



**Watercare Network Grading Zones Water Quality Report**  
**July 2016 – June 2017**

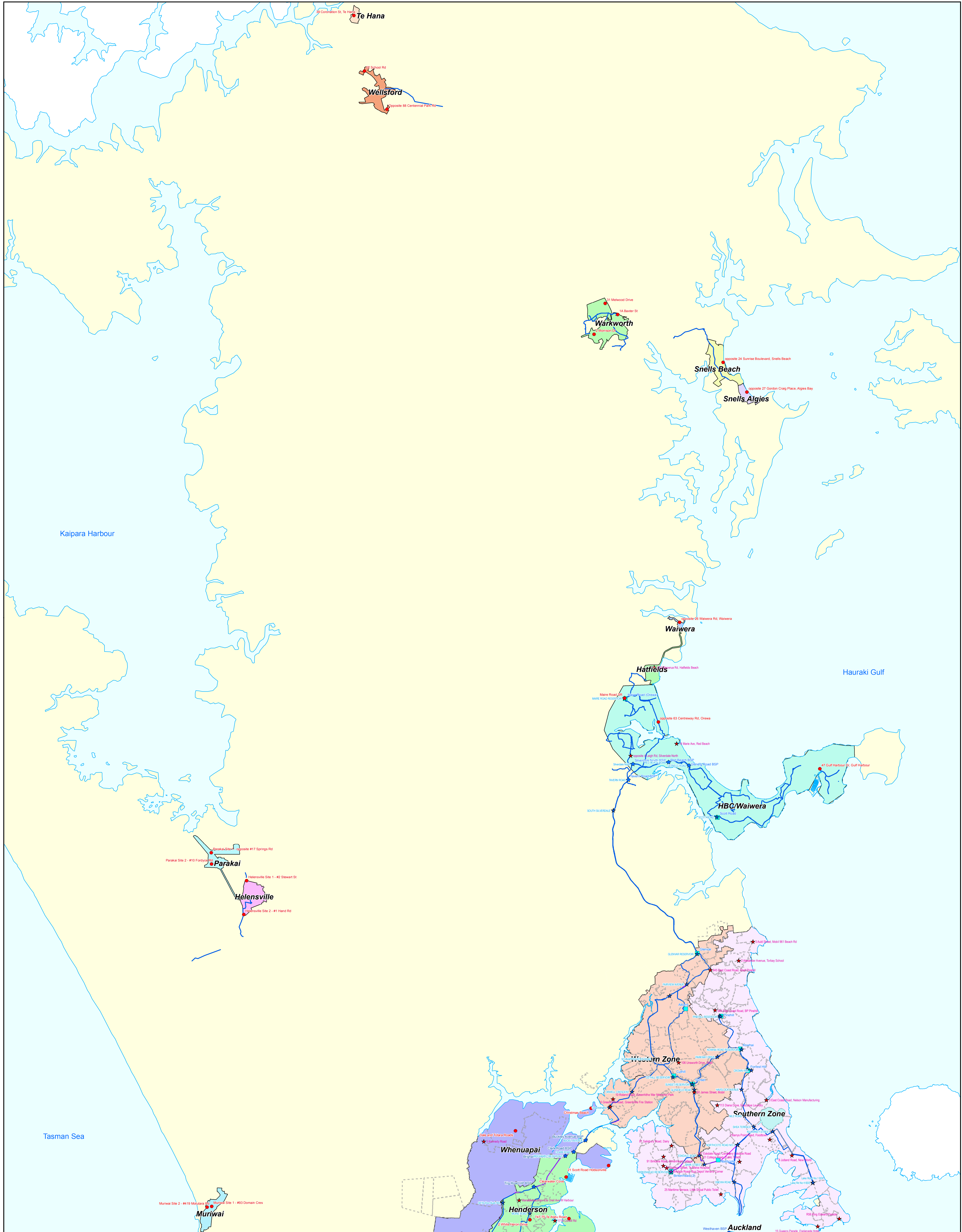
This report shows compliance with the Drinking Water Standards for New Zealand 2005 (Revised 2008) within the Watercare Network Grading Zones. The Guideline Values (GV) and Maximum Acceptable Values (MAVs) for the determinands are summarised below. The MAV is the concentration of a microbial or chemical constituent below which the presence of the determinand does not result in any significant risk to the health of the consumer over a lifetime consumption of that water. GVs are for parameters which have no effect on human health but can contribute to aesthetic complaints if they are exceeded.

Drinking Water Standards for New Zealand 2005 (Revised 2008) MAVs and GVs

<b>Determinand</b>	<b>GV</b>	<b>MAV</b>	<b>Unit</b>
Chlorine Residual	0.6 - 1	5	mg/L
pH	7 - 8.5		pH unit
Turbidity	2.5	5	NTU
<i>E. coli</i>		<1/100mL	MPN/100mL

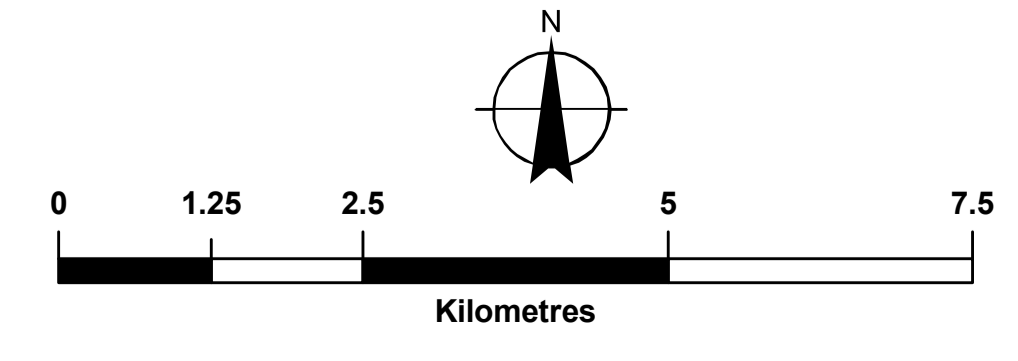
# WATERCARE SERVICES LIMITED

## Water Sample Points in North



**Legend**

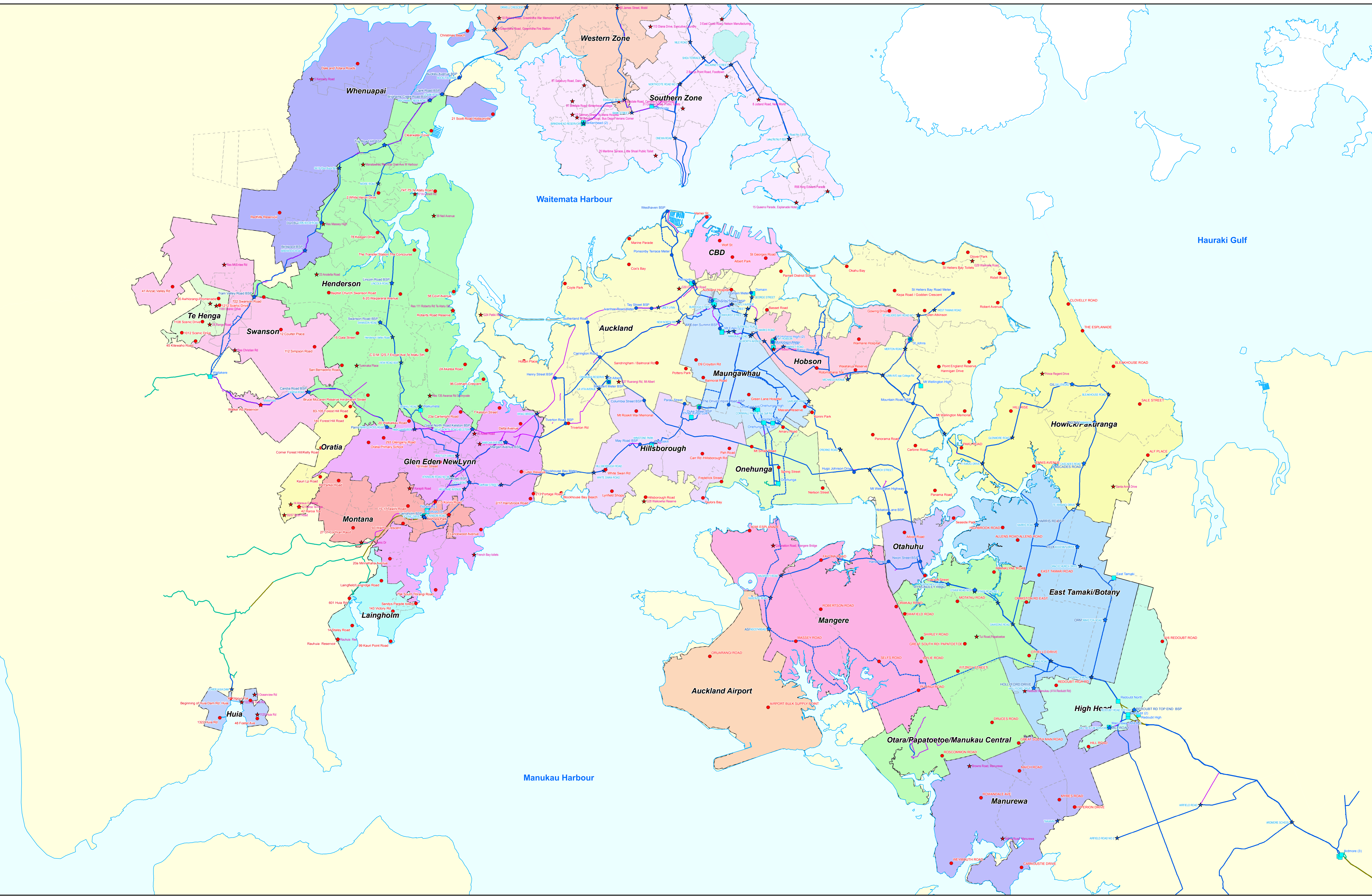
<span style="color: blue;">●</span> Transmission BSP with Tap	<span style="color: blue;">★</span> Transmission BSP without Tap	<span style="color: blue;">—</span> Treated Watermain	<span style="color: blue;">- - -</span> Proposed Watermain
<span style="color: red;">●</span> Network Sample Tap	<span style="color: red;">★</span> Network Sample Tap (Non-Routine)	<span style="color: green;">—</span> Raw Watermain	<span style="color: purple;">—</span> OOS Watermain
<span style="color: green;">■</span> Reservoir	<span style="border: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span> Pressure Zone	<span style="color: yellow;">—</span> Tunnelled Watermain	



**Mapping**  
**Water Care**  
 services limited

SCALE 1:62,000 @ A0  
 DATE 2 September 2011  
 GIS REF PR11101\_TF  
 MAP NO PR11101\_02

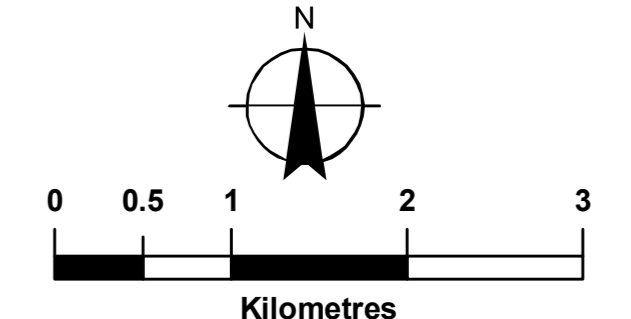
**DISCLAIMER**  
 This plan is illustrative only and all information should be independently verified on site before taking any action. Land Parcel Boundary Information from LINZ. Whilst due care has been taken, Watercare Services Limited gives no warranty as to the accuracy and completeness of any information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



**Legend**

<span style="color: blue;">●</span> Transmission BSP with Tap	<span style="color: blue;">★</span> Transmission BSP without Tap	<span style="color: blue;">—</span> Treated Watermain	<span style="color: blue;">- - - - -</span> Proposed Watermain
<span style="color: red;">●</span> Network Sample Tap	<span style="color: red;">★</span> Network Sample Tap (Non-Routine)	<span style="color: green;">—</span> Raw Watermain	<span style="color: purple;">—</span> OOS Watermain
<span style="color: green;">■</span> Reservoir	<span style="border: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span> Pressure Zone	<span style="color: brown;">—</span> Tunnelled Watermain	

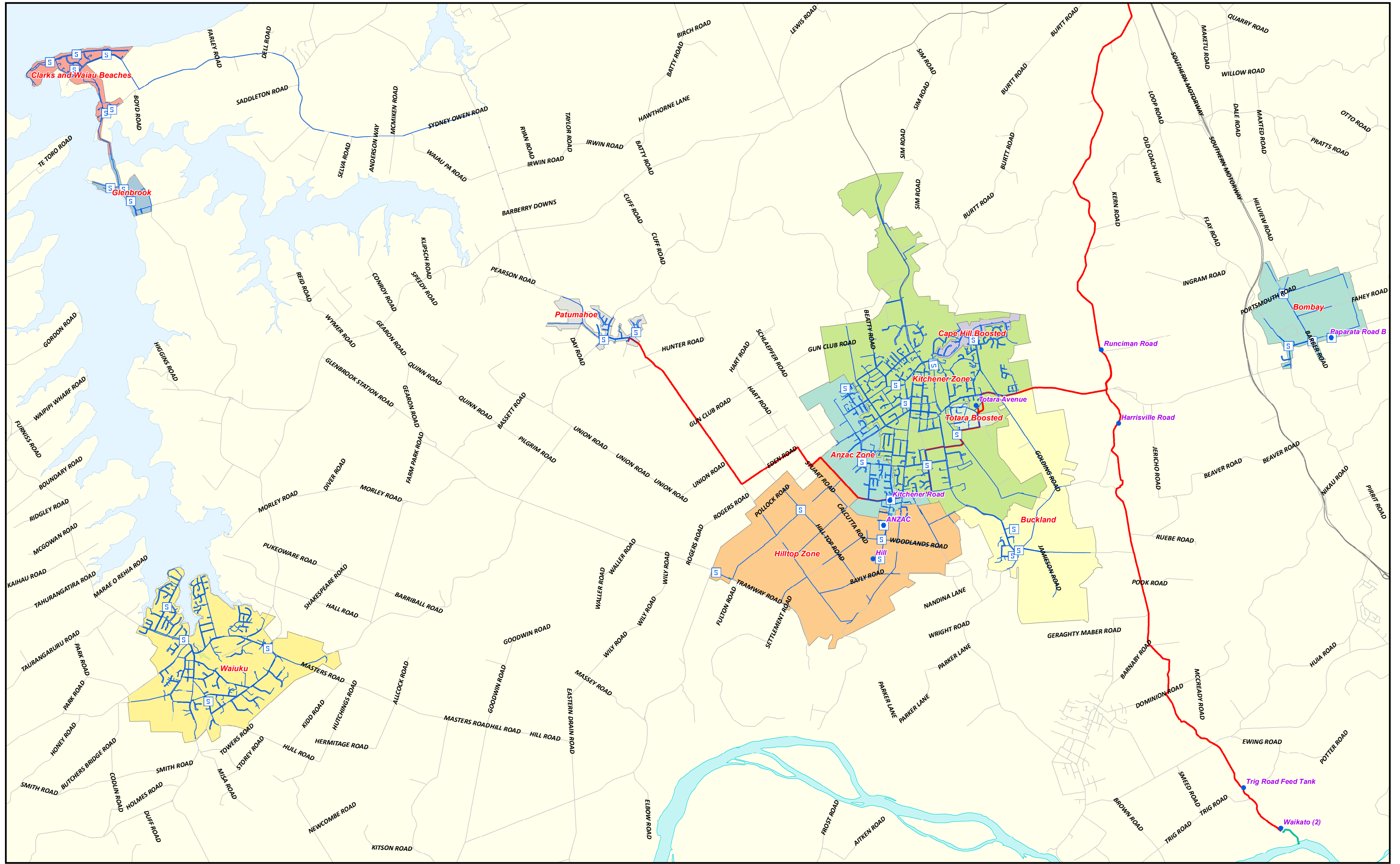
**WATERCARE SERVICES LIMITED**  
**Water Sample Points in Central**



**G Mapping**  
**WaterCare**  
 Services Limited

SCALE: 1:43,000 @ A0  
 DATE: 2 September 2011  
 GIS REF: PR11101\_TF  
 MAP NO: PR11101\_01

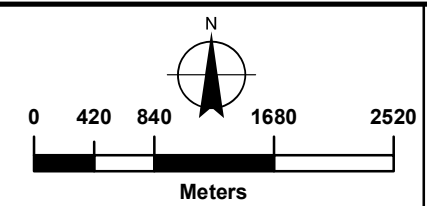
DISCLAIMER  
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 Height datum: Auckland 1946.



**LEGEND**

<span style="color: blue;">●</span> Reservoir	<span style="color: blue;">—</span> Local Watermain	<span style="color: red;">—</span> Transmission Watermain
<span style="border: 1px solid blue; padding: 2px;">S</span> Sampling Tap	<span style="color: blue;">—</span> Main/Service	<span style="color: red;">—</span> Treated
	<span style="color: blue;">—</span> Out of Service	<span style="color: green;">—</span> 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

## Network Grading Zones Water Quality: 1 July 2016 - 30 June 2017

### Anzac Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.20	7.60
Median	0.25	0.00	0.81	7.90
Average	0.27	0.00	0.78	7.88
Maximum	0.55	0.00	1.09	8.40
Count of Results	98	98	98	98

### Auckland Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.07	7.40
Median	0.15	0.00	0.83	8.00
Average	0.20	0.00	0.81	8.00
Maximum	2.90	0.00	1.56	9.30
Count of Results	713	713	713	713

### Auckland Airport Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.21	7.70
Median	0.15	0.00	0.84	8.10
Average	0.22	0.00	0.83	8.09
Maximum	3.80	0.00	1.23	8.60
Count of Results	111	111	111	111

### Bombay Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.59	7.00
Median	0.10	0.00	0.86	7.80
Average	0.13	0.00	0.86	7.74
Maximum	0.95	0.00	1.24	8.00
Count of Results	85	85	85	85

### Buckland Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.30	7.60
Median	0.25	0.00	0.81	7.90
Average	0.48	0.00	0.81	7.88
Maximum	19.00	0.00	1.08	8.20
Count of Results	85	85	85	85

The turbidity of 19.00 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of the water in supply, and compliance with the Drinking Water Standards for New Zealand was maintained.

### 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	0.34	7.70
Median	0.20	0.00	0.72	7.90
Average	0.22	0.00	0.71	8.06
Maximum	1.80	0.00	1.41	9.20
Count of Results	161	161	161	161

### Clarks/Waiiau Beach Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.19	7.70
Median	0.20	0.00	0.70	8.00
Average	0.25	0.00	0.67	7.97
Maximum	1.00	0.00	1.02	8.40
Count of Results	87	87	87	87

### East Tamaki / Botany Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.39	7.60
Median	0.15	0.00	0.96	7.90
Average	0.17	0.00	0.95	7.89
Maximum	0.80	0.00	1.42	8.40
Count of Results	171	171	171	171

### Glenbrook Beach Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.06	7.70
Median	0.25	0.00	0.66	7.90
Average	0.24	0.00	0.61	7.94
Maximum	0.55	0.00	0.99	8.40
Count of Results	85	85	85	85

### 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	0.05	7.00
Median	0.20	0.00	0.76	7.80
Average	0.24	0.00	0.76	7.84
Maximum	1.90	0.00	1.24	8.40
Count of Results	235	235	235	235

### HBC/Waiwera Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.05	7.90
Median	0.15	0.00	0.72	8.50
Average	0.21	0.00	0.68	8.58
Maximum	2.70	0.00	1.50	9.10
Count of Results	157	157	157	157

### Helensville Parakai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.20	7.20
Median	0.10	0.00	0.68	7.50
Average	0.19	0.00	0.68	7.47
Maximum	1.90	0.00	1.01	7.70
Count of Results	99	99	99	99

### Henderson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.24	7.40
Median	0.15	0.00	0.79	7.90
Average	0.21	0.00	0.79	7.93
Maximum	2.60	0.00	1.89	8.80
Count of Results	378	378	378	378

### High Head Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.16	7.70
Median	0.15	0.00	0.75	7.90
Average	0.18	0.00	0.75	7.92
Maximum	0.40	0.00	1.10	8.50
Count of Results	110	110	110	110

### Hillsborough Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.28	7.40
Median	0.15	0.00	0.79	7.80
Average	0.19	0.00	0.78	7.87
Maximum	0.70	0.00	1.22	8.60
Count of Results	245	245	245	245



### 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	0.49	7.90
Average	0.24	0.00	0.50	7.89
Maximum	0.80	0.00	1.04	8.30
Count of Results	99	99	99	99

### Howick / Pakuranga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.30	7.70
Median	0.15	0.00	0.74	8.00
Average	0.17	0.00	0.75	8.04
Maximum	0.85	0.00	1.22	8.80
Count of Results	372	372	372	372

### Huia Village Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.23	7.80
Median	0.10	0.00	0.68	8.00
Average	0.16	0.00	0.66	8.08
Maximum	0.75	0.00	1.10	8.90
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	0.23	7.50
Median	0.25	0.00	0.83	7.90
Average	0.26	0.00	0.82	7.88
Maximum	0.60	0.00	1.36	8.50
Count of Results	146	146	146	146

### Laingholm Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.25	7.70
Median	0.20	0.00	0.58	8.20
Average	0.41	0.00	0.60	8.21
Maximum	14.00	0.00	1.08	8.90
Count of Results	115	115	115	115

The turbidity of 14.00 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of the water in supply, and compliance with the Drinking Water Standards for New Zealand was maintained.

### Mangere Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.26	7.60
Median	0.15	0.00	0.88	7.90
Average	0.20	0.00	0.88	7.92
Maximum	1.40	0.00	1.72	8.40
Count of Results	243	243	243	243

### Manurewa Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.30	7.60
Median	0.15	0.00	0.87	8.00
Average	0.20	0.00	0.86	8.05
Maximum	3.30	0.00	1.17	8.60
Count of Results	246	246	246	246

### Maungawhau Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.19	7.60
Median	0.15	0.00	0.70	8.05
Average	0.21	0.00	0.68	8.02
Maximum	1.50	0.00	1.31	8.70
Count of Results	206	206	206	206

### Montana Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.17	7.50
Median	0.20	0.00	0.66	7.90
Average	0.25	0.00	0.65	7.90
Maximum	1.20	0.00	1.14	8.50
Count of Results	98	98	98	98

### Mt Hobson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.03	7.50
Median	0.20	0.00	0.64	8.00
Average	0.42	0.00	0.61	8.06
Maximum	15.00	0.00	1.02	9.20
Count of Results	147	147	147	147

The turbidity of 15.00 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of the water in supply, and compliance with the Drinking Water Standards for New Zealand was maintained.

### Muriwai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.12	7.20
Median	0.10	0.00	0.80	7.50
Average	0.16	0.00	0.79	7.49
Maximum	1.40	0.00	1.11	8.40
Count of Results	86	86	86	86

### North Shore South Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.16	7.70
Median	0.15	0.00	0.69	8.10
Average	0.21	0.00	0.67	8.06
Maximum	3.50	0.00	1.25	8.50
Count of Results	422	422	422	422

### North Shore West Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.31	7.60
Median	0.15	0.00	0.86	8.00
Average	0.24	0.00	0.85	8.04
Maximum	14.00	0.00	1.54	8.60
Count of Results	392	392	392	392

The turbidity of 14.00 NTU was reported to the Auckland Regional Public Health Service. Investigations confirmed this was not representative of the water in supply, and compliance with the Drinking Water Standards for New Zealand was maintained.

### Onehunga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.46	7.60
Median	0.10	0.00	0.84	8.00
Average	0.10	0.00	0.84	7.96
Maximum	0.75	0.00	1.12	8.60
Count of Results	133	133	133	133

### Oratia Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.15	7.70
Median	0.20	0.00	0.57	8.40
Average	0.22	0.00	0.60	8.44
Maximum	1.60	0.00	1.27	9.20
Count of Results	110	110	110	110

### Otahuhu Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.32	7.60
Median	0.15	0.00	0.91	7.90
Average	0.21	0.00	0.88	7.96
Maximum	1.10	0.00	1.31	8.70
Count of Results	110	110	110	110

### 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	0.34	7.70
Median	0.15	0.00	0.92	7.90
Average	0.21	0.00	0.89	7.92
Maximum	2.60	0.00	1.26	9.00
Count of Results	222	222	222	222

### Patumahoe Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.02	7.50
Median	0.20	0.00	0.75	7.90
Average	0.25	0.00	0.72	7.88
Maximum	1.50	0.00	1.00	8.50
Count of Results	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	1.00	8.50
Average	0.10	0.00	0.99	8.46
Maximum	0.60	0.00	1.31	8.60
Count of Results	98	98	98	98

### Swanson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.14	7.50
Median	0.20	0.00	0.69	8.10
Average	0.24	0.00	0.65	8.10
Maximum	0.80	0.00	1.37	8.80
Count of Results	122	122	122	122

### Te Henga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.11	7.70
Median	0.20	0.00	0.60	8.20
Average	0.25	0.00	0.60	8.17
Maximum	0.95	0.00	1.18	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	0.44	7.80
Median	0.10	0.00	0.74	8.00
Average	0.12	0.00	0.75	8.01
Maximum	0.95	0.00	1.12	8.20
Count of Results	110	110	110	110

### Warkworth Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.10	7.20
Median	0.15	0.00	0.72	7.40
Average	0.18	0.00	0.71	7.42
Maximum	1.50	0.00	1.27	8.40
Count of Results	86	86	86	86

### Wellsford Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.04	7.20
Median	0.15	0.00	0.67	7.50
Average	0.25	0.00	0.64	7.47
Maximum	2.10	0.00	1.32	8.00
Count of Results	110	110	110	110

### Whenuapai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.04	7.40
Median	0.20	0.00	0.72	8.00
Average	0.22	0.00	0.70	8.06
Maximum	1.20	0.00	1.11	8.80
Count of Results	146	146	146	146