

GBC Winstone (Higgins
Aggregates)
56 Ruahine Street
Paraparaumu 5032
Attention: Lawrence Snook

Analytical Report

Report Number: 18/31434

Issue: 1
05 July 2018

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
18/31434-01	Bore water		30/06/2018 10:37	30/06/2018 15:40	0
Notes: 72 Te Roto site bore- Otaki					
Test	Result	Units	Comments	Signatory	
0001 pH	6.4			Gordon McArthur KTP	
0052 Alkalinity - Total	19	g CaCO3/m ³		Gordon McArthur KTP	
0055 Conductivity at 25°C	9.7	mS/m		Gordon McArthur KTP	
0602 Chloride	9.28	g/m ³		Shanel Kumar KTP	
0605 Nitrate - Nitrogen	0.84	g/m ³		Shanel Kumar KTP	
1642 Total Hardness	23	g CaCO3/m ³		Shanel Kumar KTP	
1800 Aluminium - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP	
1810 Calcium - Dissolved	6.80	g/m ³		Shanel Kumar KTP	
1819 Iron - Dissolved	0.033	g/m ³		Shanel Kumar KTP	
1822 Magnesium - Dissolved	1.41	g/m ³		Shanel Kumar KTP	
1823 Manganese - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP	
5007 TPH C7 - C9	< 0.1	mg/L		Joanna Yang KTP	
5010 TPH C10 - C12	< 0.1	mg/L		Joanna Yang KTP	
5012 TPH C13 - C19	< 0.1	mg/L		Joanna Yang KTP	
5015 TPH C20 - C26	< 0.1	mg/L		Joanna Yang KTP	
5021 TPH C27 - C37	< 0.1	mg/L		Joanna Yang KTP	
5040 Maximum TPH Content	< 0.5	mg/L		Joanna Yang KTP	
M0408 Faecal Coliforms	< 1	cfu/100mL		Sunita Raju KTP	
M0409 E. coli	< 1	cfu/100mL		Sunita Raju KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
18/31434-02	Bore water		30/06/2018 11:00	30/06/2018 15:41	0
Notes: Winstones site bore - Otaki					
Test	Result	Units	Comments	Signatory	
0001 pH	6.4			Gordon McArthur KTP	
0052 Alkalinity - Total	19	g CaCO3/m ³		Gordon McArthur KTP	
0055 Conductivity at 25°C	9.8	mS/m		Gordon McArthur KTP	
0602 Chloride	9.35	g/m ³		Shanel Kumar KTP	
0605 Nitrate - Nitrogen	0.84	g/m ³		Shanel Kumar KTP	
1642 Total Hardness	25	g CaCO3/m ³		Shanel Kumar KTP	
1800 Aluminium - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP	
1810 Calcium - Dissolved	7.66	g/m ³		Shanel Kumar KTP	
1819 Iron - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP	
1822 Magnesium - Dissolved	1.48	g/m ³		Shanel Kumar KTP	
1823 Manganese - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP	
5007 TPH C7 - C9	< 0.1	mg/L		Joanna Yang KTP	
5010 TPH C10 - C12	< 0.1	mg/L		Joanna Yang KTP	
5012 TPH C13 - C19	< 0.1	mg/L		Joanna Yang KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
18/31434-02	Bore water		30/06/2018 11:00	30/06/2018 15:41	0
Notes: Winstones site bore - Otaki					
Test	Result	Units	Comments	Signatory	
5015	TPH C20 - C26	< 0.1	mg/L		Joanna Yang KTP
5021	TPH C27 - C37	< 0.1	mg/L		Joanna Yang KTP
5040	Maximum TPH Content	< 0.5	mg/L		Joanna Yang KTP
M0408	Faecal Coliforms	< 1	cfu/100mL		Sunita Raju KTP
M0409	E. coli	< 1	cfu/100mL		Sunita Raju KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
18/31434-03	Bore water		30/06/2018 11:18	30/06/2018 08:43	0
Notes: Winstones site Pond - Otaki					
Test	Result	Units	Comments	Signatory	
0001	pH	7.2			Gordon McArthur KTP
0052	Alkalinity - Total	14	g CaCO3/m ³		Gordon McArthur KTP
0055	Conductivity at 25°C	7.3	mS/m		Gordon McArthur KTP
0602	Chloride	7.82	g/m ³		Shanel Kumar KTP
0605	Nitrate - Nitrogen	0.31	g/m ³		Shanel Kumar KTP
1642	Total Hardness	18	g CaCO3/m ³		Shanel Kumar KTP
1800	Aluminium - Dissolved	0.008	g/m ³		Shanel Kumar KTP
1810	Calcium - Dissolved	5.50	g/m ³		Shanel Kumar KTP
1819	Iron - Dissolved	0.006	g/m ³		Shanel Kumar KTP
1822	Magnesium - Dissolved	1.13	g/m ³		Shanel Kumar KTP
1823	Manganese - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
5007	TPH C7 - C9	< 0.1	mg/L		Joanna Yang KTP
5010	TPH C10 - C12	< 0.1	mg/L		Joanna Yang KTP
5012	TPH C13 - C19	< 0.1	mg/L		Joanna Yang KTP
5015	TPH C20 - C26	< 0.1	mg/L		Joanna Yang KTP
5021	TPH C27 - C37	< 0.1	mg/L		Joanna Yang KTP
5040	Maximum TPH Content	< 0.5	mg/L		Joanna Yang KTP
M0408	Faecal Coliforms	47	cfu/100mL	Above extreme maximum of 1	Maria Norris KTP
M0409	E. coli	47	cfu/100mL		Maria Norris KTP

Comments:

Sampled by ELS using approved containers and techniques.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA 22nd Edition Method 4500 H.	0.1
Alkalinity - Total	APHA 22nd Edition Method 2320 B	1 g CaCO3/m ³
Conductivity at 25°C	APHA 22nd Edition Method 2510 B.	0.1 mS/m
Chloride	Ion Chromatography following USEPA 300.0 (modified).	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following USEPA 300.0 (modified).	0.01 g/m ³
Total Hardness	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	1 g CaCO3/m ³
Aluminium - Dissolved	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	0.005 g/m ³
Calcium - Dissolved	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	0.01 g/m ³

Test	Methodology	Detection Limit
Manganese - Dissolved	ICP-OES following APHA 22nd Edition Method 3120 B (modified).	0.005 g/m ³
TPH C7 - C9	Total Petroleum Hydrocarbon performed by GC-FID.	0.1 mg/L
TPH C10 - C12	Total Petroleum Hydrocarbon performed by GC-FID	0.1 mg/L
TPH C13 - C19	Total Petroleum Hydrocarbon performed by GC-FID	0.1 mg/L
TPH C20 - C26	Total Petroleum Hydrocarbon performed by GC-FID	0.1 mg/L
TPH C27 - C37	Total Petroleum Hydrocarbon performed by GC-FID	0.1 mg/L
Maximum TPH Content	Total Petroleum Hydrocarbon performed by GC-FID.	0.5 mg/L
Faecal Coliforms	APHA 22nd Edition 9222 D:2012	1 cfu/100mL
E. coli	APHA 22nd Edition 9222G:2012	1 cfu/100mL

"<" means that no analyte was found in the sample at the level of detection shown. "Not Recovered" indicates that the compound was not successfully extracted from the matrix when it was added, at a known concentration, during the test. Detection limits are based on a clean matrix and may vary according to individual sample.

g/m³ is the equivalent to mg/L and ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

All test methods and confidence limits are available on request. This report must not be reproduced except in full, without the written consent of the laboratory.



Report Released By
Rob Deacon



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