

Winstone Aggregates
 541 Hebden Cres
 PO Box 31-447
 LOWER HUTT 5040
 Attention: Kristian Otto

Analytical Report

Report Number: 17/47265
 Issue: 1
 03 October 2017

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
17/47265-01	Miscellaneous Sample		25/09/2017 12:35	25/09/2017 15:00	14266272

Notes: Sample site: 72 Te Roto Rd

Test	Result	Units	Comments	Signatory
0001 pH	6.2			Gordon McArthur KTP
0052 Alkalinity - Total	25	g CaCO3/m ³		Gordon McArthur KTP
0055 Conductivity at 25°C	10.8	mS/m		Gordon McArthur KTP
0602 Chloride	9.14	g/m ³		Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.71	g/m ³		Shanel Kumar KTP
1642 Total Hardness	32	g CaCO3/m ³		Shanel Kumar KTP
1800 Aluminium - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
1810 Calcium - Dissolved	9.83	g/m ³		Shanel Kumar KTP
1819 Iron - Dissolved	0.029	g/m ³		Shanel Kumar KTP
1822 Magnesium - Dissolved	1.82	g/m ³		Shanel Kumar KTP
1823 Manganese - Dissolved	0.006	g/m ³		Shanel Kumar KTP
5007 TPH C7 - C9	< 0.1	mg/L		Alan Stanley KTP
5010 TPH C10 - C12	< 0.1	mg/L		Alan Stanley KTP
5012 TPH C13 - C19	< 0.1	mg/L		Alan Stanley KTP
5015 TPH C20 - C26	< 0.1	mg/L		Alan Stanley KTP
5021 TPH C27 - C37	< 0.1	mg/L		Alan Stanley KTP
5040 Maximum TPH Content	< 0.5	mg/L		Alan Stanley KTP
M0408 Faecal Coliforms	< 1	cfu/100mL		Maria Norris KTP
M0409 E. coli	< 1	cfu/100mL		Maria Norris KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
17/47265-02	Miscellaneous Sample		25/09/2017 12:10	25/09/2017 15:00	14266272

Notes: Sample site: Winstone Bore

Test	Result	Units	Comments	Signatory
0001 pH	6.3			Gordon McArthur KTP
0052 Alkalinity - Total	23	g CaCO3/m ³		Gordon McArthur KTP
0055 Conductivity at 25°C	10.0	mS/m		Gordon McArthur KTP
0602 Chloride	8.40	g/m ³		Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.62	g/m ³		Shanel Kumar KTP
1642 Total Hardness	30	g CaCO3/m ³		Shanel Kumar KTP
1800 Aluminium - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
1810 Calcium - Dissolved	9.15	g/m ³		Shanel Kumar KTP
1819 Iron - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
1822 Magnesium - Dissolved	1.64	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		Alan Stanley KTP
5010 TPH C10 - C12	< 0.1	mg/L		Alan Stanley KTP
5012 TPH C13 - C19	< 0.1	mg/L		Alan Stanley KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
17/47265-02	Miscellaneous Sample		25/09/2017 12:10	25/09/2017 15:00	14266272
Notes: Sample site: Winstone Bore					
Test	Result	Units	Comments	Signatory	
5015	TPH C20 - C26	< 0.1	mg/L		Alan Stanley KTP
5021	TPH C27 - C37	< 0.1	mg/L		Alan Stanley KTP
5040	Maximum TPH Content	< 0.5	mg/L		Alan Stanley KTP
M0408	Faecal Coliforms	< 1	cfu/100mL		Maria Norris KTP
M0409	E. coli	< 1	cfu/100mL		Maria Norris KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
17/47265-03	Miscellaneous Sample		25/09/2017 12:15	25/09/2017 15:00	14266272
Notes: Sample site: Open water pit					
Test	Result	Units	Comments	Signatory	
0001	pH	6.6			Gordon McArthur KTP
0052	Alkalinity - Total	15	g CaCO3/m ³		Gordon McArthur KTP
0055	Conductivity at 25°C	6.7	mS/m		Gordon McArthur KTP
0602	Chloride	6.62	g/m ³		Shanel Kumar KTP
0605	Nitrate - Nitrogen	0.14	g/m ³		Shanel Kumar KTP
1642	Total Hardness	19	g CaCO3/m ³		Shanel Kumar KTP
1800	Aluminium - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
1810	Calcium - Dissolved	5.72	g/m ³		Shanel Kumar KTP
1819	Iron - Dissolved	< 0.005	g/m ³		Shanel Kumar KTP
1822	Magnesium - Dissolved	1.04	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		Alan Stanley KTP
5010	TPH C10 - C12	< 0.1	mg/L		Alan Stanley KTP
5012	TPH C13 - C19	< 0.1	mg/L		Alan Stanley KTP
5015	TPH C20 - C26	< 0.1	mg/L		Alan Stanley KTP
5021	TPH C27 - C37	< 0.1	mg/L		Alan Stanley KTP
5040	Maximum TPH Content	< 0.5	mg/L		Alan Stanley KTP
M0408	Faecal Coliforms	8	cfu/100mL	Above extreme maximum of 1	Maria Norris KTP
M0409	E. coli	8	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. 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



This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not IANZ", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.