

MEETING MINUTES

Te Akau South Water Supply	18 February 2022 9:30 – 10:30 am
-----------------------------------	--

Meeting called by	Horongarara Community Group (Te Akau South)/ Waikato District Council
Attendees	Te Akau South Community represented by: Anaru Wilson (Chairman for Horongarara Community Group) Simon Jordan (HCG Member), Owen Mooney (Engineer/HCG Member) WDC represented by: Keith Martin, Carole Nutt, Zinab Al-Khaleefa, Hermanus Kruger (Beca), Matt Telfer (Watercare)
Apologies	-
Location	MS Teams - Online

Summary of Meeting

Agenda Topic	Discussion
Last Meeting Review <i>(Keith Martin)</i>	<p>Reviewed last meeting where the Te Akau South Community group presented information in relation the water supply for the Te Akau South Scheme. The residents were concerned WDC had formed a consensus that the Te Akau water supply would be disestablished, and residents issued with water tanks for the purposes of collecting rainwater. The HCG presented a PowerPoint highlighting an WTP upgrade option to reach compliance based on assumed suitable source water. Also a PowerPoint illustrating that providing water tanks to residents for rainwater collection was problematic given site access, SNA, Coastal Hazard & Extreme Fire Risk designations. Geotechnical engineering would also be extensive given the terrain & difficulty of retrofitting established properties with the tank(s) required. The HCG highlighted they felt this was a downgrade in the supply.</p> <p>Currently Council is tankering water to the community while issues encountered with the bore are investigated due to unexplained chlorate and bromate exceedances.</p> <p>Council raised the prospect of piping water across the harbour from Raglan as an option to explore.</p>

	<p>From Waters Reform perspective, we have to determine what is happening from this point on, discuss with the community what the options are and how we go forward.</p>
<p>Waters Governance Board Report <i>(Keith Martin)</i></p>	<p>It is planned to deliver the business case to the WGB on 15 March. The BC is to include an option to continue with a bore as the raw water source and upgrade of the WTP to meet the new drinking water rules. The Te Akau South Community Board desire is to continue with a bore supply</p> <p>The aim of the business case is to seek recommendation that we can engage with the community on the options (continue with tankered supply, New bore and WTP, disestablish and provide rain water storage tanks to each connected supply or supply via a pipe laid across the harbour) and seek the communities views on the favored option, recommend that we commit to technical design and recommend that we seek sources of funding and that we understand that CAPEX and OPEX costs</p>
<p>LGIOMA <i>(Keith Martin)</i></p>	<p>Discussed current LGIOMA request and sought the Te Akau South Community group rationale. HCG are seeking information relating to the results and procedures followed in the WSL bore investigations. They had been told at a community meeting 31 May 2021 that WDC/WSL would make this information freely available.</p> <p>Simon Jordan shared that for future health and safety it was important to identify the root cause of the issues encountered. The HCG's own investigations indicate the Chlorate & Bromate exceedances were caused by issues with water flow rate resulting in dosing anomalies. Mathew Telfar responded that WSL had also come to the same conclusion after initially suspecting raw material quality as a possible cause.</p> <p>HCGC to will consider with an abbreviated request taking into consideration the time constraint concerns of WDC. WDC will continue to process request unless we receive a request to stop from solicitor. WDC currently preparing time and cost estimate</p>
<p>Current state of play. <i>(Keith Martin and Anaru Wilson)</i></p>	<p>If bore water is continued as raw water source, the bore water will be retested, and new samples taken. Previous sampling will not make up the analysis as it was taken from an operational perspective rather than that of WTP design.</p> <p>Current costings and estimates based on as if new for the purposes of desk top costing. A more detailed costing will include any existing plant in the future should that plant be acceptable to reuse. Anaru Wilson provided a power point of potential new bore location and stock take of existing plant componentry including reference to age & photos of existing equipment. Future design may or may not incorporate existing plant. Some plant may be suitable for reuse, other pieces of plant whilst functional may not be acceptable from a holistic perspective when design takes into account district standardization, communication capability with systems and critical spares.</p>

	Anaru advised that he had supplied the original bore logs and had the costs of a new bore estimated at \$48,000
Current Charging (Keith Martin/ Carole Nutt)	Fixed charges can only be charged to SUP. We have 18 properties contributing to fixed charges (repays capital costs) and 26 water meters on 25 properties who are charged based on volumetric use (this pays for treatment and O&M). Those in the community without consented dwellings but with a water meter are not paying fixed charges.
Treatment option and General Discussion (All)	<p>Options to consider: long term tankering as currently occurring, pipe under the harbour, bore supply, private rain tanks. We need to consider all options in the long list, some will be quickly discounted. Anaru to provide contact details of a Raglan based professional with local knowledge who has recently undertaken a project in Wellington piping water under the harbour there. The HCG has investigated this in order to help those working on the high-level BC to expedite the time required on this study including costs.</p> <p>We have until 2024 until we move to Entity B. Our future approach will have this in mind as we continue to provide safe drinking water to the Te Akau Community</p> <p>Te Akau is currently a closed scheme. There are a few more properties that may want to connect in future. Council informed the HCG that new connections from the 33 properties covered by the scheme are now restricted and new connections will not presently be allowed to connect on application.</p> <p>Depending on Waters Governance Board direction, it may need to go to Council especially if capital costs are required.</p> <p>Council will need to engage with the wider community to ensure they are informed and that individual views heard. This will include Hapu and Iwi engagement.</p>

Actions

What	Who	When	Status
Source age and operational condition of current infrastructure components where recorded separately and share with Community Group	Watercare	31 January 2022	Outstanding

Parameters of the options analysis shared with Community Group ahead of being presented in a formal report prior to costing.	WDC	As developed	Open
Engagement with wider community	WDC	At such time, relevant information available	Open
Minutes from 18 January to be made publicly available through Council website.	WDC	31 January 2022	Completed
Meeting to be set up regularly to review progress	WDC/ HCG	18 February 2022	Open

The Te Akau South Water Supply

Additive Options to Treatment System Upgrade:
Existing & recently removed plant (2021)

Te Akau South plant upgrade:

Original Lutra High Level workings: 14.12.2021 report to Waters Governance Board

<p>Plant Upgrade with Online Monitoring:</p> <ul style="list-style-type: none"> • Coarse Pre-filter; • Cartridge Filtration system; • Sodium hypochlorite dosing system; • Raw water UVT meter; • SCADA HMI; • Historian; • Telemetry; • Full automatic control via PLC 	<p>Plant Upgrade with Online Monitoring:</p> <ul style="list-style-type: none"> • Raw water UVT meter; • Validated duty/standby UV reactors; • New sodium hypochlorite system; • New hydrochloric acid dosing; • SCADA HMI; • Historian; • Telemetry; • Full automatic control via PLC
<p>CAPEX: \$2607 K OPEX: \$25 K pa NPV: \$560 K</p>	<p>CAPEX: \$270 K OPEX: \$30 K pa NPV: \$630 K + \$50K additional cost to reinstall water bore Currently under tanker supply which is the lowest cost short term solution</p>
<ul style="list-style-type: none"> • No end user sampling point that remotely measures FAC and pH daily • No reservoir installed • No on-site storage <ul style="list-style-type: none"> - Disallows guarantee of 	<ul style="list-style-type: none"> • No end user sampling point that remotely measures FAC and pH daily • No measurement of free available chlorine (FAC) 30 min after treatment

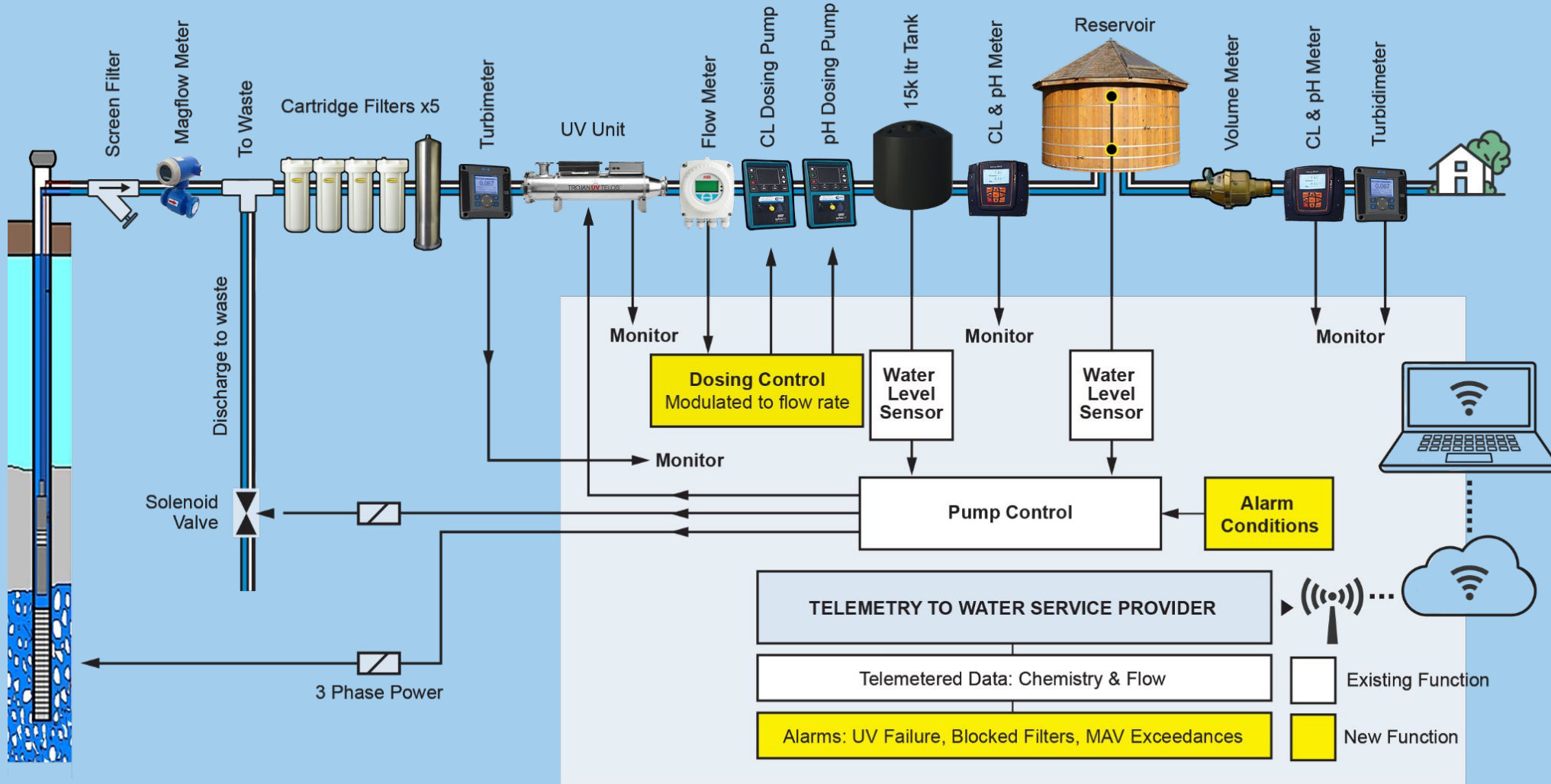
- Sodium Hypochlorite: Utilise previous Qdos Pump #1 ?
- Hydrochloric Acid: Utilise previous Qdos Pump #2 ?
- SCADA HMI & Historian: WSL Existing System ?

- New Bore estimate \$48k

- Line of sight available to Distribution System endpoint
- FAC sampling utilising existing tank prior to reservoir?

Compliant Treatment System

*Design sketch showing existing 15000 litre tank utilised for FAC monitoring prior to pumping to Reservoir



New Equipment Required

- Turbidimeter
- UV Unit
- CL & pH Meter
- S/S Screen Filter
- Magflow Meter

Current: New 2021

- Turbidimeter
- Flow Meter
- CL & pH Meter
- 15000 ltr Tank

Current: Older than 2021

- Solenoid Valve (2020)
- Reservoir
- Volume Meter
- Cartridge Filter Housings

Removed 2021: New 2019

- CL Dosing Pump
- pH Dosing Pump

Existing Function
New Function

Plant: Currently On-site

Te Akau South Treatment Shed

- Treatment shed is fit for purpose with plumbing & wiring installed.
- ★ Currently in use



Plant: Currently On-site

Te Akau South Treatment System

- Hach 1720E Turbidimeter: **New 2021**
- Hach SC200 Meter: **New 2021**
- ★ Currently in use.



Plant: Currently On-site

Te Akau South Treatment System

- ProMinent diaLog DACb CL & pH Meter: **New 2021**
- ★ Currently in use.



Plant: Currently On-site

Te Akau South Transfer Tank

- 15,000 litre holding tank: **New 2021**
- Tanker unloads into this tank prior to water being pumped to the Reservoir.
- ★ Currently in use.



Plant: Currently On-site

Te Akau South Reservoir

- 45,000 litre timber storage reservoir.
- Water level sensors fitted.
- Mechanical insert meter.
- Constructed 1993.
- ★ Currently in use



Plant: Currently On-site

Te Akau South Treatment System

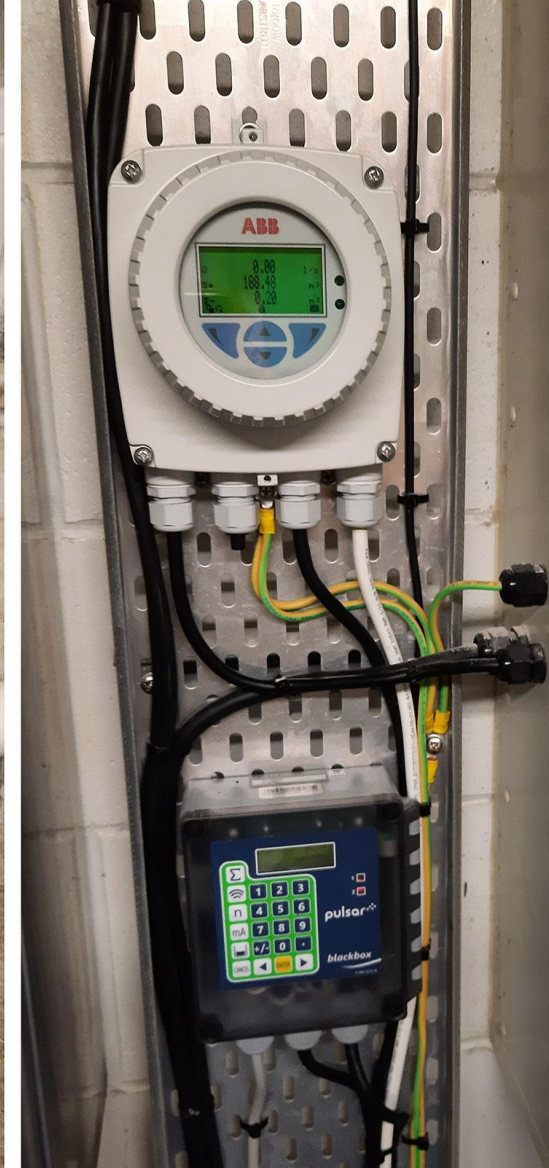
- Grundfos Pump: **New 2021**
- ★ Currently in use.



Plant: Currently On-site

Te Akau South Treatment System

- ABB Flow Meter: **New 2021**
- ★ Currently in use.



Plant: Currently On-site

Te Akau South Treatment System

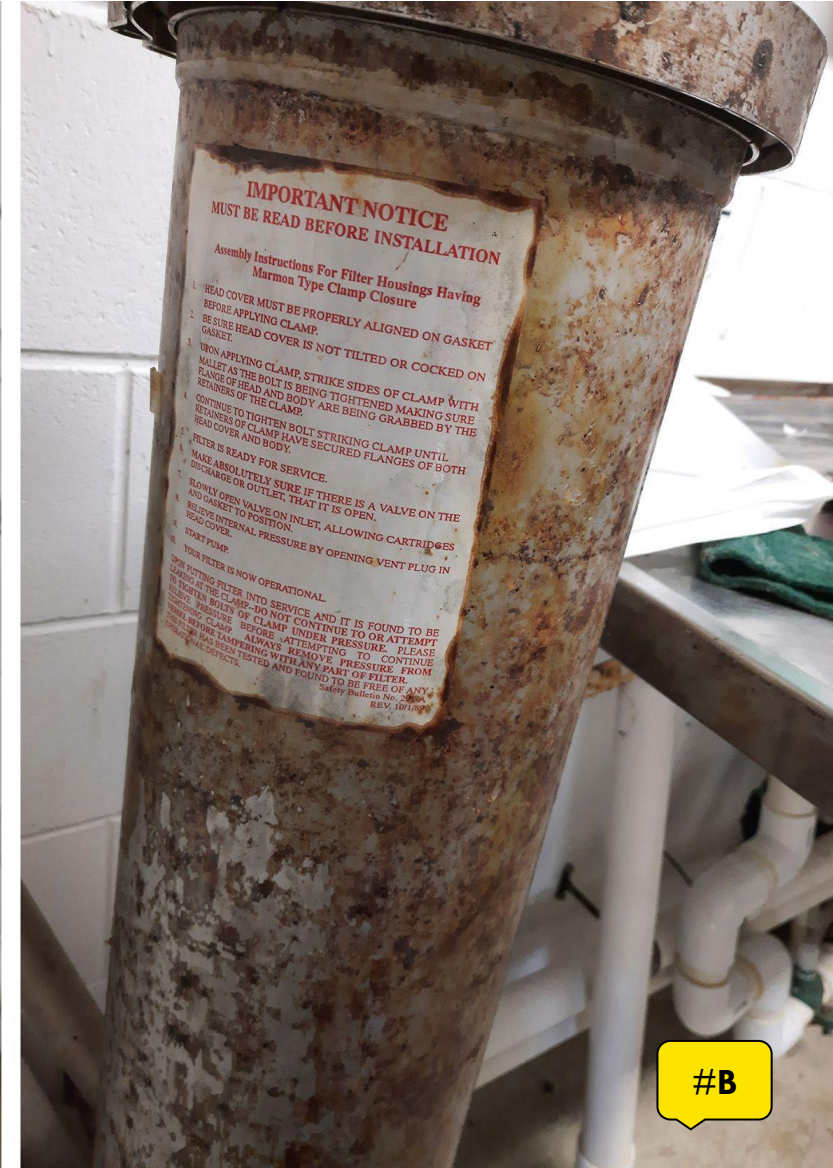
- Solenoid valve (to waste): **New 2020**
- 4x Filterpure jumbo cartridge filter housings fitted with pressure gauges. These housed 2x20 micron & 2x5 micron cartridge filters.
- 1x Stainless Filter Housing (1 micron). Pressure gauge installed post filtration*
- ❑ Currently not in use.



Plant: Currently On-site

Te Akau South Treatment System

- * Stainless 1 micron housing: *photo #A*
- This was taken off-site in April 2021 & then replaced: *photo #B*
- ❑ Currently not in use.



Plant: Recently removed from site

Te Akau South Treatment System

- 2x Qdos 30 (Universal) dosing pumps
 - These were installed in 2019 & taken off-site in 2021.
- ❑ Currently not in use:

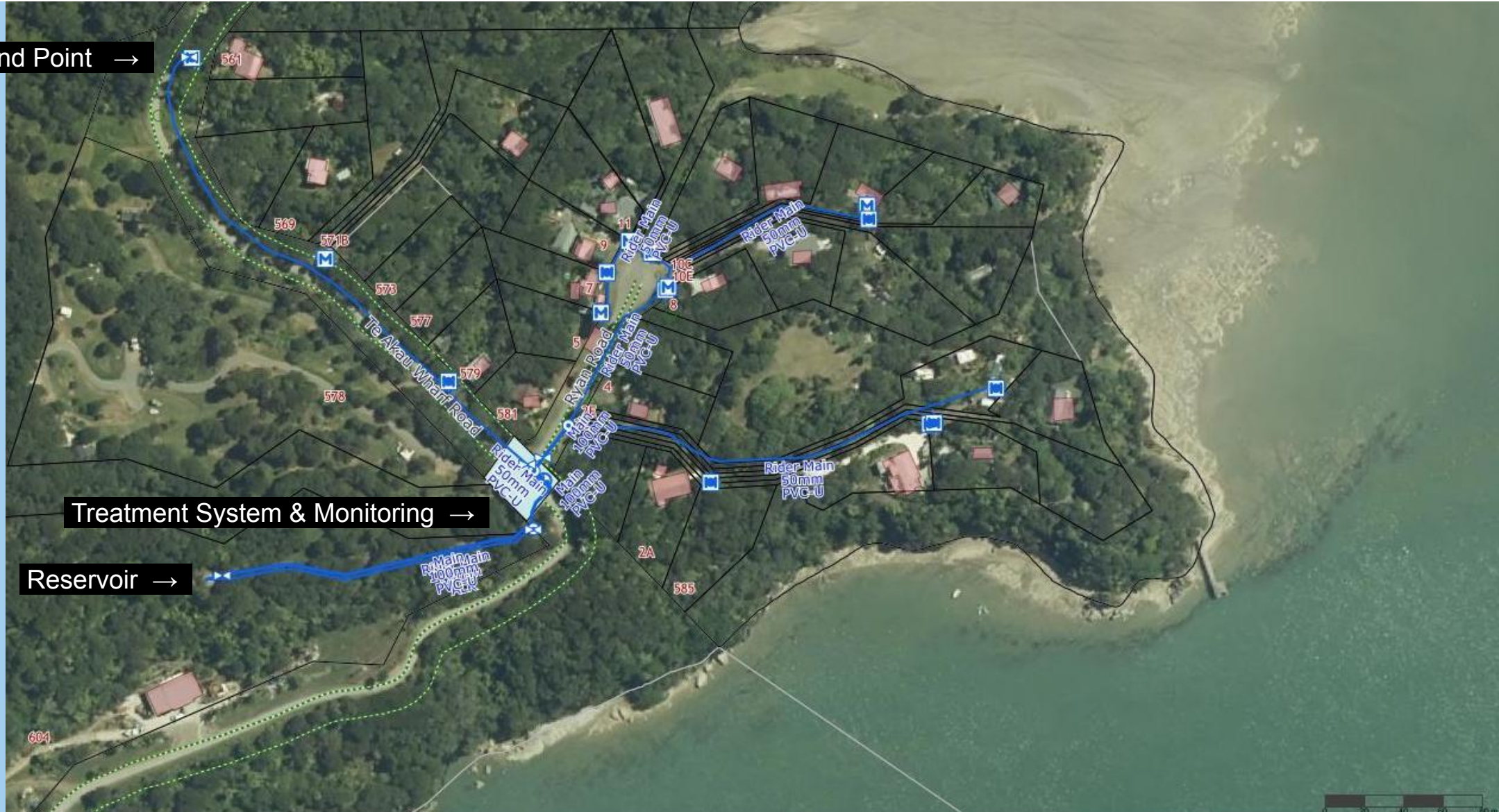


Endpoint monitoring

Te Akau South Water Supply Distribution Network

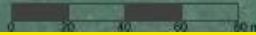
Distribution System End Point →

Approx. 300m from Reservoir Meters



Treatment System & Monitoring →

Reservoir →



Plant: Currently On-site

Te Akau South Distribution System

- Distribution Endpoint
- Outside 561 Te Akau Wharf Road
- ★ Currently in use: Manual Sampling.



Plant: Currently On-site

Te Akau South Treatment System

- QTECH Datran Components onsite.
- ★ Telemetry Control: Currently in use



Plant: Currently On-site

Te Akau South Treatment System

- The 3 phase unit, required to power the submersible pump, was removed from site in 2021.
- ❑ 3 Phase unit: Currently not in use: Whereabouts unknown.
- Existing onsite power unit (pictured).
- ★ Power unit: Currently in use.



Plant: Currently On-site

Te Akau South Treatment System

- Hach CL17 Chlorine Analyser.
- ❑ Currently not in use.



Plant: Removed from site

Te Akau South Bore Supply

- Submersible Pump
 - This was taken off-site on July 27, 2021 for investigation.
 - WSL contractors pledged to inform HCG of the result within a few days however we have not been contacted since.
- ❑ Currently not in use: Whereabouts unknown.





End