



**Watercare Network Grading Zones Water Quality Report**  
**July 2015 – June 2016**

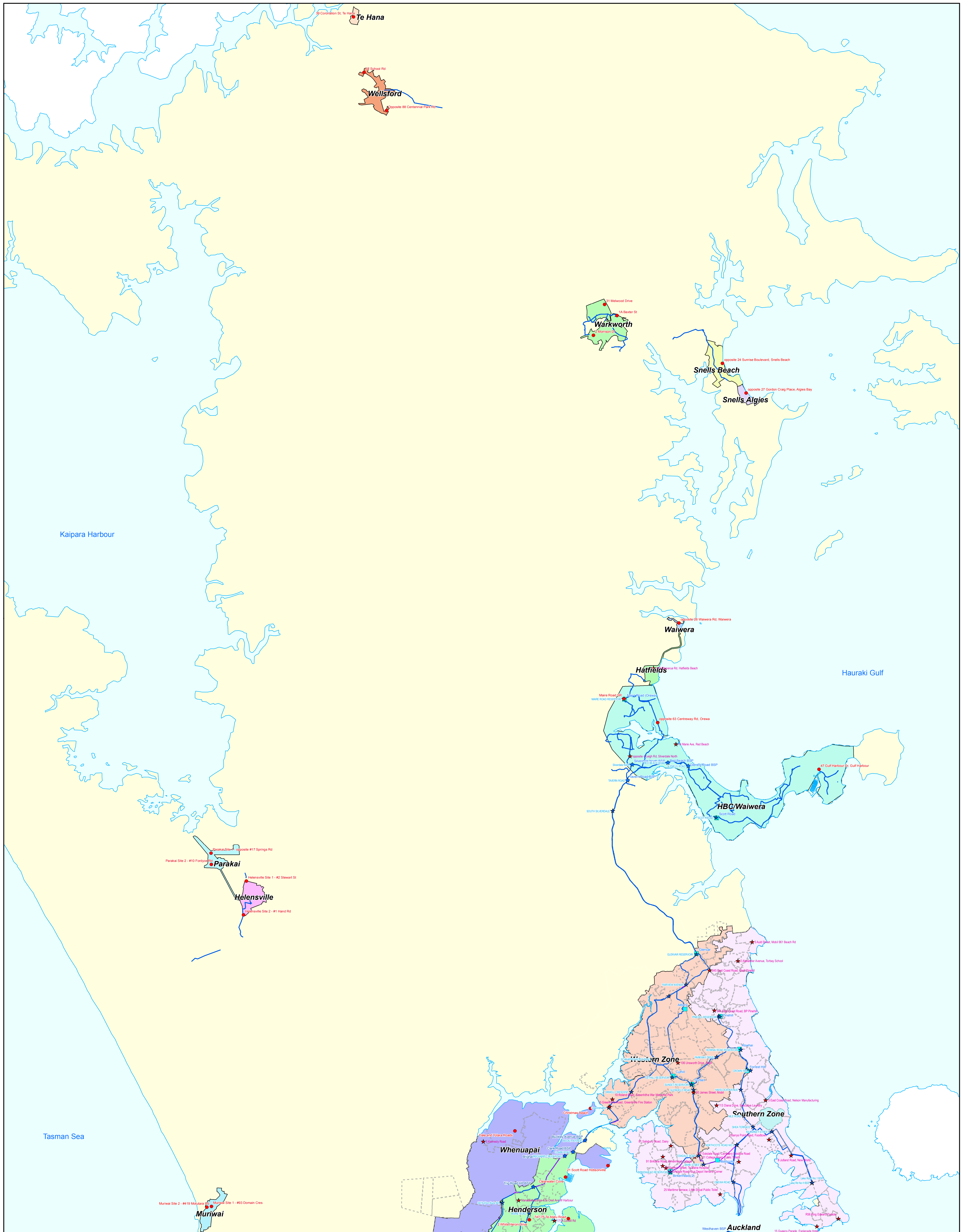
This report shows compliance with the Drinking Water Standards for New Zealand 2005 (revised 2008) within the Watercare network grading zones. The Guideline Values (GV) and Maximum Acceptable Values (MAVs) for the determinands are also summarised below. The MAV is the concentration of a microbial or 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
E.coli		<1/100mL	MPN/100mL

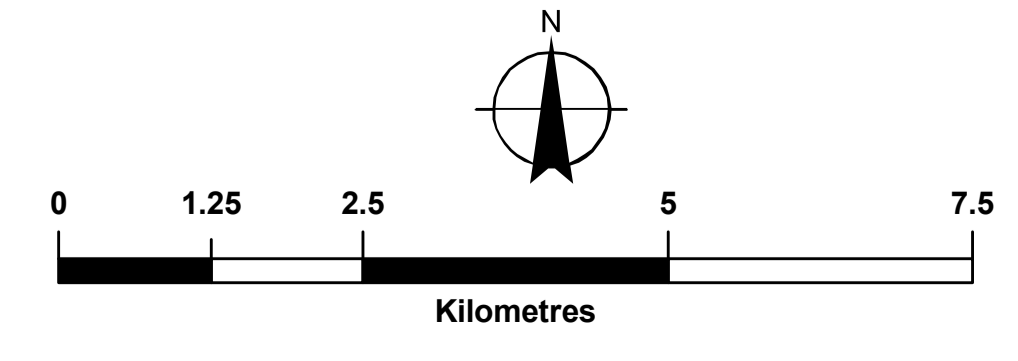
# WATERCARE SERVICES LIMITED

## 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	

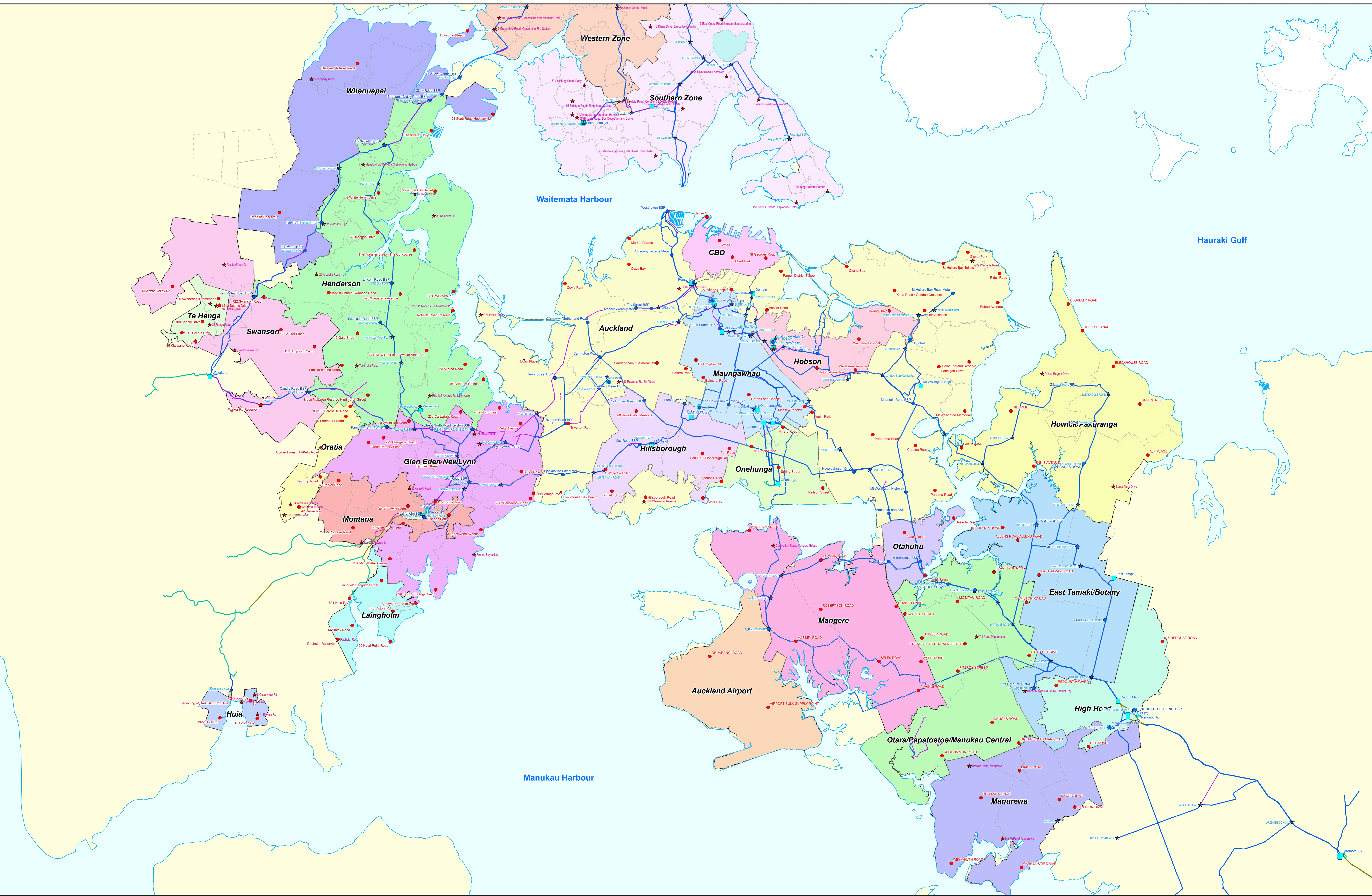


**Mapping**  
Water Care  
services limited

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.

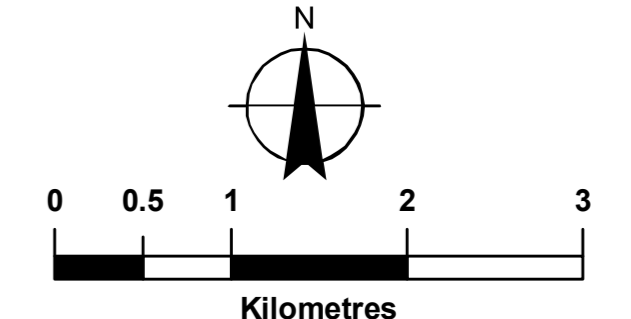




**Legend**

<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**

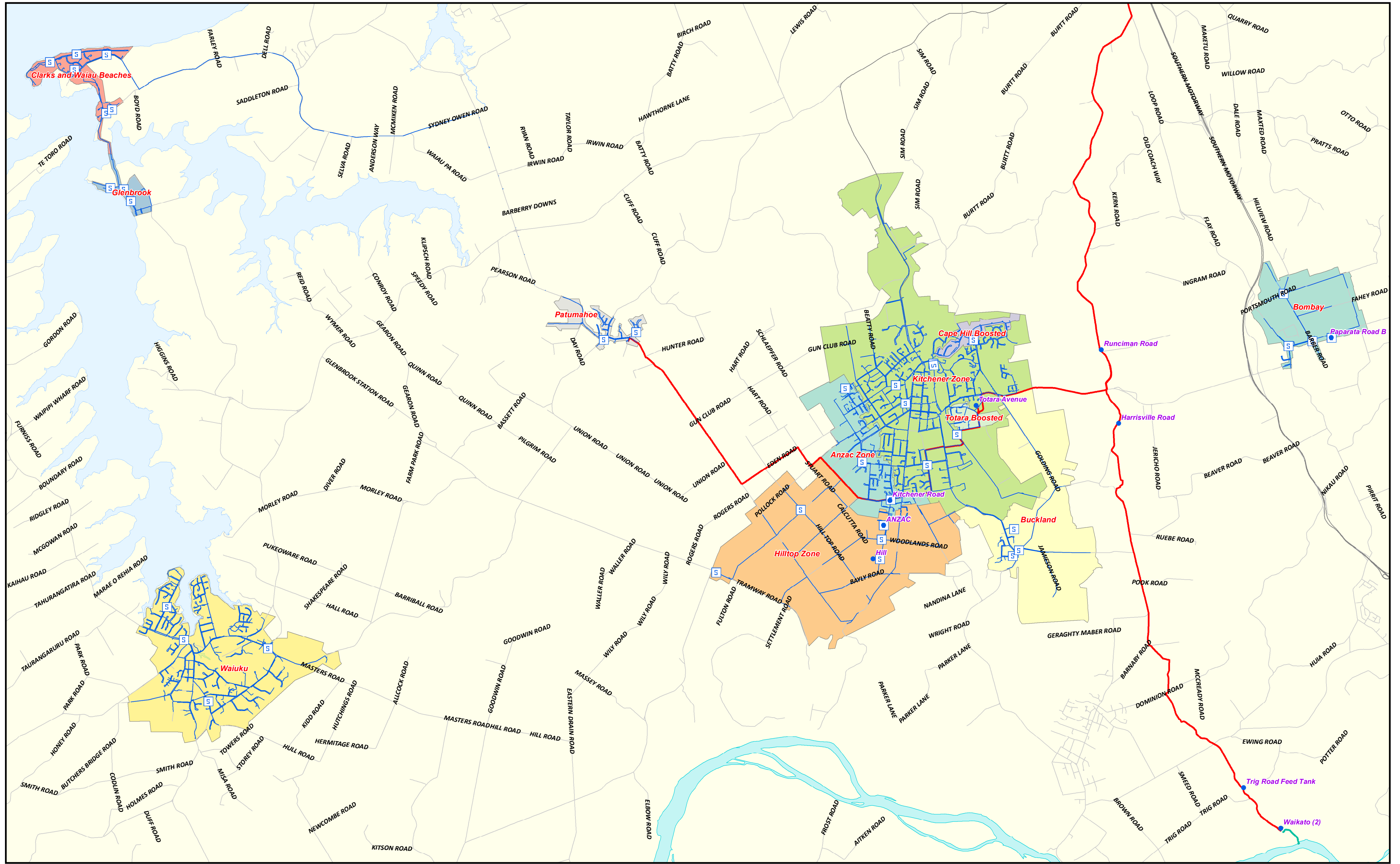


**G Mapping**  
**WaterCare**  
 Services Limited

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

DISCLAIMER  
 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 1946.

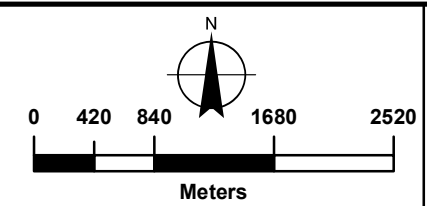




**LEGEND**

Reservoir	Local Watermain	Transmission Watermain
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

## Network Grading Zones Water Quality: 1 July 2015 - 30 June 2016

### Anzac Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.33	7.60
Median	0.25	0.00	0.77	7.90
Average	0.31	0.00	0.76	7.91
Maximum	2.60	0.00	1.33	8.20
Count of Results	101	101	101	101

### Auckland Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.22	7.50
Median	0.20	0.00	0.82	7.90
Average	0.20	0.00	0.79	7.95
Maximum	2.20	0.00	1.37	8.90
Count of Results	697	697	697	697

### Auckland Airport 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	0.75	8.00
Average	0.20	0.00	0.68	8.07
Maximum	0.75	0.00	1.27	8.70
Count of Results	110	110	110	110

### Bombay Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.22	6.80
Median	0.10	0.00	0.91	7.80
Average	0.11	0.00	0.92	7.79
Maximum	0.50	0.00	1.32	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	0.10	0.00	0.29	7.70
Median	0.20	0.00	0.80	7.90
Average	0.25	0.00	0.84	7.93
Maximum	1.60	0.00	1.27	8.30
Count of Results	89	89	89	89

### 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	0.41	7.70
Median	0.20	0.00	0.69	7.90
Average	0.20	0.00	0.68	7.96
Maximum	0.45	0.00	1.21	8.80
Count of Results	160	160	160	160

### 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	0.37	7.80
Median	0.25	0.00	0.69	8.00
Average	0.27	0.00	0.73	8.02
Maximum	0.90	0.00	1.20	8.20
Count of Results	86	86	86	86

### 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	0.41	7.70
Median	0.20	0.00	0.91	7.90
Average	0.19	0.00	0.90	7.92
Maximum	0.50	0.00	1.39	8.30
Count of Results	172	172	172	172

### Glenbrook Beach Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.38	7.80
Median	0.25	0.00	0.73	8.00
Average	0.25	0.00	0.74	7.99
Maximum	0.50	0.00	1.20	8.20
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	0.21	7.20
Median	0.20	0.00	0.76	7.90
Average	0.25	0.00	0.74	7.84
Maximum	1.20	0.00	1.10	8.30
Count of Results	234	234	234	234

### HBC/Waiwera Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.25	7.90
Median	0.20	0.00	0.74	8.60
Average	0.19	0.00	0.71	8.57
Maximum	0.35	0.00	1.32	9.10
Count of Results	161	161	161	161

### Helensville Parakai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.05	7.20
Median	0.10	0.00	0.63	7.40
Average	0.21	0.00	0.63	7.40
Maximum	2.70	0.00	1.22	7.70
Count of Results	98	98	98	98



### Henderson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.30	7.50
Median	0.20	0.00	0.80	7.90
Average	0.20	0.00	0.79	7.91
Maximum	1.20	0.00	1.15	8.80
Count of Results	380	380	380	380

### High Head Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.29	7.70
Median	0.20	0.00	0.69	7.90
Average	0.22	0.00	0.72	7.90
Maximum	0.70	0.00	1.30	8.30
Count of Results	111	111	111	111

### Hillsborough Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.24	7.50
Median	0.20	0.00	0.78	7.90
Average	0.22	0.00	0.77	7.94
Maximum	1.20	0.00	1.12	8.50
Count of Results	244	244	244	244

### Hilltop Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.08	7.70
Median	0.25	0.00	0.45	7.90
Average	0.26	0.00	0.51	7.92
Maximum	1.70	0.00	1.28	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	0.05	0.00	0.30	7.80
Median	0.20	0.00	0.69	8.00
Average	0.22	0.00	0.71	8.03
Maximum	10.00	0.00	1.27	8.60
<b>Count of Results</b>	366	366	366	366

The turbidity of 10 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.

### Huia Village Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.31	7.70
Median	0.10	0.00	0.75	8.10
Average	0.14	0.00	0.74	8.15
Maximum	0.55	0.00	1.18	8.70
<b>Count of Results</b>	98	98	98	98

### Kitchener Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.47	7.60
Median	0.25	0.00	0.78	7.90
Average	0.29	0.00	0.80	7.92
Maximum	1.10	0.00	1.26	8.30
<b>Count of Results</b>	148	148	148	148

### Laingholm Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.25	7.70
Median	0.20	0.00	0.60	8.30
Average	0.25	0.00	0.59	8.29
Maximum	1.40	0.00	0.89	9.00
<b>Count of Results</b>	113	113	113	113



### Mangere Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.37	7.80
Median	0.20	0.00	0.81	8.00
Average	0.22	0.00	0.82	7.96
Maximum	0.85	0.00	1.20	8.40
Count of Results	250	250	250	250

### Manurewa Grading Zone Summary 1 July 2015 - 30 June 2016

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.41	7.70
Median	0.20	0.00	0.80	8.00
Average	0.22	0.00	0.81	8.03
Maximum	1.10	0.00	1.35	8.60
Count of Results	245	245	245	245

### Maungawhau Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.28	7.70
Median	0.20	0.00	0.67	7.90
Average	0.20	0.00	0.66	7.89
Maximum	0.40	0.00	1.18	8.20
Count of Results	196	196	196	196

### Montana 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	0.20	0.00	0.62	8.00
Average	0.29	0.00	0.60	8.06
Maximum	5.00	0.00	0.92	8.80
Count of Results	106	106	106	106

The turbidity of 5 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.

### Mt Hobson Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.21	7.70
Median	0.15	0.00	0.64	8.00
Average	0.20	0.00	0.60	7.97
Maximum	0.65	0.00	1.04	8.40
Count of Results	150	150	150	150

### Muriwai Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.52	7.20
Median	0.10	0.00	0.83	7.40
Average	0.13	0.00	0.84	7.46
Maximum	0.75	0.00	1.25	7.70
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	0.31	7.70
Median	0.20	0.00	0.70	7.90
Average	0.21	0.00	0.70	7.93
Maximum	3.70	0.00	1.16	8.30
Count of Results	416	416	416	416

### North Shore West Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.37	7.60
Median	0.20	0.00	0.85	8.00
Average	0.22	0.00	0.84	8.02
Maximum	3.00	0.00	2.10	8.80
Count of Results	383	383	383	383



### Onehunga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.00	0.00	0.39	7.70
Median	0.10	0.00	0.80	8.00
Average	0.10	0.00	0.81	7.96
Maximum	0.55	0.00	1.21	8.50
Count of Results	139	139	139	139

### Oratia Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.27	7.40
Median	0.20	0.00	0.62	8.30
Average	0.22	0.00	0.62	8.35
Maximum	0.95	0.00	0.97	9.00
Count of Results	113	113	113	113

### Otahuhu Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.51	7.60
Median	0.20	0.00	0.90	7.90
Average	0.36	0.00	0.89	7.92
Maximum	4.30	0.00	1.34	8.30
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	0.10	0.00	0.44	7.70
Median	0.20	0.00	0.84	7.90
Average	0.23	0.00	0.84	7.94
Maximum	0.85	0.00	1.36	8.30
Count of Results	219	219	219	219

### Patumahoe Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.15	0.00	0.33	7.50
Median	0.25	0.00	0.68	7.90
Average	0.26	0.00	0.71	7.94
Maximum	0.55	0.00	1.25	8.30
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	0.38	8.30
Median	0.10	0.00	0.88	8.50
Average	0.09	0.00	0.90	8.46
Maximum	0.20	0.00	1.44	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	0.18	7.10
Median	0.20	0.00	0.72	8.00
Average	0.29	0.00	0.71	8.01
Maximum	1.70	0.00	1.14	8.60
Count of Results	124	124	124	124

### Te Henga Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.10	0.00	0.23	7.20
Median	0.20	0.00	0.62	8.20
Average	0.25	0.00	0.58	8.10
Maximum	1.40	0.00	0.98	8.90
Count of Results	112	112	112	112



### Waiuku Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.59	7.80
Median	0.10	0.00	0.83	8.00
Average	0.10	0.00	0.85	8.01
Maximum	0.50	0.00	1.31	8.10
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	0.02	7.10
Median	0.15	0.00	0.66	7.50
Average	0.19	0.00	0.62	7.48
Maximum	2.10	0.00	1.31	8.00
Count of Results	88	88	88	88

### Wellsford Grading Zone Summary

	Turbidity	Escherichia coli	Chlorine Residual	pH
	NTU	MPN/100 mL	mg/L	pH unit
Minimum	0.05	0.00	0.02	7.20
Median	0.15	0.00	0.47	7.40
Average	0.18	0.00	0.48	7.39
Maximum	0.50	0.00	1.35	7.60
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	0.00	0.00	0.29	6.90
Median	0.15	0.00	0.76	7.90
Average	0.17	0.00	0.76	7.89
Maximum	0.60	0.00	1.16	8.50
Count of Results	127	127	127	127