

RESULTS OF WATER ANALYSIS

5 samples collected by EAL for Lismore City Council on 18/02/2021. Lab Job No. K3686.

Samples submitted by Eleisha Went. Your Job: Q12/124 PO 77501 Surface Water.

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01	MCS02	MCS03	MCS04	MCS05
	Job No.	K3686/1	K3686/2	K3686/3	K3686/4	K3686/5
pH	APHA 4500-H ⁺ -B	6.67	6.79	6.74	6.86	6.94
Conductivity (EC) (dS/m)	APHA 2510-B	0.099	0.105	0.113	0.118	0.122
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	67	71	77	80	83
Temperature (°C)	Onsite	24	24	24	23	23
Redox Potential (mV)	Onsite	80	75	84	96	106
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	12	18	15	17	26
Turbidity (ntu)	APHA 2130	26	28	28	29	33
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	3.9	3.6	4.0	4.2	3.9
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	3.8	3.0	4.0	10.0	4.8
Total Phosphorus (mg/L P)	In house method W4	0.29	0.27	0.32	0.38	0.44
Total Nitrogen (mg/L N)	In house method W4	1.04	1.11	1.28	1.51	1.52
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN – NO _x	1.01	1.03	1.18	1.38	1.36
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.020	0.068	0.089	0.112	0.140
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.050	0.028	0.032	0.033	0.055
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	13,000	17,000	23,000	19,000	21,000
Dissolved Organic Carbon (mg/L C)	Inhouse	14.00	14.50	13.60	14.30	14.20
BTEX						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<0.5	<0.5	<0.5	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE 216775	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<100	<100	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<50	<50	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<200	<200	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 216775	<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 <2pH;
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 (2012) 'Standard Methods for the Examination of Water & Wastewater', 22nd 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 relate only to the samples tested.
- This report was issued on 05/03/2021.



RESULTS OF LEACHATE ANALYSIS

2 samples collected by EAL for Lismore City Council on 18/02/2021. Lab Job No. K3687.

Samples submitted by Eleisha Went. Your Job: Q12/124 PO 77501 Surface Water

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2
		Leachate Dam	Tryton Wedge Pit
	Job No.	K3687/1	K3687/2
pH	APHA 4500-H ⁺ -B	8.08	7.92
Conductivity (EC) (dS/m)	APHA 2510-B	2.960	4.389
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	2,013	2,985
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	924	751
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	620	1,800
Total Phosphorus (mg/L P)	In house method W4	2.58	6.34
Total Nitrogen (mg/L N)	In house method W4	80.6	60.4
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN – NO _x	80.3	60.3
Nitrate (mg/L N)	APHA 4500 NO ₃ ⁻ -F	0.058	<0.05
Ammonia (mg/L N)	APHA 4500 NH ₄ ⁺ -H	56.5	27.0
Sodium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	276	392
Potassium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	240	695
Calcium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	118	125
Magnesium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	51.4	51.5
Sodium Absorption Ratio (SAR)	** By calculation	5.3	7.5
Chloride (mg/L)	APHA 3125 ICPMS ^{note 1&2}	555	924
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS ^{note 1&2}	45	124
Chloride/Sulfate Ratio	** Calculation	12.2	7.4
Fluoride (mg/L)	** APHA 4500-F-D	0.9	0.7
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	30,000	190,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	185	488
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.013	0.027

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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- This report was issued on 05/03/2021.



RESULTS OF WATER ANALYSIS

19 samples collected by EAL for Lismore City Council on 31st May, 2021. Lab Job No. K7544
 Samples requested by Commercial Services Compliance. Your Job: PO-71869
 PO Box 23a LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8
		MW01	MW02	MW03	MW09	MW11	MW12	MW13	MW14
	Job No.	K7544/1	K7544/2	K7544/3	K7544/4	K7544/5	K7544/6	K7544/7	K7544/8
Depth of piezometer (m)	..	7.70	8.65	2.95	5.08	11.68	28.5	11.82	29.84
Piezometer height (m)	..	0.05	0.07	0.00	0.97	1.03	0.99	0.91	0.89
Standing Water Level (m)	..	2.21	0.00	0.47	2.31	2.23	1.00	1.12	0.00
pH	APHA 4500-H ⁺ -B	6.28	6.61	7.02	6.87	6.68	10.96	7.34	7.28
Conductivity (EC) (dS/m)	APHA 2510-B	0.355	3.01	1.84	0.711	4.65	3.60	3.57	2.69
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	241	2,047	1,251	483	3,162	2,448	2,428	1,829
Temperature (°C)	Onsite	20	23	19	21	20	19	19	19
Redox Potential (mV)	Onsite	137	0	106	118	12	11	22	28
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	2.6	0.9	2.4	1.5	1.1	4.1	0.7	0.9
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	75	996	1,040	202	580	145	310	529
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	0.9	1.1	1.6	1.6	25.4	25.0	4.0	11.3
Total Phosphorus (mg/L P)	In house method W4	0.30	0.10	0.15	0.60	4.06	0.06	0.63	1.77
Total Nitrogen (mg/L N)	In house method W4	1.28	0.93	1.05	4.00	23.37	30.1	1.07	10.33
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	0.57	0.93	0.94	3.51	23.36	30.0	0.66	10.32
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	<0.005	<0.005	<0.005	<0.005	0.069	<0.005	<0.005	<0.005
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.074	<0.005	<0.005	<0.005	19.08	24.6	0.06	7.89
Sodium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	20.7	229	213	47.7	606	497	383	506
Potassium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	1.1	2.2	1.0	1.9	27.3	29.0	7.8	19.6
Calcium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	19.4	267	116	40.2	287	352	202	20.2
Magnesium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	9.1	151	84	40.0	185	0.347	123	33.6
Sodium Absorption Ratio (SAR)	** By calculation	0.97	2.77	3.67	1.27	6.85	7.28	5.24	16.0
Chloride (mg/L)	APHA 3125 ICPMS ^{note 1&2}	74	422	41	21.9	1,489	1,174	904	514
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS ^{note 1&2}	40	43	23	150	33	90	158	34
Chloride/Sulfate Ratio	** Calculation	1.86	9.9	1.77	0.146	45.5	13.0	5.7	15
Fluoride (mg/L)	** APHA 4500-F-D	0.18	0.19	0.36	0.29	0.30	0.25	0.41	1.17
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	10	<10	<10	20	<10	<10	<10	800
Dissolved Organic Carbon (mg/L)	** Subcontracted- inhouse	2.1	13.4	17.3	4.4	17.8	9.4	9.7	6.6
Total Phenols (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.01	0.0	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.001	0.001	0.000	0.002	0.003	0.002	0.002	0.001
Iron (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.042	0.014	0.070	1.14	19.0	0.083	1.14	0.462
Manganese (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.010	1.75	0.623	0.090	0.501	0.002	0.326	0.353
Pesticide analysis screen ^{note 11}									
Methoxychlor (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate) (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methidathion (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BTEX									
Benzene (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE220237	<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 SE220237	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE220237	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)									
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<40	<40	<40	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<100	370	170	<100	320	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<50	<50	<50	<50	580	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<60	82	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<200	330	<200	<200	730	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<100	<100	<100	<100	230.000	<100	<100	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220237	<100	370	170	<100	900	<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.
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- Results relate only to the samples tested.
- This report was issued on 11/06/2021.



RESULTS OF WATER ANALYSIS

5 samples collected by EAL for Lismore City Council on 2/06/2021. Lab Job No. K7642.

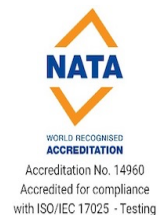
Samples requested by CS Compliance. Your Job: Q20/124 PO 77501 Surface Water

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01	MCS02	MCS03	MCS04	MCS05
	Job No.	K7642/1	K7642/2	K7642/3	K7642/4	K7642/5
pH	APHA 4500-H ⁺ -B	7.04	7.67	7.57	7.34	7.42
Conductivity (EC) (dS/m)	APHA 2510-B	0.262	0.590	0.616	0.474	0.545
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	178	401	419	322	371
Redox Potential (mV)	Onsite	+153	+157	+159	+157	+164
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	19	9	37	70	35
Turbidity (NTU)	APHA 2130	24.4	10.9	39.5	43.6	46.6
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	56	132	145	106	125
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	5.0	4.6	4.6	3.9	3.4
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	1.5	1.1	4.2	7.4	4.5
Total Phosphorus (mg/L P)	In house method W4	0.09	0.40	0.40	0.41	0.51
Total Nitrogen (mg/L N)	In house method W4	0.32	7.87	8.95	5.74	6.84
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	0.29	2.22	2.87	2.11	3.15
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	<0.005	5.371	5.819	3.315	3.491
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.031	1.018	1.238	1.014	1.324
Temperature (-C)	data supplied by client	16	10	18	16	17
Sodium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	26.9	75.3	79.3	57.9	72.1
Potassium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	0.61	15.3	16.3	10.2	13.7
Calcium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	11.1	24.8	26.4	20.6	22.8
Magnesium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	8.23	6.76	6.88	6.99	6.84
Sodium Absorption Ratio (SAR)	** By calculation	1.5	3.5	3.6	2.8	3.4
Chloride (mg/L)	APHA 3125 ICPMS ^{note 1&2}	38	57	55	50	49
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS ^{note 1&2}	7	38	39	28	38
Chloride/Sulfate Ratio	** Calculation	5.7	1.5	1.4	1.8	1.3
Fluoride (mg/L)	** APHA 4500-F-D	0.1	0.5	0.5	0.4	0.5
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	290	2,960	1,030	290	640
Dissolved Organic Carbon (mg/L)	APHA 5310-B	5.5	12.7	12.2	9.4	10.6
Iron (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	1.10	0.260	0.496	1.65	0.792
Manganese (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.082	0.049	0.095	0.148	0.137
BTEX						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE220460	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE220460	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE220460	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE220460	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE220460	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE220460	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<100	180	290	250	290
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<50	<50	220	230	230
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<200	<200	420	380	450
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<100	<100	<100	110	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE220460	<100	180	510	480	520

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).
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- Results relate only to the samples tested.
- This report was issued on 24/06/2021.



RESULTS OF LEACHATE ANALYSIS

2 samples collected by EAL for Lismore City Council on 7/06/2021 . Lab Job No. K7812.
 Samples requested by Commercial Services Compliance. Your Job: Q20/124 PO 77501 Leachate
 PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1 LD	Sample 2 TWP
	Job No.	K7812/1	K7812/2
pH	APHA 4500-H ⁺ -B	8.89	8.40
Conductivity (EC) (dS/m)	APHA 2510-B	3.851	8.913
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	2,619	6,061
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	796	1,204
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	1,000	2,700
Total Phosphorus (mg/L P)	In house method W4	4.72	7.20
Total Nitrogen (mg/L N)	In house method W4	102	164
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	<0.05	<0.05
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	41.0	89.4
Sodium (mg/L)	APHA 3125 ICPMS ^{total 1&2}	400	717
Potassium (mg/L)	APHA 3125 ICPMS ^{total 1&2}	423	1,399
Calcium (mg/L)	APHA 3125 ICPMS ^{total 1&2}	88.3	213
Magnesium (mg/L)	APHA 3125 ICPMS ^{total 1&2}	45.1	110
Sodium Absorption Ratio (SAR)	** By calculation	8.6	9.9
Fluoride (mg/L)	** APHA 4500-F-D	1.13	1.03
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	152,000	133,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	264	708
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{total 1&2}	0.019	0.023
Pesticide analysis screen ^{*see notes}			
Alpha BHC (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Hexachlorobenzene (HCB) (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Beta BHC (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Lindane (gamma BHC) (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Delta BHC (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Heptachlor (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Aldrin (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Heptachlor epoxide (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Gamma Chlordane (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Alpha Chlordane (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Alpha Endosulfan (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
o,p'-DDE (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
p,p'-DDE (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Dieldrin (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Endrin (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Beta Endosulfan (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
o,p'-DDD (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
p,p'-DDD (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Endosulfan sulphate (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
o,p'-DDT (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
p,p'-DDT (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Endrin ketone (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Methoxychlor (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
trans-Nonachlor (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Endrin aldehyde (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Isodrin (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Mirex (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Other Organochlorine (OC) Pesticides (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.1
Dichlorvos (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.5
Dimethoate (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.5
Diazinon (Dimpylate) (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.5
Fenitrothion (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Malathion (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl) (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Parathion-ethyl (Parathion) (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Bromophos Ethyl (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Methodathion (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.5
Ethion (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Azinphos-methyl (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.1	<0.2
Other Organophosphate (OP) Pesticides (µg/L or ppb)	Subcontracted: SGS report SE 220516	<0.2	<0.2

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 relate only to the samples tested.
- This report was issued on 24/06/2021.



RESULTS OF LEACHATE ANALYSIS

2 samples collected by EAL for Lismore City Council on 25/08/2021. Lab Job No. M0649.
Samples submitted by Eleisha Went. Your Job: PO 77501

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2
		LD	TWP
	Job No.	M0649/1	M0649/2
pH	APHA 4500-H ⁺ -B	8.30	8.09
Conductivity (EC) (dS/m)	APHA 2510-B	5.14	3.22
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	3,495	2,190
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	1,690	600
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	1,050	770
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	105	88
Total Phosphorus (mg/L P)	In house method W4	6.92	5.69
Total Nitrogen (mg/L N)	In house method W4	235	43.6
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	235	41.8
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	<0.5	1.15
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	154	17.5
Sodium (mg/L)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	584	329
Potassium (mg/L)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	363	474
Calcium (mg/L)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	133	140
Magnesium (mg/L)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	69.6	61.0
Sodium Absorption Ratio (SAR)	** By calculation	10.2	5.8
Chloride (mg/L)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	762	695
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	66	197
Chloride/Sulfate Ratio	** Calculation	11.5	3.5
Fluoride (mg/L)	** APHA 4500-F-D	0.9	1.4
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	260,000	224,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	290	228
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ¹⁰²⁴⁻¹⁸²	0.017	0.015

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 relate only to the samples tested.
- This report was issued on 06/09/2021.



RESULTS OF WATER ANALYSIS

5 samples collected by EAL for Lismore City Council on 25/08/2021. Lab Job No. M0650.

Samples submitted by Eleisha Went. Your Job: PO 77501.

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1 MCS01	Sample 2 MCS02	Sample 3 MCS03	Sample 4 MCS04	Sample 5 MCS05
	Job No.	M0650/1	M0650/2	M0650/3	M0650/4	M0650/5
pH	APHA 4500-H ⁺ -B	7.03	7.08	7.51	7.25	7.31
Conductivity (EC) (dS/m)	APHA 2510-B	0.286	0.330	0.534	0.444	0.517
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	194	224	363	302	352
Temperature (-C)	Onsite	16	17	17	16	17
Redox Potential (mV)	Onsite	+97	+102	+122	+138	+119
Total Suspended Solids (mg/L)	GFC equiv. filter -APHA 2540-D	11	17	45	33	34
Turbidity (ntu)	APHA 2130	17	20	30	39	36
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	4.5	3.9	3.7	3.4	3.7
Biochemical Oxygen Demands (mg/L O ₂)	APHA 5210-B	0.9	1.3	4.6	3.7	4.2
Total Phosphorus (mg/L P)	In house method W4	0.07	0.17	0.62	0.46	0.50
Total Nitrogen (mg/L N)	In house method W4	0.36	1.28	4.93	3.70	3.84
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	0.31	0.51	2.26	2.11	2.02
NO _x	APHA - HideRow	0.051	0.772	2.670	1.590	1.820
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.040	0.713	2.27	1.20	1.34
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.012	0.099	1.00	1.08	1.01
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	1,950	1,430	1,690	1,950	1,560
Dissolved Organic Carbon (mg/L C)	**inhouse	4.8	6.7	9.8	8.9	9.9
BTEX						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<0.5	<0.5	<0.5	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE 223041	<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 223041	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<100	<100	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<50	<50	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<60	<60	<60	<60	<60
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<200	<200	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 223041	<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 <2pH;
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 (2012) 'Standard Methods for the Examination of Water & Wastewater', 22nd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
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- Results relate only to the samples tested.
- This report was issued on 07/09/2021.



RESULTS OF WATER ANALYSIS

19 samples collected by EAL for Lismore City Council on 30/11/2021. Lab Job No. M4027.
 Samples requested by Eleisha Went. Your Job: Half Yearly Groundwater Q21-205 PO 84469
 PO Box 29A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10	Sample 11	Sample 12	Sample 13	Sample 14	Sample 15	Sample 16	Sample 17	Sample 18	Sample 19
		MW01	MW02	MW03	MW09	MW11	MW12	MW13	MW14	MW15	MW16	MW17	MW18	MW19	MW20	MW21	MW22	MW23	MW25	MW26
	Job No.	M4027/1	M4027/2	M4027/3	M4027/4	M4027/5	M4027/6	M4027/7	M4027/8	M4027/9	M4027/10	M4027/11	M4027/12	M4027/13	M4027/14	M4027/15	M4027/16	M4027/17	M4027/18	M4027/19
Depth of piezometer (m)	Onsite	7.70	8.65	2.95	5.08	11.68	28.5	11.82	29.84	11.40	16.18	19.06	9.20	19.04						
Piezometer height (m)	Onsite	0.050	0.07	0.00	0.970	1.03	0.99	0.91	0.89	1.01	0.890	0.63	0.99	0.97						
Standing Water Level (m)	Onsite	4.88	0.00	0.75	3.70	1.75	1.00	1.45	0.00	4.24	2.78	8.68	3.93	3.13	3.21	2.65	3.38	3.89	4.24	1.22
Temperature (°C)	Onsite	20.2	22.9	20.6	20.8	20.0	19.8	18.8	19.6	19.8	20.9	22.3	20.5	20.4	20.1	20.1	20.7	20.7	20.4	20.2
Redox Potential (mV)	Onsite	+217	+64	+50	+227	+51	+27	+63	+61	+66	+197	-25	+105	+26	+67	+74	+77	+75	+92	+32
pH	APHA 4500HF-B	6.38	6.71	6.97	7.05	6.77	11.5	7.25	7.50	6.78	8.80	7.39	7.42	7.10	6.62	6.56	6.68	7.24	6.95	7.56
Conductivity (EC) (dS/m)	APHA 2510-B	0.291	2.75	1.04	0.559	6.61	4.91	3.87	2.39	6.90	0.789	1.23	1.56	1.87	3.01	3.00	8.88	2.77	2.86	3.76
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	198	1,872	709	380	4,491	3,340	2,629	1,625	4,694	537	834	1,059	1,273	2,049	2,039	6,038	1,886	1,943	2,559
Turbidity (ntu)	APHA 2130	58.9	4.70	32.9	29.3	6.90	19.8	26.8	4.70	28.7	9.90	45.5	56.7	49.6	156	6.80	469	13.2	16.5	4.40
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	3.21	1.12	2.08	1.63	0.780	0.330	0.780	1.38	1.28	2.35	1.05	1.82	0.710	2.11	1.89	1.21	1.42	2.55	3.22
Biochemical Oxygen Demand (mg/L O ₂)	APHA 5210-B	1.30	1.40	2.40	1.30	14.0	4.90	7.90	1.30	3.30	2.80	33.0	1.70	78.3	2.00	4.20	15.4	21.7	13.2	30.1
Total Phosphorus (mg/L P)	In house method W4	0.305	0.090	0.089	0.468	1.55	0.026	0.762	1.72	0.176	0.258	1.92	0.448	3.71	3.72	1.39	0.550	2.12	1.83	3.06
Total Nitrogen (mg/L N)	In house method W4	2.68	0.917	1.11	2.10	3.86	34.5	4.10	11.6	5.60	0.562	11.9	0.256	28.1	7.30	7.60	4.35	4.40	6.40	24.5
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	1.75	0.007	<0.005	1.53	<0.005	<0.005	<0.005	0.317	<0.005	<0.005	<0.005	0.071	<0.005	0.278	0.015	0.049	0.812	0.666	<0.005
Ammonia (mg/L N)	APHA 4500 NH ₄ -H	0.014	<0.005	0.622	<0.005	0.243	34.0	4.07	11.2	5.53	0.436	10.2	0.163	28.1	7.00	7.52	3.34	0.586	5.69	24.5
Dissolved Organic Carbon (mg/L)	APHA 5310-B	5.44	16.3	8.43	2.84	8.84	8.35	10.7	4.69	54.4	3.18	18.2	1.67	23.8	6.21	2.33	29.1	4.78	2.47	8.60
BTEX																				
Benzene (µg/L or ppb)	Subcontracted: SGS report SE226554	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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 SE226554	<0.5	<0.5	<5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<5	<0.5	7.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE226554	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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 SE226554	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE226554	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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 SE226554	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Total Recoverable Hydrocarbons (TRH)																				
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<50	62	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	540	<50	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<100	210	<100	<100	<100	<100	<100	<100	<100	<100	340	<100	160	<100	<100	<100	<100	<100	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	2000	<50	410	<50	<50	<50	<50	<50	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<60	99	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	580	<60	<60	<60	<60	<60	<60
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<200	200	<200	<200	<200	<200	<200	<200	<200	1800	<200	450	<200	<200	<200	<200	<200	<200	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	830.000	<100	100.000	<100	<100	<100	<100	<100	<100
Sum C10-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE226554	<100	270	<100	<100	<100	<100	<100	<100	<100	<100	2300	<100	1100	<100	<100	<100	<100	<100	<100

- Notes:
- 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 relate only to the samples tested.
 - This report was issued on 16/12/2021.



RESULTS OF LEACHATE ANALYSIS

2 samples supplied by Lismore City Council on 30/11/2021. Lab Job No. M4028.

Samples submitted by Eleisha Went. Your Job: Q21-205 PO 84469

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2
		LD	TWP
	Job No.	M4028/1	M4028/2
pH	APHA 4500-H ⁺ -B	7.74	7.38
Conductivity (EC) (dS/m)	APHA 2510-B	5.73	8.25
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	3,898	5,612
Bicarbonate (Alkalinity) (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	1,708	1,939
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	3,200	7,500
Total Phosphorus (mg/L P)	In house method W4	14.1	18.9
Total Nitrogen (mg/L N)	In house method W4	277	306
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.049	0.017
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	268	195
Sodium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	527	547
Potassium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	629	1,389
Calcium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	175	288
Magnesium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	114	184
Sodium Absorption Ratio (SAR)	** By calculation	7.6	6.2
Fluoride (mg/L)	** APHA 4500-F-D	1.2	1.1
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	70,000	2,600,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	1,097	2,063
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.024	0.045
Pesticide analysis screen ^{see notes}			
Dieldrin (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
Endrin (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
o,p'-DDD (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
p,p'-DDD (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
o,p'-DDT (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
p,p'-DDT (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
Methoxychlor (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.1	<0.1
Other Organochlorine (OC) Pesticides (µg/L or ppb)	Subcontracted: SGS report SE226555	<1.7	<1.7
Dichlorvos (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.5	<0.5
Dimethoate (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.5	<0.5
Diazinon (Dimpylate) (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.5	<0.5
Methidathion (µg/L or ppb)	Subcontracted: SGS report SE226555	<0.5	<0.5
Other Organophosphate (OP) Pesticides (µg/L or ppb)	Subcontracted: SGS report SE226555	<1	<1

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 relate only to the samples tested.
- This report was updated on 23/12/2021 and replaces the report issued on 20/12/2021. The DOC result for sample 2 was added.



RESULTS OF WATER ANALYSIS

6 samples supplied by Lismore City Council on 7/12/2021 . Lab Job No. M4190.
 Samples submitted by CS Compliance. Your Job: Q20/124 PO 77501 Surface Water.

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01 06/12/21	MCS02 06/12/21	MCS03 06/12/21	MCS04 06/12/21	MCS05 06/12/21
	Job No.	M4190/1	M4190/2	M4190/3	M4190/4	M4190/5
pH	APHA 4500-H ⁺ -B	6.78	6.84	6.94	6.94	6.94
Conductivity (EC) (dS/m)	APHA 2510-B	0.146	0.153	0.201	0.208	0.203
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	99	104	137	141	138
Temperature (-C)	Onsite	22	22	22	22	22
Redox Potential (mV)	Onsite	+206	+199	+199	+194	+206
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	12	14	21	27	39
Turbidity (ntu)	APHA 2130	24	28	28	32	39
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Onsite method preferable)	3.7	4.0	3.9	3.6	3.7
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	1.6	1.8	2.4	3.8	4.9
Total Phosphorus (mg/L P)	In house method W4	0.28	0.32	0.46	0.48	0.50
Total Nitrogen (mg/L N)	In house method W4	1.29	1.45	2.35	2.39	2.33
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	1.25	1.37	1.61	1.71	1.72
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.023	0.063	0.670	0.602	0.549
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.020	0.106	0.342	0.347	0.290
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	2,080	2,160	2,200	2,280	3,900
Dissolved Organic Carbon (mg/L C)	**inhouse	17.3	16.2	14.2	15.9	18.0
BTEX						
Benzene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<0.5	<0.5	<0.5	<0.5	<0.5
m+p-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<1	<1	<1	<1	<1
o-Xylene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene (µg/L or ppb)	Subcontracted: SGS report SE 226871	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
C6-C9 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<40	<40	<40	<40	<40
C10-C14 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<50	<50	<50	<50	<50
C15-C28 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<100	<100	<100	200	<100
C29-C36 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<50	<50	<50	230	<50
C10-C16 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<60	<60	<60	<60	<60
C10-C16 less Naphthalene Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<60	<60	<60	<60	<60
C16-C34 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<200	<200	<200	360	<200
C34-C40 Fraction (µg/L or ppb)	Subcontracted: SGS report SE 226871	<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 <2pH;
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).
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