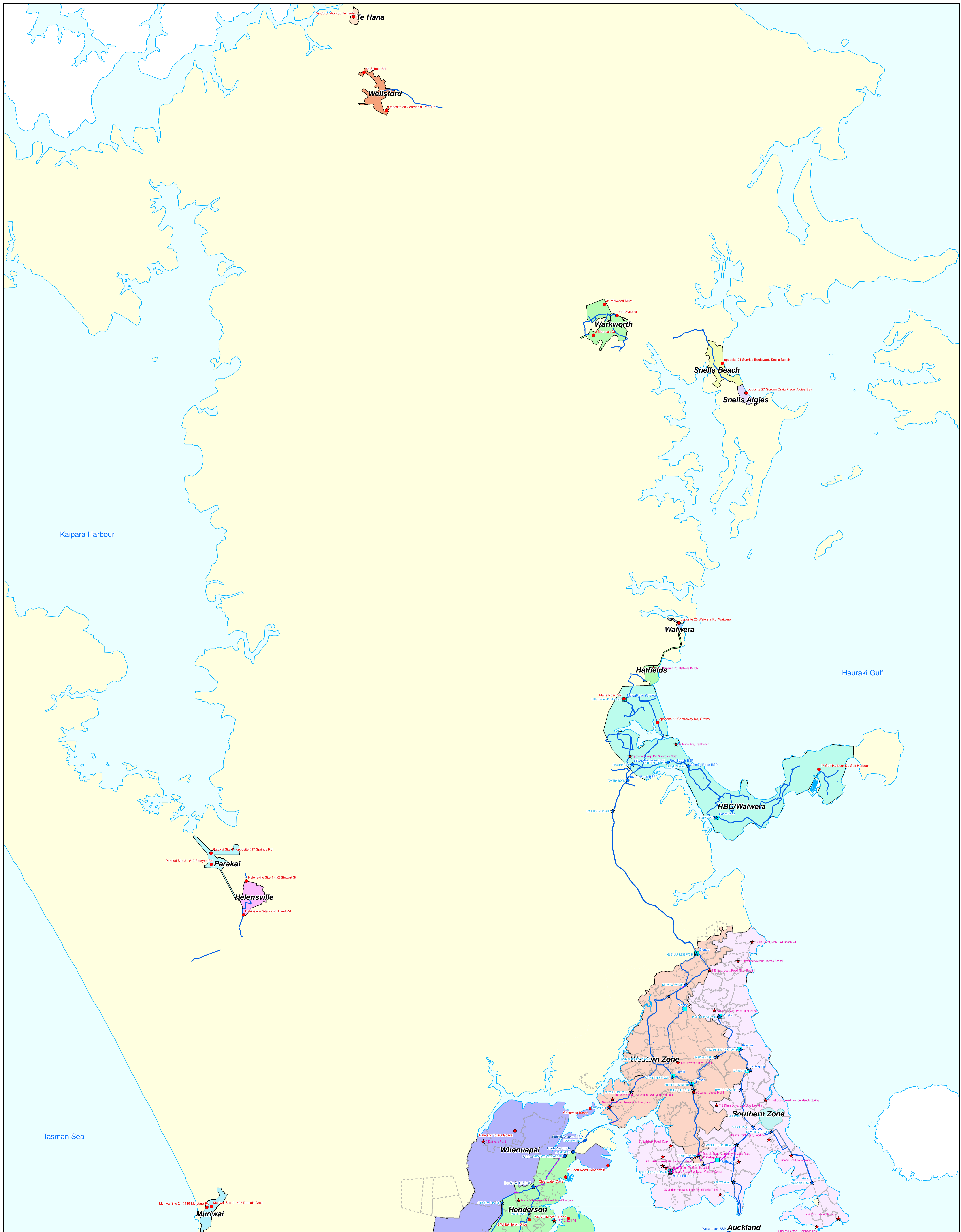


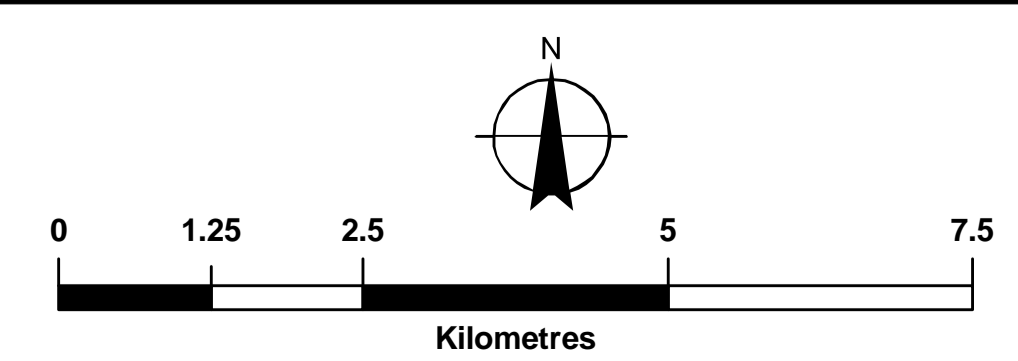
WATERCARE SERVICES LIMITED

Water Sample Points in North



Legend

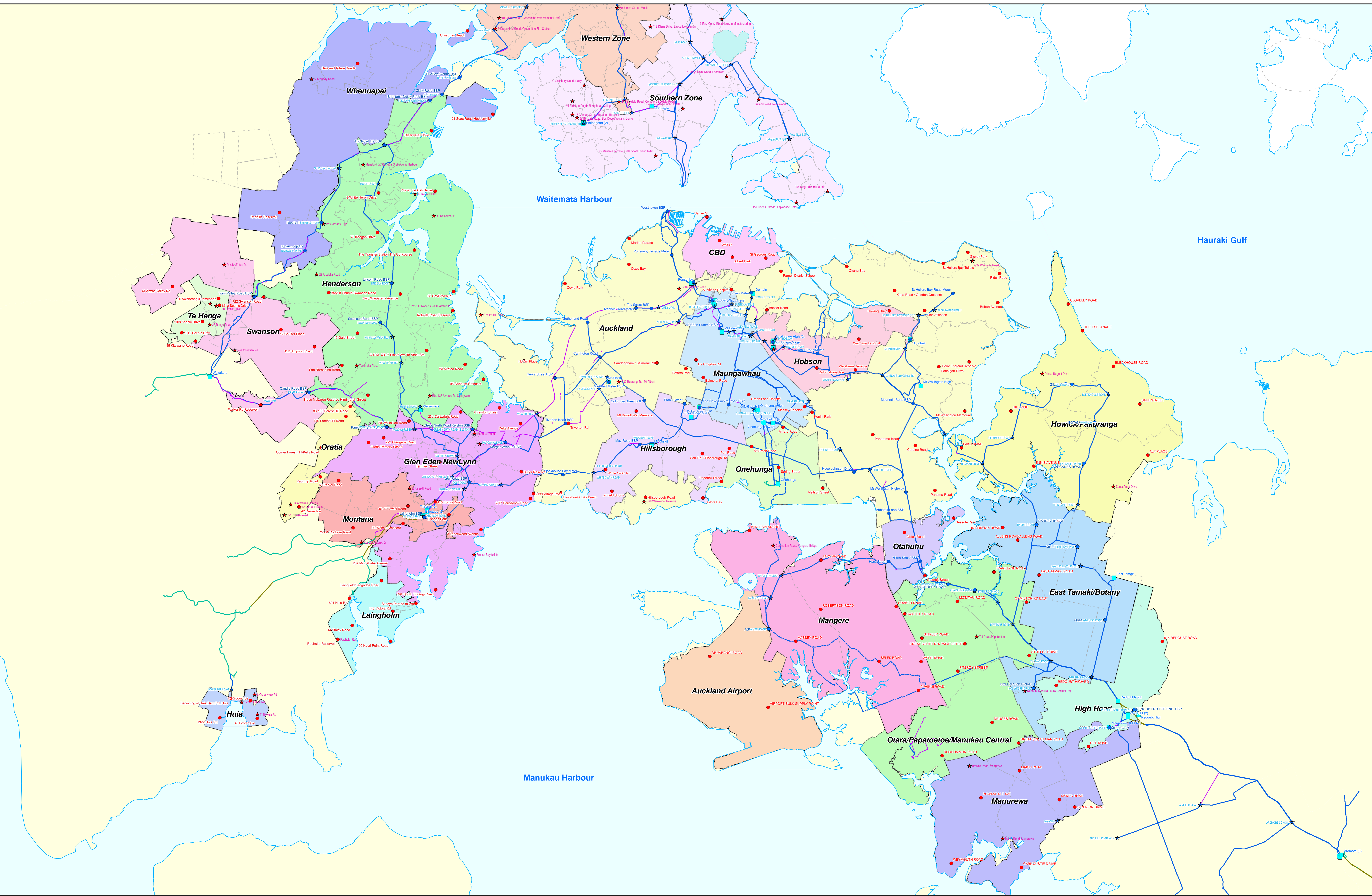
● Transmission BSP with Tap	★ Transmission BSP without Tap	— Treated Watermain	- - - Proposed Watermain
● Network Sample Tap	★ Network Sample Tap (Non-Routine)	— Raw Watermain	— OOS Watermain
■ Reservoir	 Pressure Zone	— Tunnelled Watermain	



Mapping
water Care
services limited

SCALE 1:82,000 @ A0
DATE 2 September 2011
GIS REF PR11101_TF
MAP NO PR11101_02

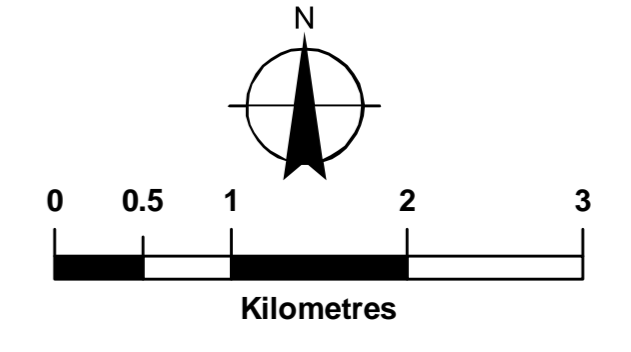
DISCLAIMER
This plan is illustrative only and all information should be independently verified on site before taking any action. Land Parcel Boundary Information from LINZ. Whilst due care has been taken, Watercare Services Limited gives no warranty as to the accuracy and completeness of any information on this plan and accepts no liability for any error, omission or use of the information.
Height datum: Auckland 1984.



Legend

● Transmission BSP with Tap	★ Transmission BSP without Tap	— Treated Watermain	- - - - - Proposed Watermain
● Network Sample Tap	★ Network Sample Tap (Non-Routine)	— Raw Watermain	— OOS Watermain
■ Reservoir	 Pressure Zone	— Tunnelled Watermain	

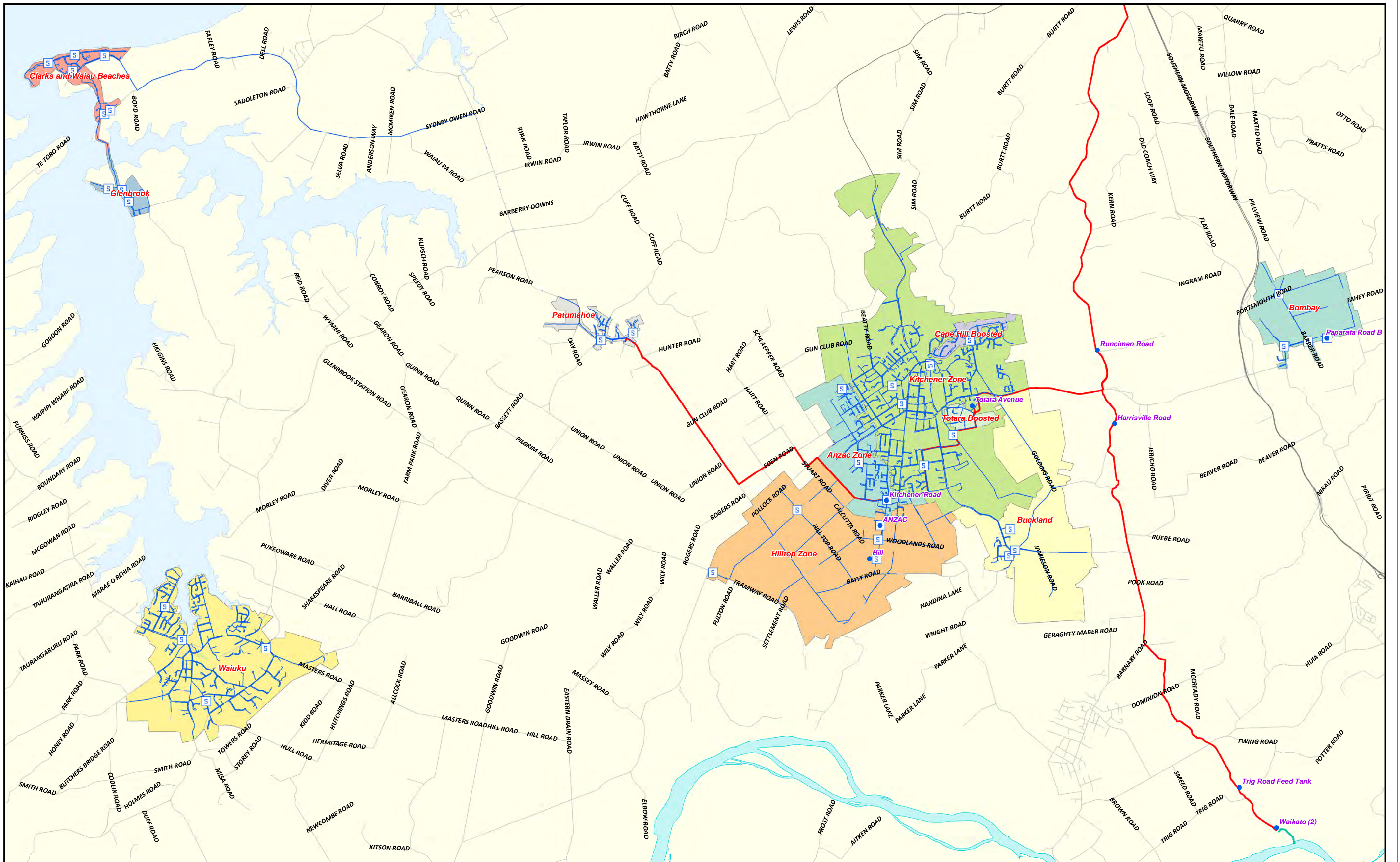
WATERCARE SERVICES LIMITED
Water Sample Points in Central



G Mapping
WaterCare
 Services Limited

SCALE 1:43,000 @ A0
 DATE 2 September 2011
 GIS REF PR11101_TF
 MAP NO PR11101_01

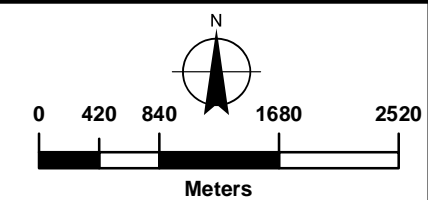
DISCLAIMER
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 Height datum: Auckland 1946.



LEGEND

● Reservoir	— Local Watermain	— Transmission Watermain
S Sampling Tap	— Main/Service	— Treated
	— Out of Service	— Raw

WATERCARE SERVICES LTD
Water Sample Points In South



Watercare
 An Auckland Council Organisation

DISCLAIMER
 Watercare accepts no responsibility for the accuracy of these service records. If requested by Watercare, the exact position of services must be verified by carrying out a site investigation prior to commencement of any works.

SCALE: 1:53,000 @A2
 DATE: 12 May 2015
 CREATED BY: ASAWANT
 MODIFIED BY: ASAWANT
 MAP NO: PR11101_03A

Summary by Grading Zone 1/07/2014 - 30/06/2015

Anzac Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.07	7.50
Median	0.30	0.00	0.45	8.00
Average	0.38	0.00	0.44	7.98
Maximum	1.80	0.00	1.23	8.30
Count of Results	109	109	109	109

Auckland Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.15	7.40
Median	0.20	0.00	0.76	8.00
Average	0.24	0.00	0.74	8.04
Maximum	3.40	0.00	1.07	9.00
Count of Results	692	692	692	692

Auckland Airport Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.38	7.80
Median	0.20	0.00	0.75	8.10
Average	0.23	0.00	0.76	8.08
Maximum	2.00	0.00	1.07	8.50
Count of Results	109	109	109	109

Bombay Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.40	7.10
Median	0.10	0.00	0.75	7.60
Average	0.10	0.00	0.74	7.61
Maximum	0.25	0.00	1.09	9.00
Count of Results	86	86	86	86

Buckland Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.12	7.60
Median	0.25	0.00	0.51	8.00
Average	0.36	0.00	0.49	7.97
Maximum	2.80	0.00	0.76	8.20

Count of Resu	86	86	86	86
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Central Business District Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.33	7.50
Median	0.20	0.00	0.63	8.00
Average	0.21	0.00	0.64	8.04
Maximum	0.55	0.00	0.96	8.70

Count of Resu	132	132	132	132
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Clarks/Waiiau Beach Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.20	0.00	0.22	7.60
Median	0.45	0.00	0.64	8.10
Average	0.58	0.00	0.71	8.17
Maximum	1.80	0.00	1.21	8.80

Count of Resu	86	86	86	86
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East Tamaki / Botany Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.32	7.70
Median	0.15	0.00	0.86	8.00
Average	0.21	0.00	0.84	8.00
Maximum	2.90	0.00	1.19	8.50

Count of Resu	172	172	172	172
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Glenbrook Beach Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.17	7.90
Median	0.25	0.00	0.63	8.10
Average	0.44	0.00	0.76	8.05
Maximum	7.00	0.00	1.58	8.30

Count of Resu	86	86	86	86
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The turbidity of 7 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of water in supply, and compliance with the Drinking Water Standards for New Zealand is maintained.

Glen Eden / New Lynn Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.33	7.10

Median	0.20	0.00	0.72	8.00
Average	0.31	0.00	0.72	7.98
Maximum	2.60	0.00	0.97	8.60

Count of Results	230	230	230	230
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HBC/Waiwera Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.20	8.10
Median	0.20	0.00	0.71	8.70
Average	0.21	0.00	0.67	8.65
Maximum	1.40	0.00	1.12	9.20

Count of Results	159	159	159	159
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Helensville Parakai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.09	7.40
Median	0.15	0.00	0.62	7.50
Average	0.31	0.00	0.61	7.56
Maximum	2.70	0.00	0.95	8.00

Count of Results	97	97	97	97
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Henderson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.29	7.70
Median	0.20	0.00	0.74	8.00
Average	0.33	0.00	0.72	8.06
Maximum	14.00	0.00	0.99	8.90

Count of Results	378	378	378	378
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The turbidity of 14 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of water in supply, and compliance with the Drinking Water Standards for New Zealand is maintained.

High Head Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.21	7.70
Median	0.20	0.00	0.65	8.00
Average	0.21	0.00	0.60	7.97
Maximum	0.60	0.00	1.04	8.60

Count of Results	109	109	109	109
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Hillsborough Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.23	7.70
Median	0.20	0.00	0.78	8.00
Average	0.22	0.00	0.75	8.07
Maximum	1.70	0.00	1.08	9.00
Count of Results	246	246	246	246

Hilltop Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.02	7.70
Median	0.25	0.00	0.15	8.00
Average	0.26	0.00	0.18	7.97
Maximum	0.60	0.00	0.67	8.20
Count of Results	98	98	98	98

Howick / Pakuranga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.22	7.70
Median	0.20	0.00	0.64	8.10
Average	0.19	0.00	0.63	8.10
Maximum	0.60	0.00	1.05	8.70
Count of Results	365	365	365	365

Huia Village Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.23	7.90
Median	0.10	0.00	0.69	8.20
Average	0.18	0.00	0.67	8.22
Maximum	1.20	0.00	1.25	8.70
Count of Results	97	97	97	97

Kitchener Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.00	7.10
Median	0.25	0.00	0.50	8.00
Average	0.28	0.00	0.47	7.95
Maximum	0.50	0.00	0.89	8.40
Count of Results	145	145	145	145

Laingholm Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.27	7.90
Median	0.20	0.00	0.65	8.30
Average	0.26	0.00	0.63	8.36
Maximum	1.70	0.00	0.91	9.00

Count of Results	112	112	112	112
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Mangere Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.03	7.70
Median	0.20	0.00	0.72	8.00
Average	0.25	0.00	0.70	8.03
Maximum	1.40	0.00	0.99	8.80

Count of Results	245	245	245	245
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Manurewa Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.34	7.70
Median	0.20	0.00	0.69	8.10
Average	0.24	0.00	0.70	8.13
Maximum	3.60	0.00	1.03	9.00

Count of Results	244	244	244	244
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Maungawhau Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.22	7.60
Median	0.20	0.00	0.66	8.00
Average	0.20	0.00	0.62	7.95
Maximum	0.60	0.00	0.96	9.10

Count of Results	195	195	195	195
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Montana Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.21	7.70
Median	0.20	0.00	0.64	8.10
Average	0.27	0.00	0.64	8.16
Maximum	0.90	0.00	0.97	8.70

Count of Results	97	97	97	97
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Mt Hobson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.24	7.70
Median	0.15	0.00	0.59	8.00
Average	0.21	0.00	0.58	8.03
Maximum	1.10	0.00	0.88	8.60
Count of Results	146	146	146	146

Muriwai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.54	7.40
Median	0.10	0.00	0.80	7.60
Average	0.12	0.00	0.80	7.63
Maximum	0.65	0.00	1.03	8.00
Count of Results	85	85	85	85

North Shore South Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.24	7.60
Median	0.20	0.00	0.64	8.00
Average	0.23	0.00	0.62	8.03
Maximum	2.70	0.00	0.96	8.50
Count of Results	411	411	411	411

North Shore West Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.29	7.80
Median	0.20	0.00	0.79	8.20
Average	0.20	0.00	0.78	8.17
Maximum	0.90	0.00	1.08	8.80
Count of Results	365	365	365	365

Onehunga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.33	7.70
Median	0.10	0.00	0.76	8.10
Average	0.10	0.00	0.76	8.07
Maximum	0.35	0.00	1.13	8.90
Count of Results	134	134	134	134

Oratia Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.23	7.90
Median	0.20	0.00	0.51	8.50
Average	0.31	0.00	0.51	8.54
Maximum	4.50	0.00	0.80	9.20
Count of Res	109	109	109	109

Otahuhu Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.48	7.70
Median	0.20	0.00	0.81	8.00
Average	0.25	0.00	0.81	8.03
Maximum	1.40	0.00	1.10	8.60
Count of Res	109	109	109	109

Otara / Papatoetoe / Manukau Central Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.30	7.60
Median	0.20	0.00	0.80	8.00
Average	0.22	0.00	0.77	8.01
Maximum	1.10	0.00	1.21	8.60
Count of Res	197	197	197	197

Otara/Papatoetoe/Manukau Central Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.37	7.60
Median	0.20	0.00	0.57	8.10
Average	0.19	0.00	0.60	8.13
Maximum	0.35	0.00	0.83	8.40
Count of Res	19	19	19	19

Patumahoe Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.47	7.80
Median	0.25	0.00	0.67	7.90
Average	0.30	0.00	0.69	7.94
Maximum	1.10	0.00	1.08	8.30
Count of Res	73	73	73	73

Snells/Algies Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.72	8.30
Median	0.10	0.00	0.96	8.50
Average	0.14	0.00	0.97	8.47
Maximum	0.80	0.00	1.34	8.60
Count of Results	97	97	97	97

Swanson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.05	7.10
Median	0.20	0.00	0.67	8.30
Average	0.41	0.00	0.66	8.23
Maximum	13.00	0.00	1.04	8.70
Count of Results	121	121	121	121

The turbidity of 13 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of water in supply, and compliance with the Drinking Water Standards for New Zealand is maintained.

Takanini Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.85	7.80
Median	0.15	0.00	1.06	8.00
Average	0.18	0.00	1.07	8.00
Maximum	0.85	0.00	1.28	8.30
Count of Results	100	100	100	100

Te Henga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.19	7.80
Median	0.20	0.00	0.46	8.40
Average	0.33	0.00	0.49	8.38
Maximum	3.00	0.00	0.85	8.80
Count of Results	110	110	110	110

Waiuku Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.03	7.70
Median	0.10	0.00	0.66	8.10
Average	0.12	0.00	0.63	8.10
Maximum	0.50	0.00	1.02	8.60

Count of Resu	109	109	109	109
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Warkworth Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.00	7.10
Median	0.25	0.00	0.54	7.40
Average	0.28	0.00	0.54	7.44
Maximum	2.60	0.00	1.34	7.80

Count of Resu	85	85	85	85
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Wellsford Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.15	7.20
Median	0.20	0.00	0.54	7.50
Average	0.21	0.00	0.56	7.46
Maximum	1.00	0.00	1.08	7.90

Count of Resu	109	109	109	109
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Whenuapai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.40	7.20
Median	0.20	0.00	0.71	8.00
Average	0.22	0.00	0.71	8.05
Maximum	0.85	0.00	1.01	8.50

Count of Resu	120	120	120	120
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