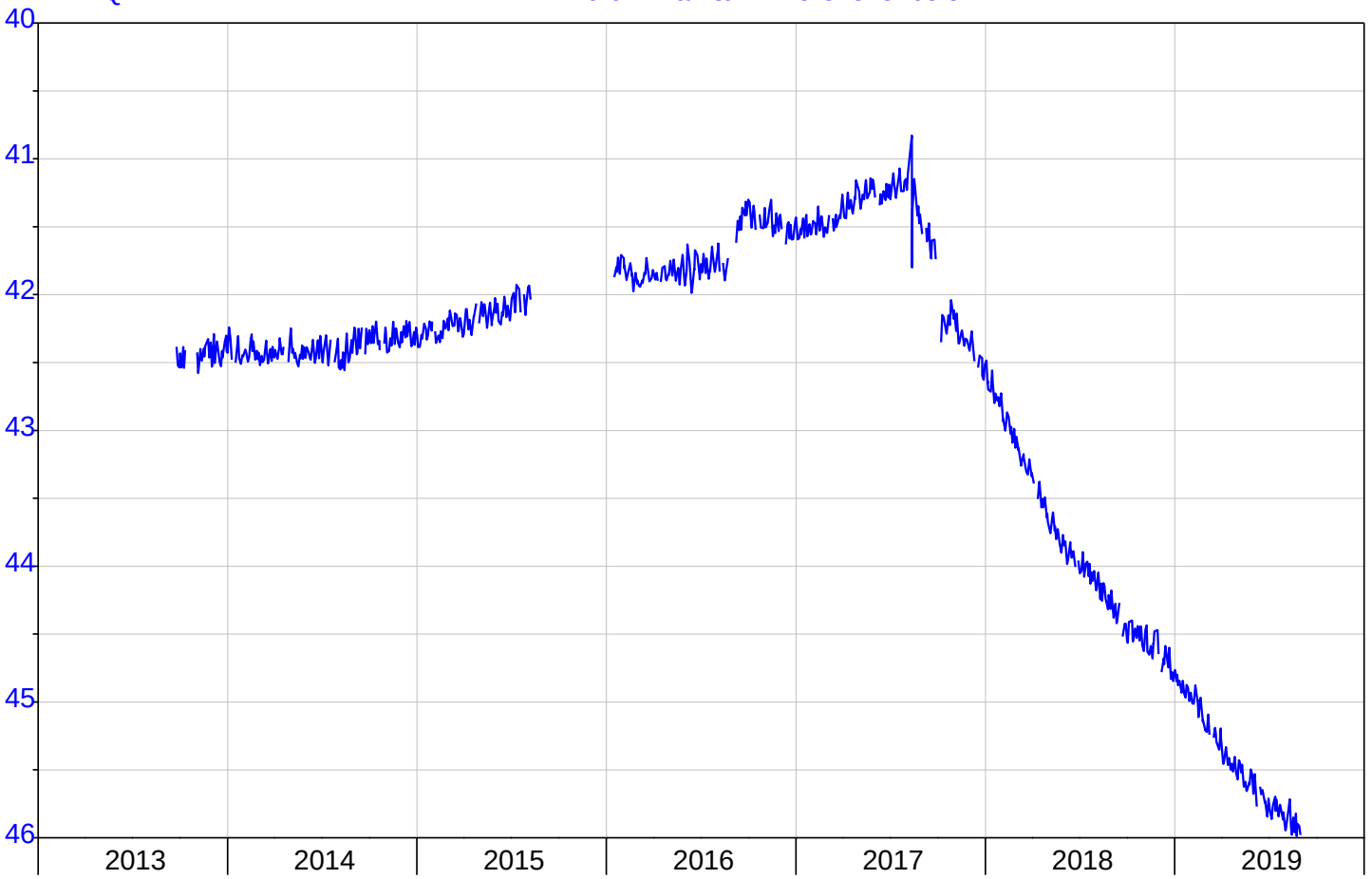
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 7 Year Plot Start 00:00_01/01/2013 2013-20

Interval 5 Day Plot End 00:00_01/01/2020

— BQN1A 110.01 Max & Min Bore level below MP



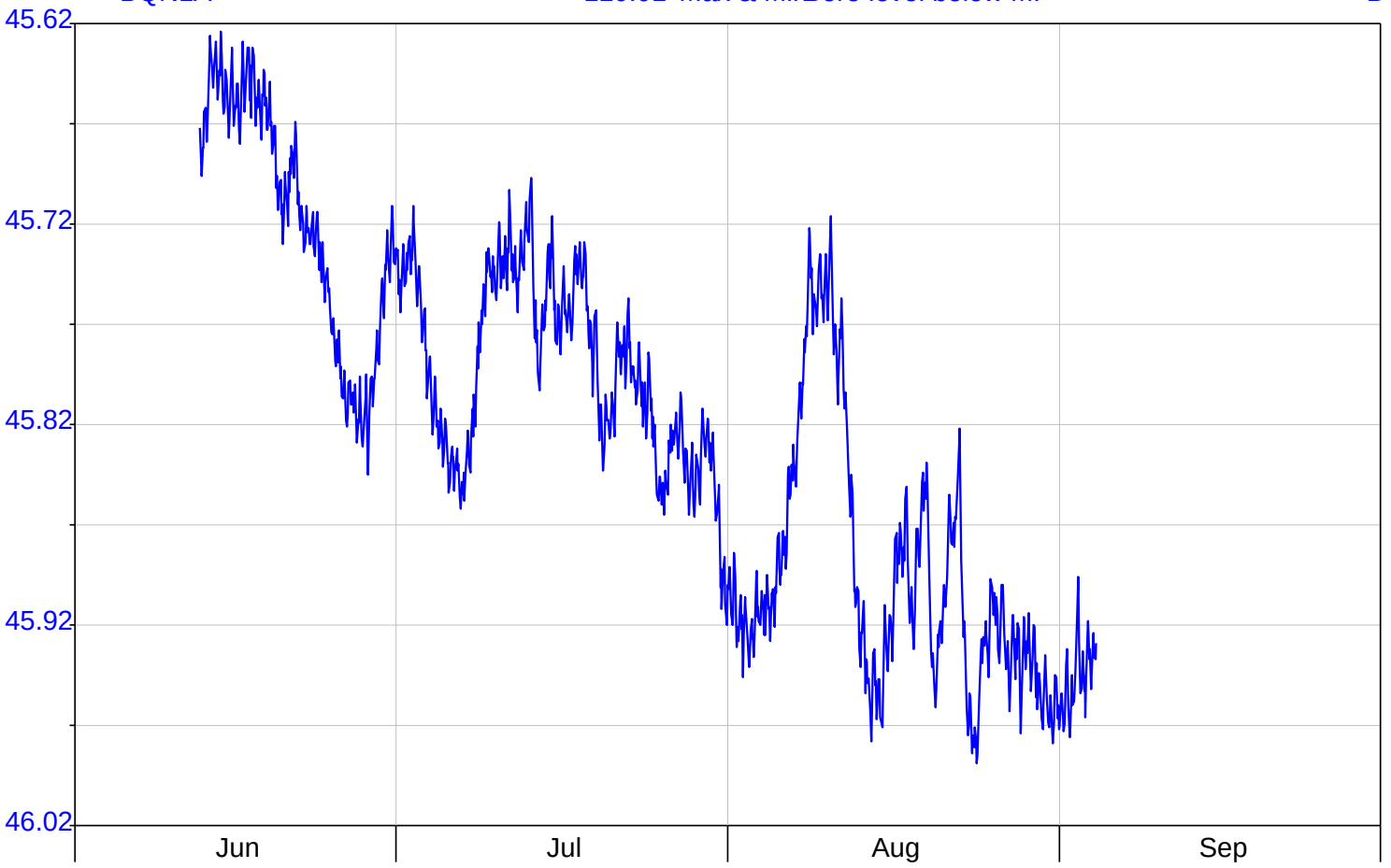
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019

Interval 4 Hour Plot End 00:00_01/10/2019

— BQN1A 110.01 Max & Min Bore level below MP B



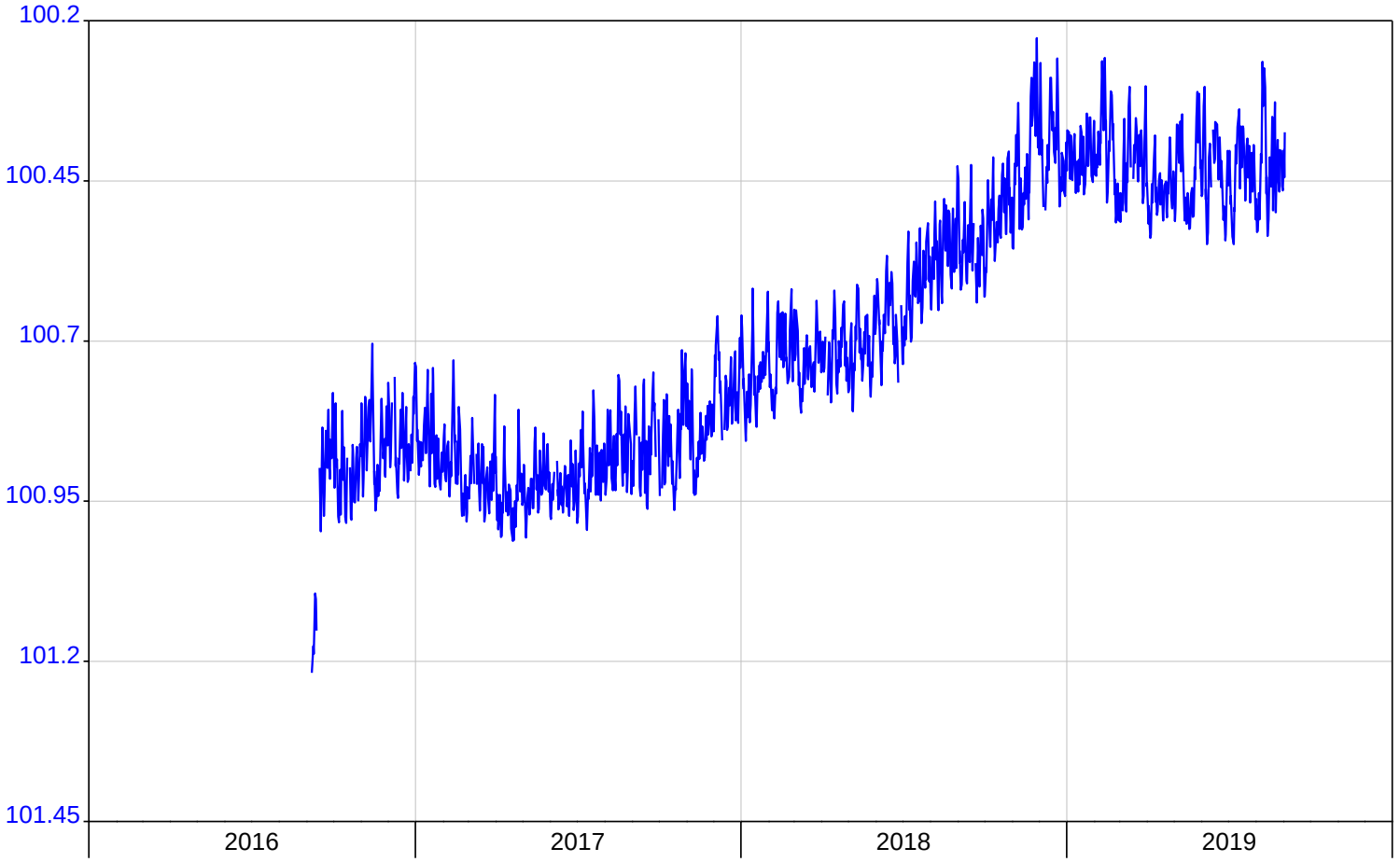
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Year Plot Start 00:00_01/01/2016 2016-20

Interval 2 Day Plot End 00:00_01/01/2020

— BQN1D 110.01 Max & Min Bore level below MP



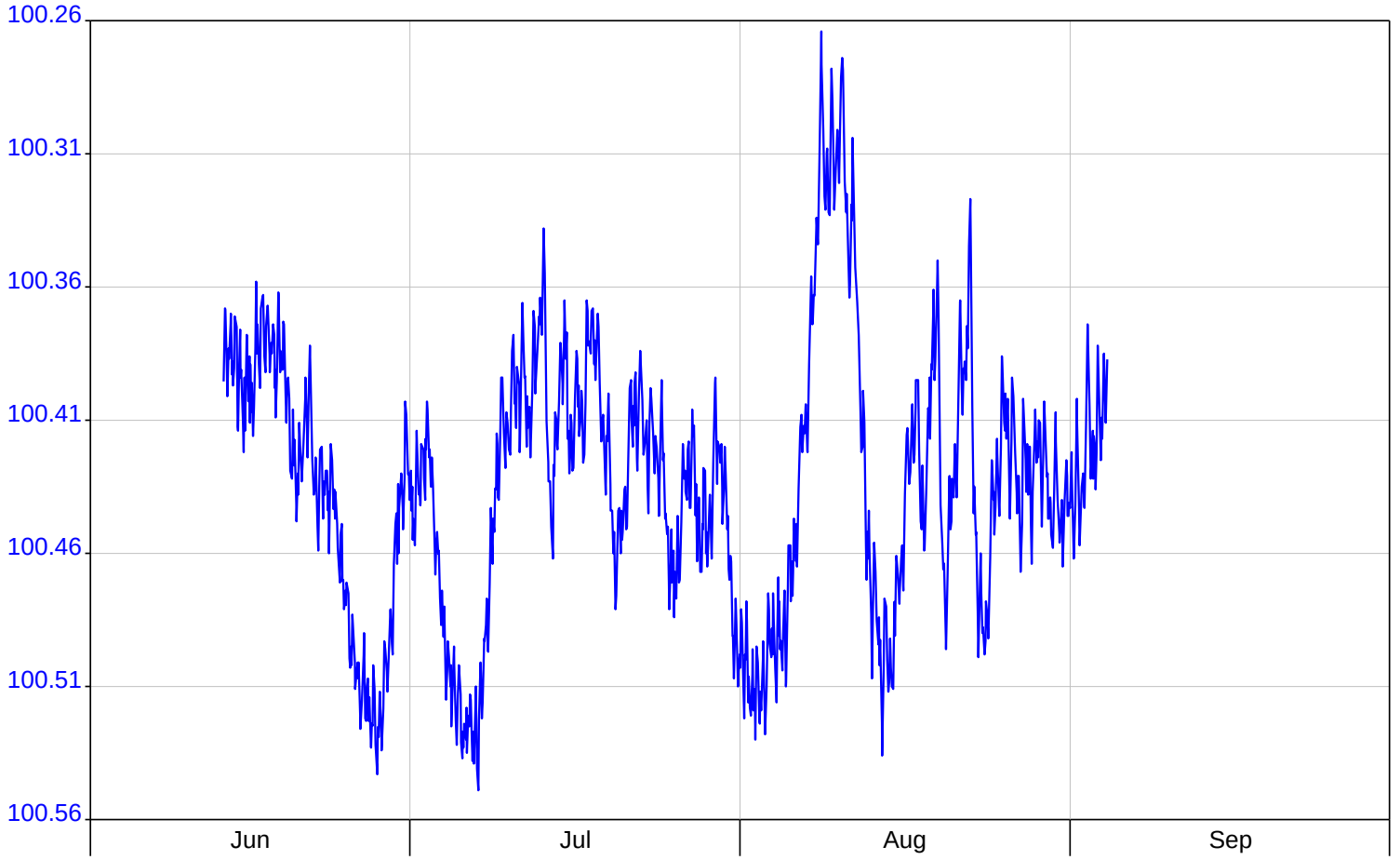
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019

Interval 4 Hour Plot End 00:00_01/10/2019

— BQN1D 110.01 Max & Min Bore level below MP B



Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 7 Year Plot Start 00:00_01/01/2013 2013-20

Interval 5 Day Plot End 00:00_01/01/2020

— BQN2B 110.01 Max & Min Bore level below MP

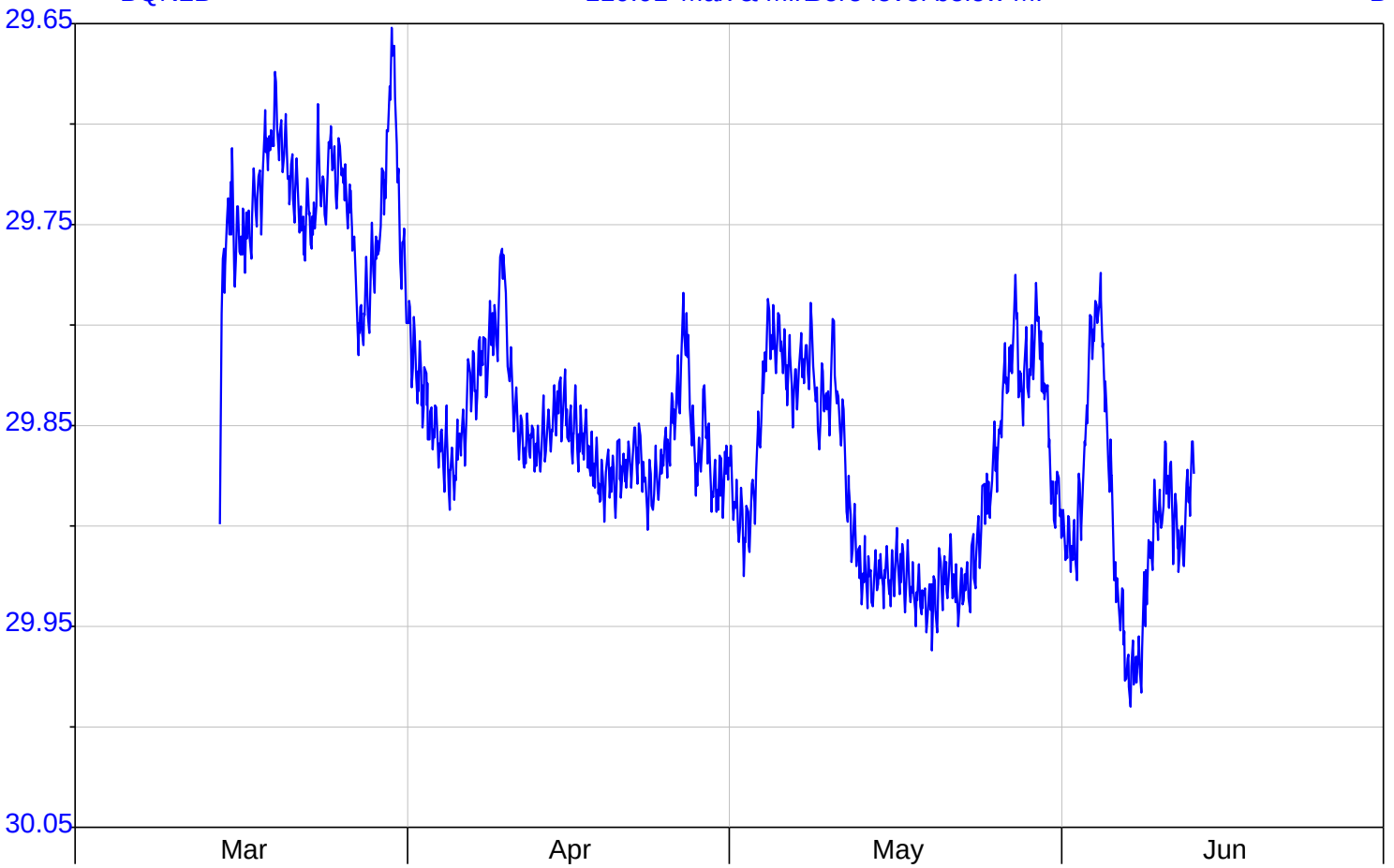
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/03/2019 2019

Interval 4 Hour Plot End 00:00_01/07/2019

— BQN2B 110.01 Max & Min Bore level below MP B



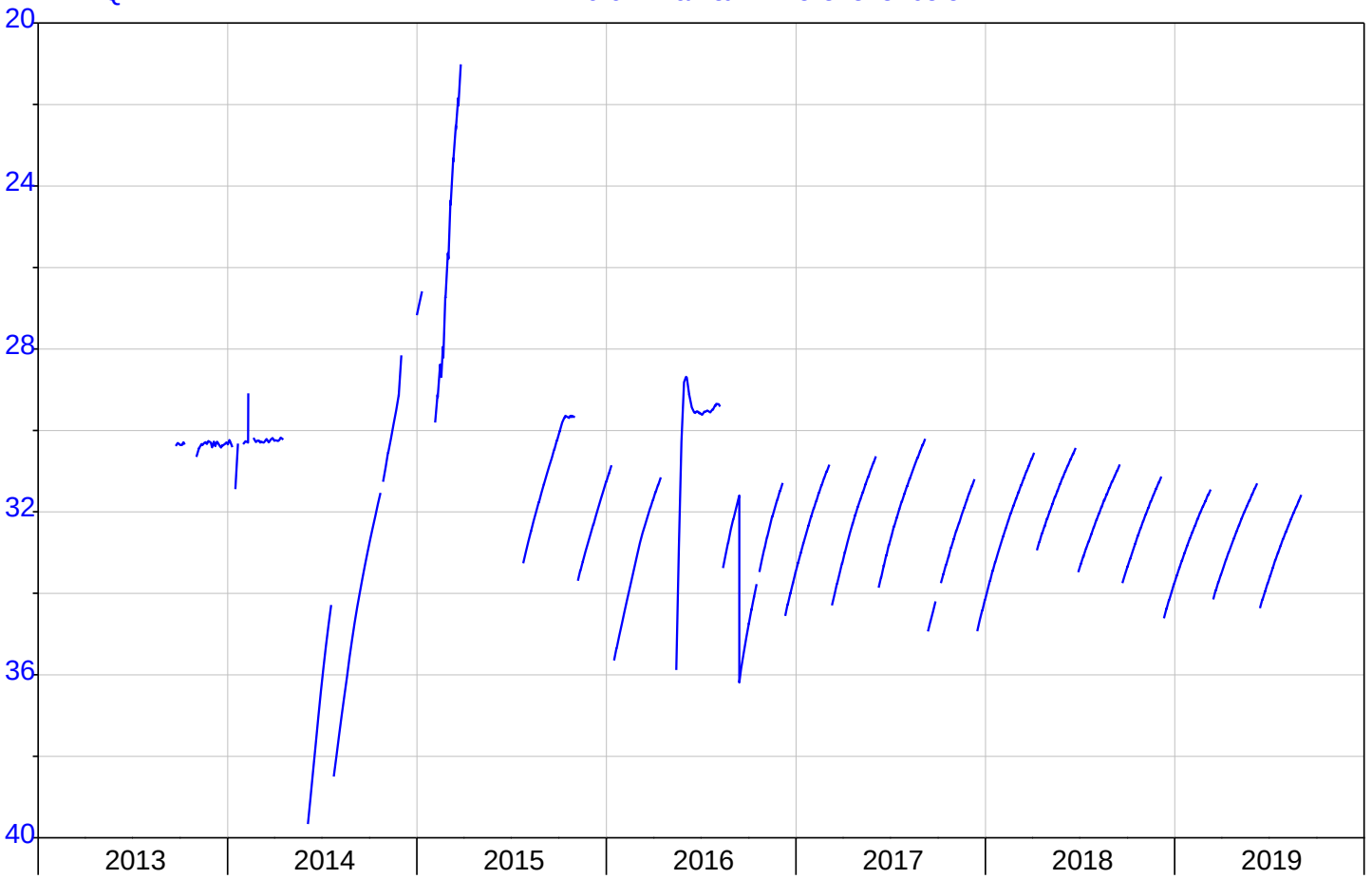
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 7 Year Plot Start 00:00_01/01/2013 2013-20

Interval 5 Day Plot End 00:00_01/01/2020

— BQN2A 110.01 Max & Min Bore level below MP

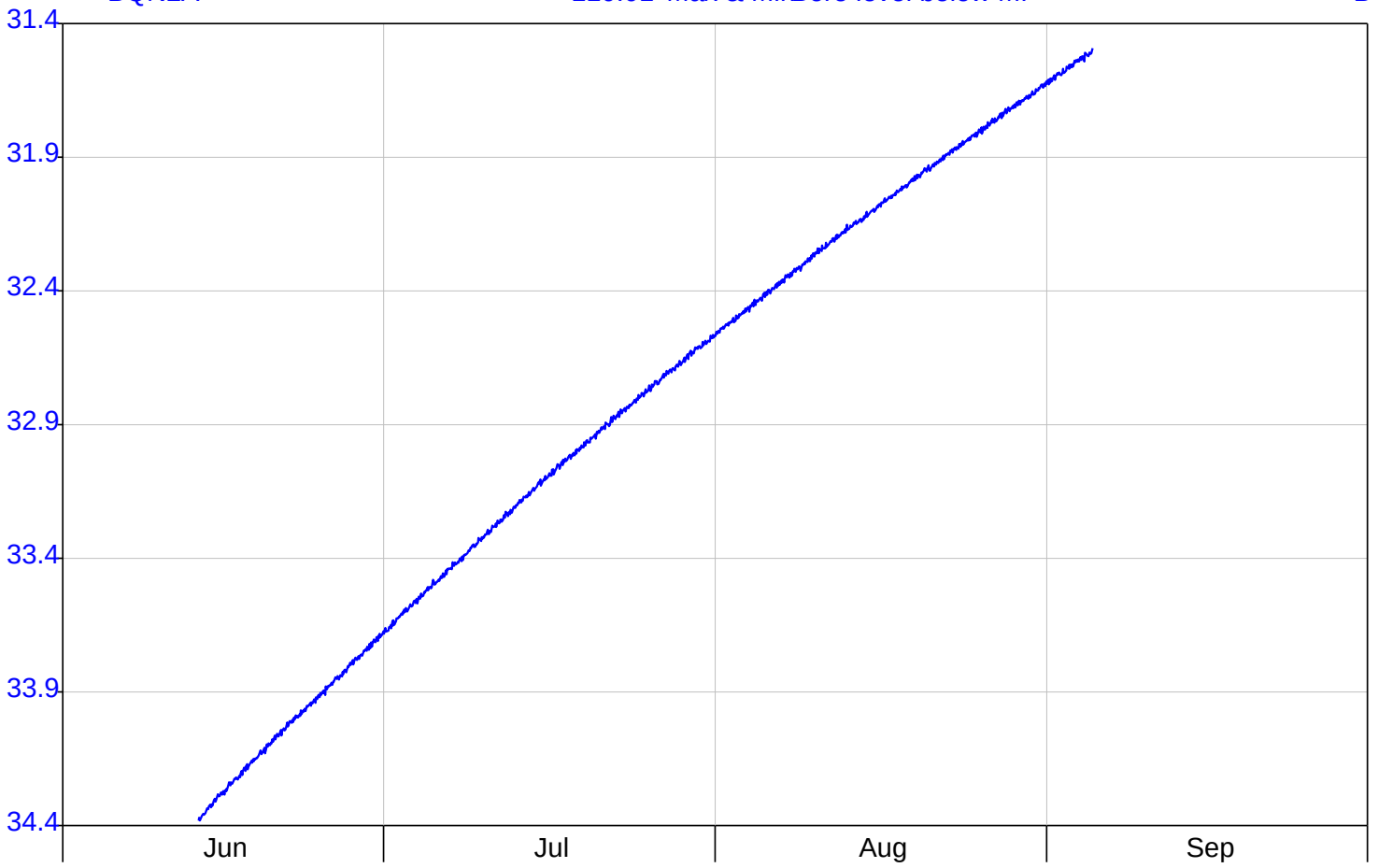


Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019
Interval 4 Hour Plot End 00:00_01/10/2019

— BQN2A 110.01 Max & Min Bore level below MP B



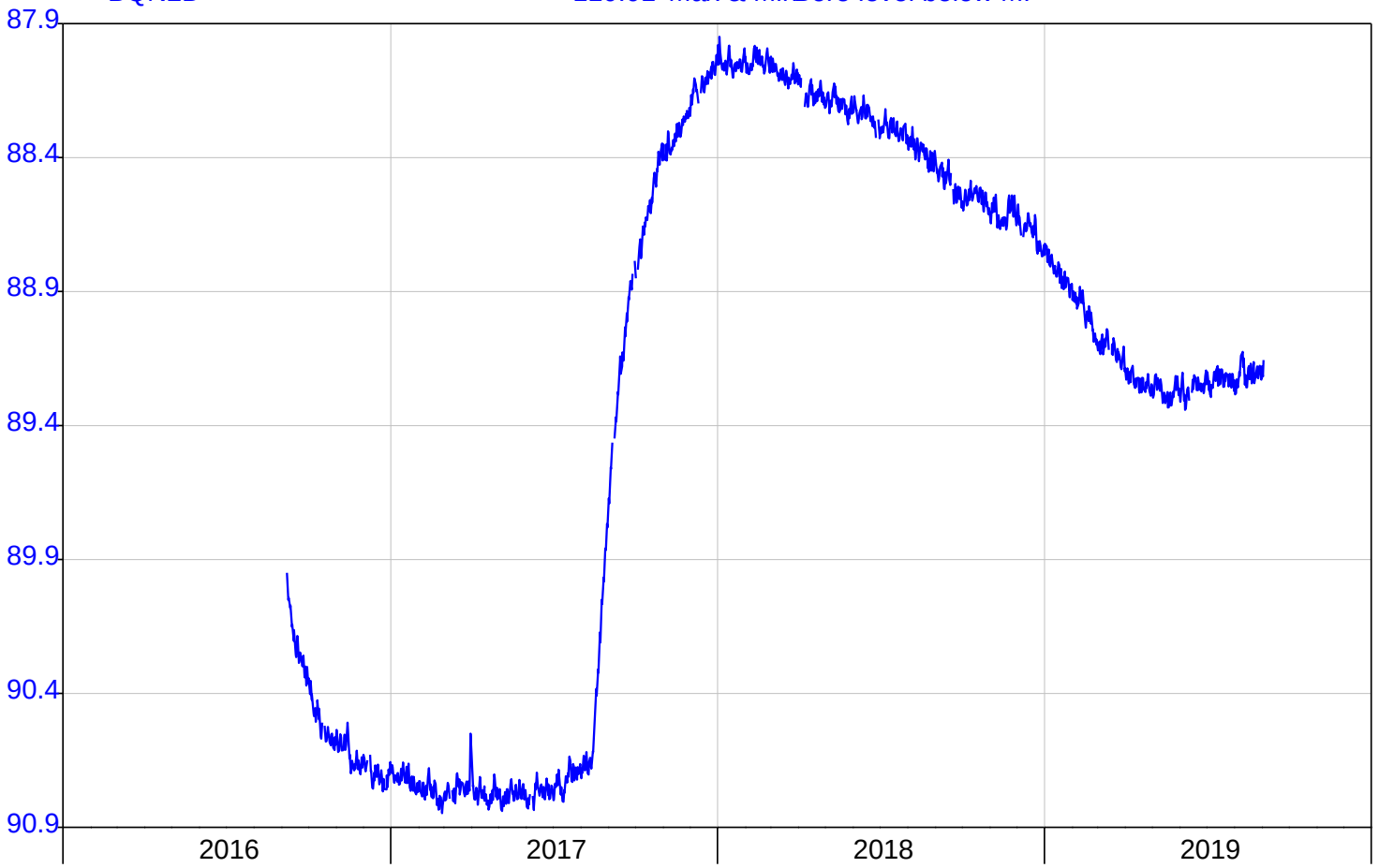
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Year Plot Start 00:00_01/01/2016 2016-20

Interval 2 Day Plot End 00:00_01/01/2020

— BQN2D 110.01 Max & Min Bore level below MP



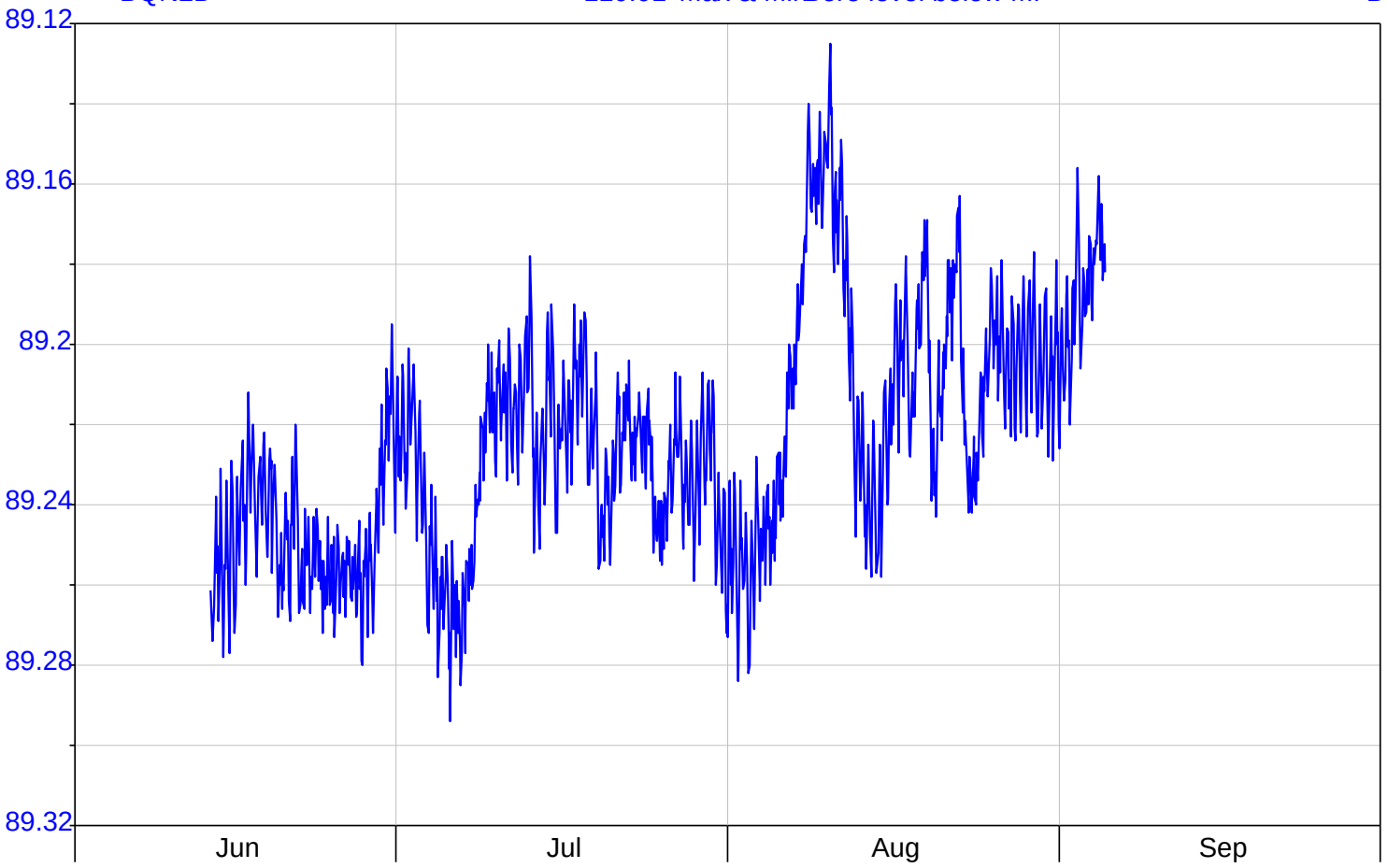
Groundwater Data Collection Services

HYPLOT V133 Output 11/09/2019

Period 4 Month Plot Start 00:00_01/06/2019 2019

Interval 4 Hour Plot End 00:00_01/10/2019

— BQN2D 110.01 Max & Min Bore level below MP B



RESULTS OF WATER ANALYSIS (Page 1 of 1)

9 samples supplied by Ground Water Data Collection Service on 5/09/2019 . Lab Job No.i5586
Samples submitted by Mathew Baker. Your Job: Blakebrook Quarry
2 Tildon Drive CLUNES NSW 2480

Parameter	Methods reference	Sample 1 BQS1-S	Sample 2 BQS1-I	Sample 3 BQS1-D	Sample 4 BQN1-B	Sample 5 BQN1-A	Sample 6 BQN1-D	Sample 7 BQN2-B	Sample 8 BQN2-A	Sample 9 BQN2-D
	Job No.	*i5586/1*	*i5586/2*	*i5586/3*	*i5586/4*	*i5586/5*	*i5586/6*	*i5586/7*	*i5586/8*	*i5586/9*
pH	APHA 4500-H^+-B	6.75	8.10	8.30	7.08	9.12	8.91	9.35	7.95	8.92
Conductivity (EC) (dS/m)	APHA 2510-B	0.394	1.498	1.758	1.104	1.899	1.403	1.117	1.153	0.929
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	268	1,019	1,195	751	1,291	954	760	784	632
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	180	39	96	3	107	52	24	4	26
Bicarbonate (Alkalinity) (mg/L $CaCO_3$ equivalent)	** Total Alkalinity - APHA 2320	185	190	135	205	60	120	125	180	333
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	2	<2	<2	<2	<2	<2	2	7	<2
Phosphate (mg/L P)	APHA 4500 P-G	0.064	0.010	0.051	0.292	0.023	0.038	0.143	0.231	0.095
Nitrate (mg/L N)	APHA 4500 NO_3^--F	0.012	0.019	0.051	<0.005	0.079	0.052	0.048	0.057	0.037
Nitrite (mg/L N)	APHA 4500 NO_2^--I	<0.005	<0.005	0.007	<0.005	0.058	<0.005	0.008	0.005	0.006
Ammonia (mg/L N)	APHA 4500 NH_3-H	0.042	0.078	0.147	0.042	0.056	0.058	0.079	0.230	0.130
Iron (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	4.727	0.358	1.212	2.053	1.432	3.755	0.101	0.155	0.116
Lead (mg/L)	Total Available - APHA 3125 ICPMS*note 1&2	0.002	<0.001	0.003	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.049	<0.005	0.011	<0.005	0.006	0.011	0.010	0.006	0.005
Iron (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.028	<0.005	0.005	0.019	<0.005	<0.005	<0.005	0.084	<0.005
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	0.193	0.066	0.024	0.152	<0.001	0.008	0.007	0.043	0.004
Lead (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	21.6	34.8	12.7	28.1	25.5	8.97	21.2	33.6	3.14
Magnesium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	8.37	6.90	1.69	18.2	5.28	0.597	4.61	9.37	0.425
Potassium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	3.48	6.18	4.11	4.38	8.22	3.14	7.57	10.2	2.16
Sodium (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	54.2	270	353	176	347	291	203	198	216
Chloride (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	18.7	288	396	195	470	289	227	132	81.1
Sulfur (mg/L)	Dissolved - APHA 3125 ICPMS*note 1&2	2.79	7.10	14.2	2.55	7.18	18.5	10.0	45.0	6.09
BTEX										
Benzene (µg/L or ppb)	Subcontracted: SGS report SE197485	<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 SE197485	<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 SE197485	<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 SE197485	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE197485	<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 SE197485	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)										
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<100	<100	<100	<100	<100	<100	<100	<100	<100

checked: .....
Graham Lancaster
Laboratory Manager

C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<50	<50	<50	<50	<50	<50	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<200	<200	<200	<200	<200	<200	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE197485	<100	<100	<100	<100	<100	<100	<100	<100	<100

Notes:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
4. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
5. Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
6. Analysis conducted between sample arrival date and reporting date.
7. ** NATA accreditation does not cover the performance of this service.
8. .. Denotes not requested.
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11. Results relate only to the samples tested.
12. This report was issued on 19/09/2019.

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Graham Lancaster
Laboratory Manager

RESULTS OF WATER ANALYSIS

9 samples supplied by Ground Water Data Collection Service on 5/12/2019 . Lab Job No. i8638.
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
		BQS1 -S	BQS1 -I	BQS1 -D	BQN1 -B	BQN1 -A	BQN1 -D	BQN2 -B	BQN2 -A	BQN2 -D
	Job No.	*i8638/1*	*i8638/2*	*i8638/3*	*i8638/4*	*i8638/5*	*i8638/6*	*i8638/7*	*i8638/8*	*i8638/9*
pH	APHA 4500-H+-B	7.28	8.14	8.06	7.36	8.68	8.41	9.54	8.20	8.98
Conductivity (EC) (dS/m)	APHA 2510-B	0.547	1.552	1.768	1.490	1.943	1.353	1.055	0.905	0.946
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	372	1,055	1,202	1,013	1,321	920	717	615	643
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	340	39	73	148	92	44	70	8	308
Bicarbonate (Alkalinity) (mg/L $CaCO_3$ equivalent)	** Total Alkalinity - APHA 2320	260	210	140	205	75	125	120	200	330
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	3	3	3	3	6	35	3	2	3
Phosphate (mg/L P)	APHA 4500 P-G	0.068	0.012	0.013	0.367	0.019	0.030	0.126	0.244	0.099
Nitrate (mg/L N)	APHA 4500 NO_3-F	0.012	<0.005	0.060	0.012	0.061	0.069	0.096	0.030	0.088
Nitrite (mg/L N)	APHA 4500 NO_2-I	<0.005	<0.005	0.006	<0.005	0.047	0.006	0.006	0.006	0.005
Ammonia (mg/L N)	APHA 4500 NH_3-H	0.050	0.042	0.030	0.040	0.086	0.057	0.070	0.144	0.102
Total Organic Carbon (mg/L)	APHA 5310-B	3.1	4.5	2.0	0.9	1.3	1.0	1.7	2.2	1.7
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	0.009	0.005	0.015	0.002	0.005	0.011	0.015	0.009	0.013
Iron (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	0.024	0.009	0.010	0.012	0.003	0.006	0.005	0.052	0.007
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	0.143	0.045	0.023	0.151	0.002	0.007	0.006	0.043	0.003
Lead (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead (mg/L)	Total Available - APHA 3125 ICPMS note 1&2	0.005	0.001	0.002	0.003	0.001	<0.001	0.001	<0.001	0.001
Iron (mg/L)	Total Available - APHA 3125 ICPMS note 1&2	4.135	0.395	0.895	9.647	1.710	1.889	0.648	0.158	1.093
Calcium (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	26.8	35.3	12.9	30.0	32.0	9.07	19.4	28.2	2.87
Magnesium (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	12.2	6.64	1.70	18.9	6.04	0.59	4.06	9.67	0.42
Potassium (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	4.25	5.58	3.96	4.29	7.04	2.80	6.70	9.68	1.96
Sodium (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	76.2	257	336	168	327	272	187	153	205
Chloride (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	31	311	418	199	503	302	210	112	83
Sulfur (mg/L)	Dissolved - APHA 3125 ICPMS note 1&2	2.0	6.8	13.7	2.6	7.2	23.7	9.6	15.3	5.4
BTEX										
Benzene (µg/L or ppb)	Subcontracted: SGS report SE200967	<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 SE200967	<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 SE200967	<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 SE200967	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE200967	<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 SE200967	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)										
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<50	<50	<50	<50	<50	<50	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<200	<200	<200	<200	<200	<200	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE200967	<100	<100	<100	<100	<100	<100	<100	<100	<100

Notes:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
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11. Results relate only to the samples tested.
12. This report was issued on 20/12/2019.

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Laboratory Manager