

## RESULTS OF WATER ANALYSIS

5 samples supplied by Gilbert and Sutherland Pty Ltd on 29/03/2021. Lab Job No. K5169.

Samples submitted by Sarah McGhee. Your Job: 12067

5/232 Robina Town Centre Drive ROBINA QLD 4226

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		LFPB1	LFPB2	LFPB3	LFPB4	LFPB5
	Job No.	K5169/1	K5169/2	K5169/3	K5169/4	K5169/5
pH	APHA 4500-H <sup>+</sup> -B	7.65	7.10	7.14	7.09	7.02
Conductivity (EC) (dS/m)	APHA 2510-B	1.132	2.127	2.061	3.362	2.158
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	770	1,446	1,401	2,286	1,467
Total Dissolved Solids (mg/L)	** APHA 2540C - Evaporation of filtrate	732	1,697	1,208	2,181	1,405
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	157	390	133	198	4
Bicarbonate (Alkalinity) (mg/L CaCO <sub>3</sub> equivalent)	** Total Alkalinity - APHA 2320	505	454	686	797	649
Water Hardness (mg/L CaCO <sub>3</sub> equivalent)	** Using Ca and Mg calculation	164	884	760	1,041	838
Biochemical Oxygen Demand <sub>5</sub> (mg/L O <sub>2</sub> )	APHA 5210-B	2.4	2.8	0.8	1.9	1.5
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	<2	<2	<2	<2	<2
Total Phosphorus (mg/L P)	In house method W4	0.67	1.29	0.73	0.52	0.08
Phosphate (mg/L P)	APHA 4500 P-G	0.511	0.108	0.665	0.333	0.067
Total Nitrogen (mg/L N)	In house method W4	0.44	0.52	0.27	0.30	0.23
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO <sub>x</sub>	0.43	0.51	0.27	0.30	0.23
Nitrate (mg/L N)	APHA 4500 NO <sub>3</sub> -F	0.009	<0.005	<0.005	<0.005	<0.005
Nitrite (mg/L N)	APHA 4500 NO <sub>2</sub> -I	<0.005	0.005	<0.005	<0.005	<0.005
Ammonia (mg/L N)	APHA 4500 NH <sub>3</sub> -H	0.157	0.163	0.180	0.127	0.014
Sodium (mg/L)	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	231	129	190	374	175
Potassium (mg/L)	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	2.88	3.50	4.37	3.57	2.10
Calcium (mg/L)	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	21.4	168	130	157	170
Magnesium (mg/L)	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	26.8	113	106	157	100
Sodium Absorption Ratio (SAR)	** By calculation	7.9	1.9	3.0	5.0	2.6
Chloride (mg/L)	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	117	389	342	640	320
Sulfate (mg/L SO <sub>4</sub> <sup>2-</sup> )	APHA 3125 ICPMS <sup>note 1&amp;2</sup>	35	32	9	46	125
Chloride/Sulfate Ratio	** Calculation	3.3	12.0	38.5	14.0	2.6
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	<10	40	20	360	350
Silver (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.010	<0.010	<0.010	<0.010	<0.010
Aluminium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	1.70	2.28	0.382	1.01	0.043
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	0.004	<0.001	0.003	<0.001
Cadmium (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<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	0.002	<0.001	<0.001	<0.001
Copper (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.013	0.008	0.003	0.029	0.004
Iron (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	1.14	4.00	0.255	1.05	0.065
Manganese (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.032	1.56	0.244	0.470	1.39
Nickel (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.002	0.004	0.002	0.003	0.002
Lead (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.004	0.002	<0.001	0.009	<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
Zinc (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.060	0.066	0.018	0.074	0.025
Mercury (mg/L)	Total Available - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silver (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.010	<0.010	<0.010	<0.010	<0.010
Aluminium (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.020	0.006	0.009	0.009	0.012
Arsenic (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	0.002	<0.001
Cadmium (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001
Copper (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.002	<0.001	<0.001	0.001	0.002
Iron (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.083	0.038	0.018	0.016	0.007
Manganese (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.009	1.45	0.254	0.461	1.34
Nickel (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	0.003	0.002	0.002	0.002
Lead (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	0.020	0.032	0.013	0.040	0.025
Mercury (mg/L)	Dissolved - APHA 3125 ICPMS <sup>note 1&amp;2</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

### 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 relate only to the samples tested.
- This report was issued on 06/04/2021.

