

Version No: 14 Issue Date: 31/03/2025 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 5 Page: 1 of 19
	Hydrology Operations Manual	

Water Quality Monitoring Run Guide

POHANGINA

**POINT DISCHARGE
Monthly Sampling**

Hazard & Task Analysis













Hazard Identification – tick all that apply, write additional hazards identified:

The yellow highlighted hazards are known hazards at the time of compiling this document. This **does not negate** the need to assess for and potentially eliminate or isolate any hazards at each sample location at every visit

Hazard	Yes	Hazard	Yes	Hazard	Yes
Confined space	<input type="checkbox"/>	Suspended loads	<input type="checkbox"/>	Noise – plant and equipment	<input type="checkbox"/>
Difficult entry/exit	<input type="checkbox"/>	Falling objects	<input type="checkbox"/>	Communication – means of	<input type="checkbox"/>
Oxygen deficiency/excess	<input type="checkbox"/>	Working near cranes and crane runways	<input type="checkbox"/>	Remote area	<input checked="" type="checkbox"/>
Poisonous fumes/gas	<input type="checkbox"/>	Live rails-gantry cranes	<input type="checkbox"/>	Temperature extremes	<input checked="" type="checkbox"/>
Explosive gas	<input type="checkbox"/>	Trip hazards	<input checked="" type="checkbox"/>	Reduced visibility	<input type="checkbox"/>
Flammable materials	<input type="checkbox"/>	Slippery surfaces	<input checked="" type="checkbox"/>	Unauthorized persons	<input type="checkbox"/>
Combustible materials	<input type="checkbox"/>	Manual handling	<input checked="" type="checkbox"/>	High pressure water	<input type="checkbox"/>
Hazardous substances	<input type="checkbox"/>	Sharp materials	<input type="checkbox"/>	Vacuum	<input type="checkbox"/>
Drowning	<input checked="" type="checkbox"/>	Line of fire	<input type="checkbox"/>	Air emissions – dust, fumes	<input type="checkbox"/>
Engulfment	<input type="checkbox"/>	Pressurized fluids	<input type="checkbox"/>	General waste	<input type="checkbox"/>
UV Radiation	<input checked="" type="checkbox"/>	Pressurized air/gas	<input type="checkbox"/>	Hazardous waste	<input type="checkbox"/>
Electrical – low /high voltage	<input type="checkbox"/>	Traffic / vehicle movements	<input checked="" type="checkbox"/>	Hydrocarbon / chemical spill	<input type="checkbox"/>
Multiple electrical feeds	<input type="checkbox"/>	Machinery – mobile plant	<input type="checkbox"/>	Soil disturbance/erosion	<input checked="" type="checkbox"/>
Working at height	<input type="checkbox"/>	Moving parts	<input type="checkbox"/>	Habitat disruption	<input type="checkbox"/>
Ladders	<input type="checkbox"/>	Chemical reaction (Pyrophoric iron)	<input type="checkbox"/>	Lighting	<input type="checkbox"/>
Elevated work platforms	<input type="checkbox"/>	Transport of hazardous substances	<input type="checkbox"/>	Weather extremes	<input checked="" type="checkbox"/>
Potential for difficult rescue	<input type="checkbox"/>	Stock/Farm Animals	<input checked="" type="checkbox"/>	Difficult site access/egress	<input checked="" type="checkbox"/>

Required PPE– tick all that apply, write additional PPE required:

The yellow highlighted PPE are known required PPE at the time of compiling this document. This **does not negate** the need to assess for the appropriate required PPE measures at each sample location per visit.

SAMPLING GLOVES	EAR PROTECTION	HARD HAT	SAFETY GLASSES / GOGGLES	WORK BOOTS	PROTECTIVE GLOVES	PERSONAL FLOATATION DEVICE (PFD)
						
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HI VIZ	SAFETY HARNESS	WADERS	HAND SANITISER	VEHICLE BEACON		
						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
Trip Hazards	✓			✓	✓		Prior to sampling staff must check area is clear of any items that pose a risk. If there is any these should only be moved if safe to do so. Sampling only to commence if the sampler is satisfied that any slip, trip or fall hazards are isolated.
Slippery Surfaces – RIVER ACCESS	✓			✓	✓		River banks can be slippery at any time. Care should be taken in all conditions. PFD's must be available for staff if use is deemed appropriate. [HMP18]
Drowning - FLOWING WATER	✓			✓		✓	Staff should be trained in alignment with HRCs training requirements. PFD's must be available for staff if use is deemed appropriate [HMP18]
Machinery – mobile plant	✓			✓		✓	Farms may have running irrigators or tractors, ensure you are seen on site, and avoid getting in the way of any operating machinery.
Traffic Vehicle movements	✓			✓		✓	Staff to obey on site signage and instruction. HRC Vehicle to be parked in a safe and appropriate location. [HMP 16] [HMP 20]
General Waste		✓		✓	✓		General waste can be stored on site depending on operating activity. Sample staff have no need to interact with any waste. All waste created by HRC staff to be taken with them.
UV Radiation	✓			✓	✓		Horizons provide sunscreen and hats. [HMP 17]
Manual Handling	✓			✓	✓		There should be no need for sample staff to move any equipment etc. in order to carry out sampling activities.
Electrical – low /high voltage	✓			✓	✓		Sampling activity does not require any interaction with live circuitry or equipment. Staff should check sample area is clear of any hazards (i.e. loose cables, live equipment etc.) before sampling. If access/safety is considered compromised sampling is aborted. [HMP 23]
Stock/Farm Animals	✓			✓	✓		Although generally docile, farm animals can still be hazardous. The risk should be isolated by finding alternative access routes to the sample location or contacting the owner for assistance. [HMP26]
Weather Extremes	✓			✓	✓		During the duration of a sampling run, varying types and degrees of weather may be experienced. All sampling staff are to have access within their HRC vehicle of additional and appropriate clothing.
Temperature Extremes - Hypothermia: following emersion	✓			✓		✓	Staff must have access to suitable PPE and spare clothing within their vehicle.
Traffic Vehicle movements – ROADSIDE /GENERAL	✓			✓		✓	Some sample sites require parking beside a main road. The vehicle must be parked as far off of the road surface as safe and practicable to do so. Use of hazards lights must be

Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
							considered. Hi-vis clothing must be worn. [HMP 16] [HMP 20]

Site Information

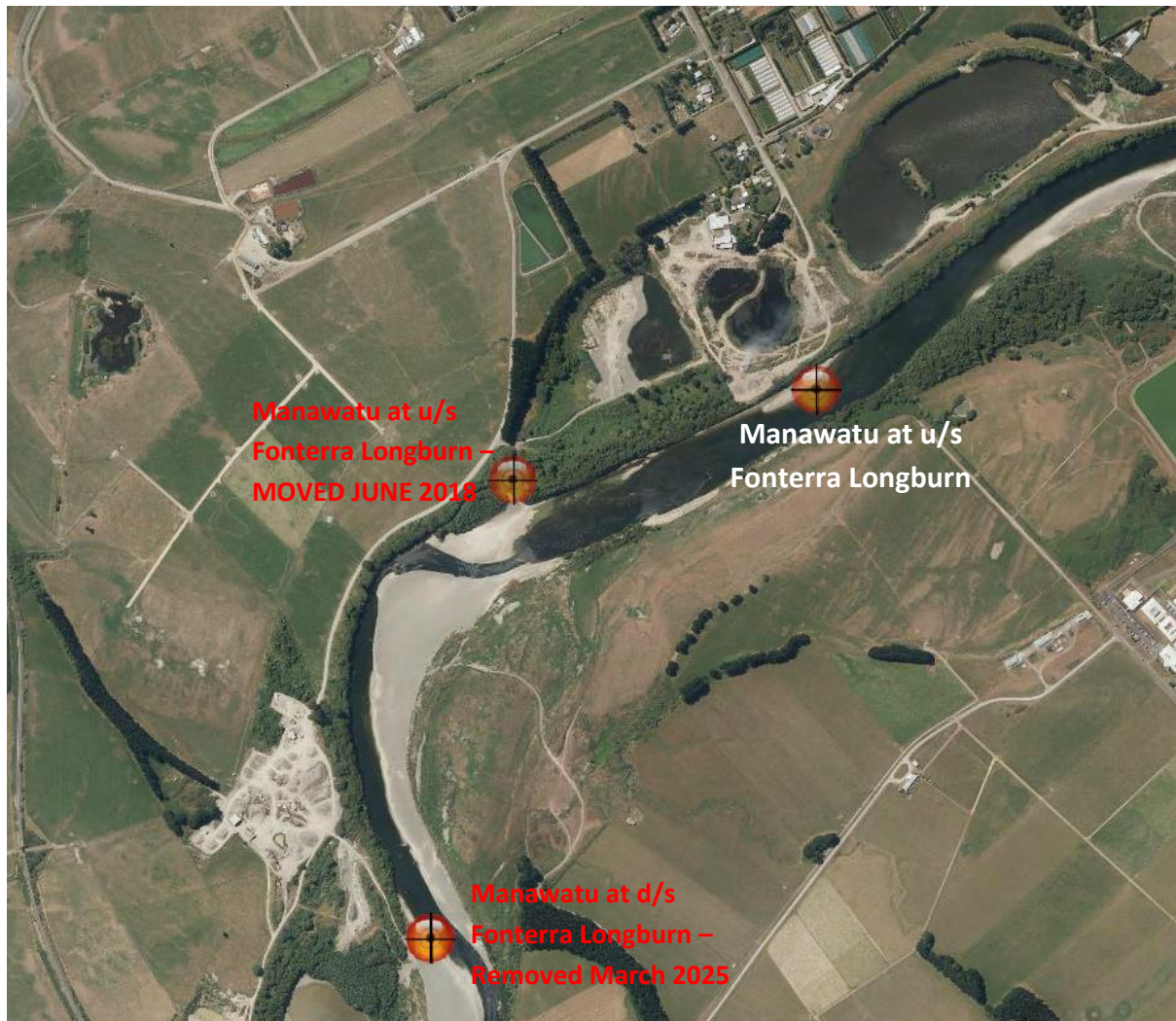
Sampling Order	Hilltop Site Name		Easting/ Longitude	Northing/ Latitude	Comments
1	Manawatu at us Fonterra Longburn	NZMG:	2727531	6086780	Access via Linton side of river. Contact Landowner prior to going on site.
		NZTM:	1817518	5525074	
		WGS84:	175.563012	-40.396549	
2	Kahuterawa at Johnstons Rata	NZMG:	2732333	6080805	Hydro site. Key required for gate. Text landowner first thing in morning before visit. Gauge site if time/ conditions allow.
		NZTM:			
		WGS84:	40.449064	175.62165	
3	Kahuterawa at Keeble Farm	NZMG:	2729915	6087071	Sign in/out at Pit Shed. Alternative access via Wool Shed. Use Onside App 'Keeble's Farm' Gauge site. AKA Kahuterawa at U/S Manawatu Confluence
		NZTM:			
		WGS84:	40.393194	175.590719	
4	Turitea at No1 Dairy	NZMG:	2731293	6087906	Contact Farm Manager prior to going on site. Use Onside App 'Massey-Dairy 1' Gauge site
		NZTM:	1821281	55260200	
		WGS84:	175.606913	-40.385417	

[Contact details can be found here.](#)

Equipment Required

Equipment	<ul style="list-style-type: none"> • Sample bottles • Handheld multi-parameter instrument (calibrated) • Black disc, viewer, tape measure • Clarity Tube • Sampling pole • Chilly bins and ice-packs • Field sampling books • Sampling ID labels (created using Hilltop Sampler) • Use gloves for wastewater and effluent samples • Appropriate PPE for sites
Additional Comments/ Instructions	<ul style="list-style-type: none"> • Manawatu at us Fonterra Longburn: Access via Linton side of river. Contact Landowner prior to going on site. • Kahuterawa at Johnstons Rata: Gate key required. Text landowner morning of (before visit). • Kahuterawa at Keeble Farm: Sign in/out at Pit Shed. Use Onside App 'Keebles Farm'. Alternative access via Wool Shed. • Turitea at No1 Dairy: Contact Dairy No1 Farm Manager stating likely time of visit prior to arriving on site. Use Onside App 'Massey – Dairy 1'. In hi-flow conditions sample via bridge.

SITE LOCATION MAP – Manawatu at u/s Fonterra Longburn








Note: Access to site changed from TR bank to TL bank in 2021.

Manawatu at Upstream Fonterra Longburn

POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):

Drowning - River	Traffic / vehicle movements – working yard	Slippery surfaces – cobbles, periphyton	Electric Fences
Trip hazards – cobbles, uneven ground	UV Radiation	Hazardous Waste – treated Effluent	

REQUIRED PPE (in accordance with above hazards – this does not negate undertaking a hazard review prior to sampling on the day and/or using additional PPE if deemed necessary):

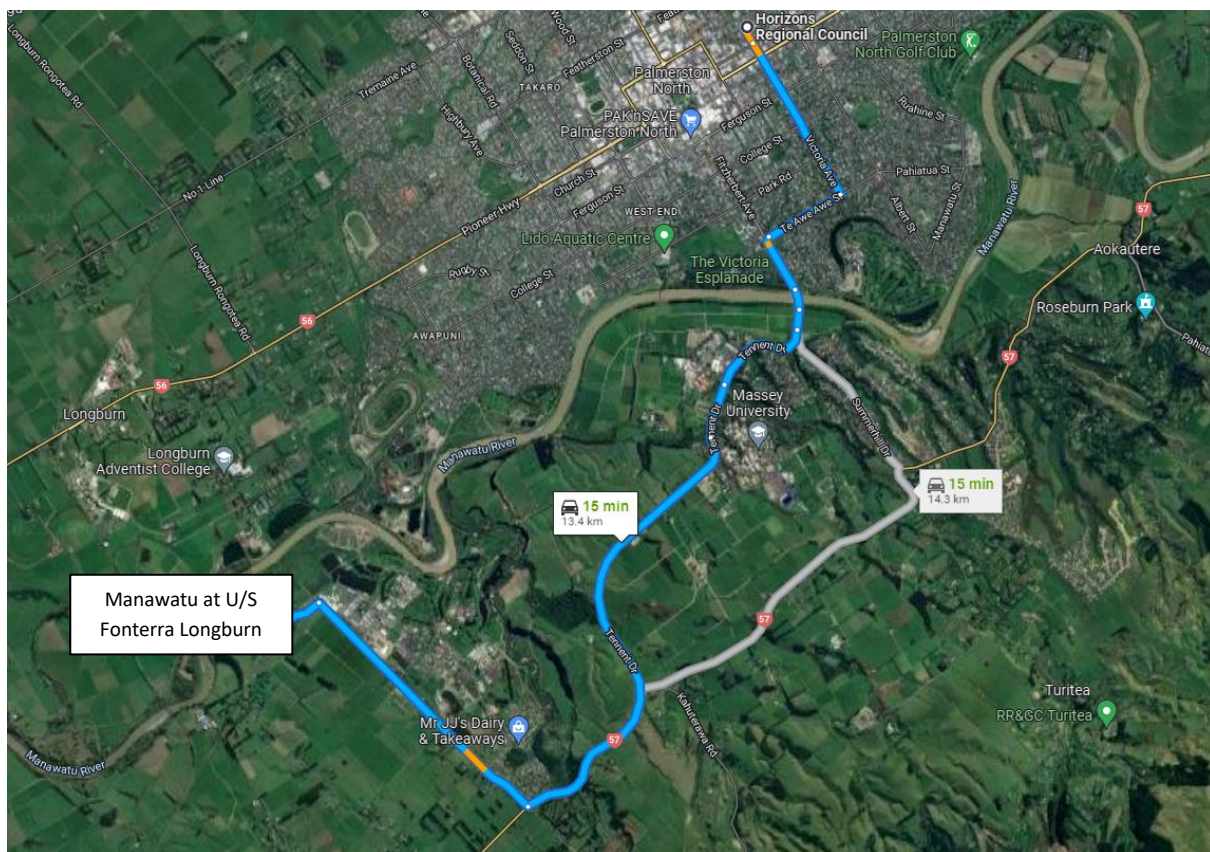
VEHICLE BEACON	HI VIZ	PFD	WADERS	HAND SANITIZER
				

DIRECTIONS:

- From Victoria Ave, drive out to Linton.
- Drive past Linton Camp, turning right onto Whitmore Road.
- Follow the road until approx. 200m after the bend.
- Turn into the gate on your left.
- The land owner should have been contracted prior to arrival.

ACCESS:

- Follow the track down past the bee hives before parking up and walking approx. 300m to the site (see map).
- Use of a sample pole is advised.



HRC to Manawatu at U/S Fonterra Longburn sites.

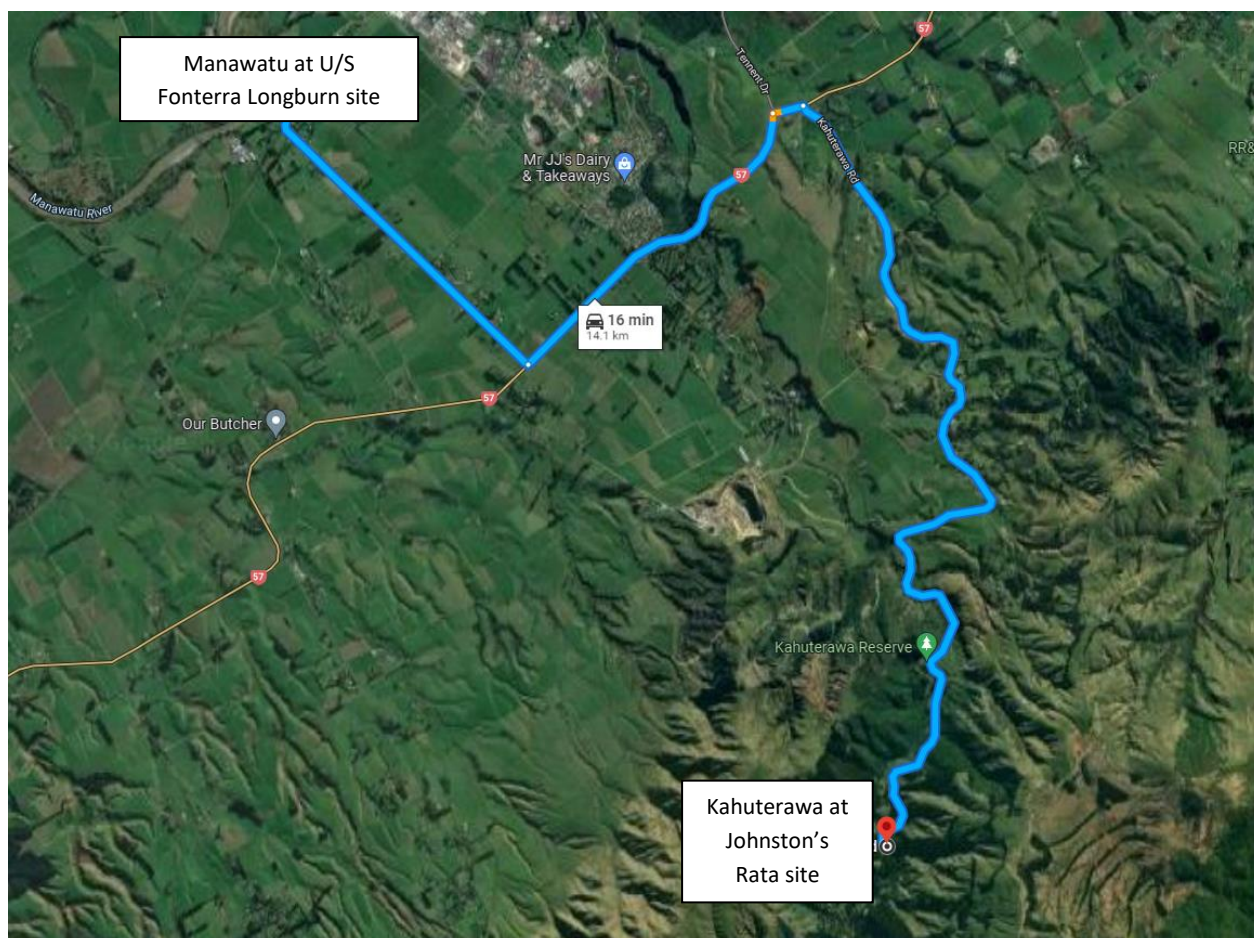


Manawatu at upstream Fonterra Longburn site Detail Map.



View of Manawatu at upstream Fonterra Longburn site looking upstream from beach.

Kahuterawa at Johnstons Rata



POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):

Drowning - River	Traffic / vehicle movements – narrow road access	Slippery surfaces – cobbles, periphyton	Electric Fences
Trip hazards – cobbles, uneven ground	UV Radiation		

REQUIRED PPE (in accordance with above hazards – this does not negate undertaking a hazard review prior to sampling on the day and/or using additional PPE if deemed necessary):

HI VIZ	PFD	WADERS	HAND SANITISER

DIRECTIONS:

- From the *Manawatu at U/S Fonterra Longburn* site, head back towards Palmy on SH57 / Tennent Drive.
- At the intersection with Old West Road, turn RIGHT onto it and RIGHT again onto Kahuterawa Road.
- Continue on past the Reserve.
- Turn into the first driveway (698 Kahuterawa Rd) on your RIGHT after the Kahuterawa Reserve. It is a tight turn.
- You'll need the key for the gate.

ACCESS:

- After accessing the property, drive down past the house towards the river.
- The hydro site is on the right-hand side. Walk past the box and down to the river from here.
- Sample and inspect at the ESG.
- Gauge if safe to do so.



Turn into the first driveway (698 Kahuterawa Rd) on your right after the Kahuterawa Reserve. It is a tight turn. Note the power pole.

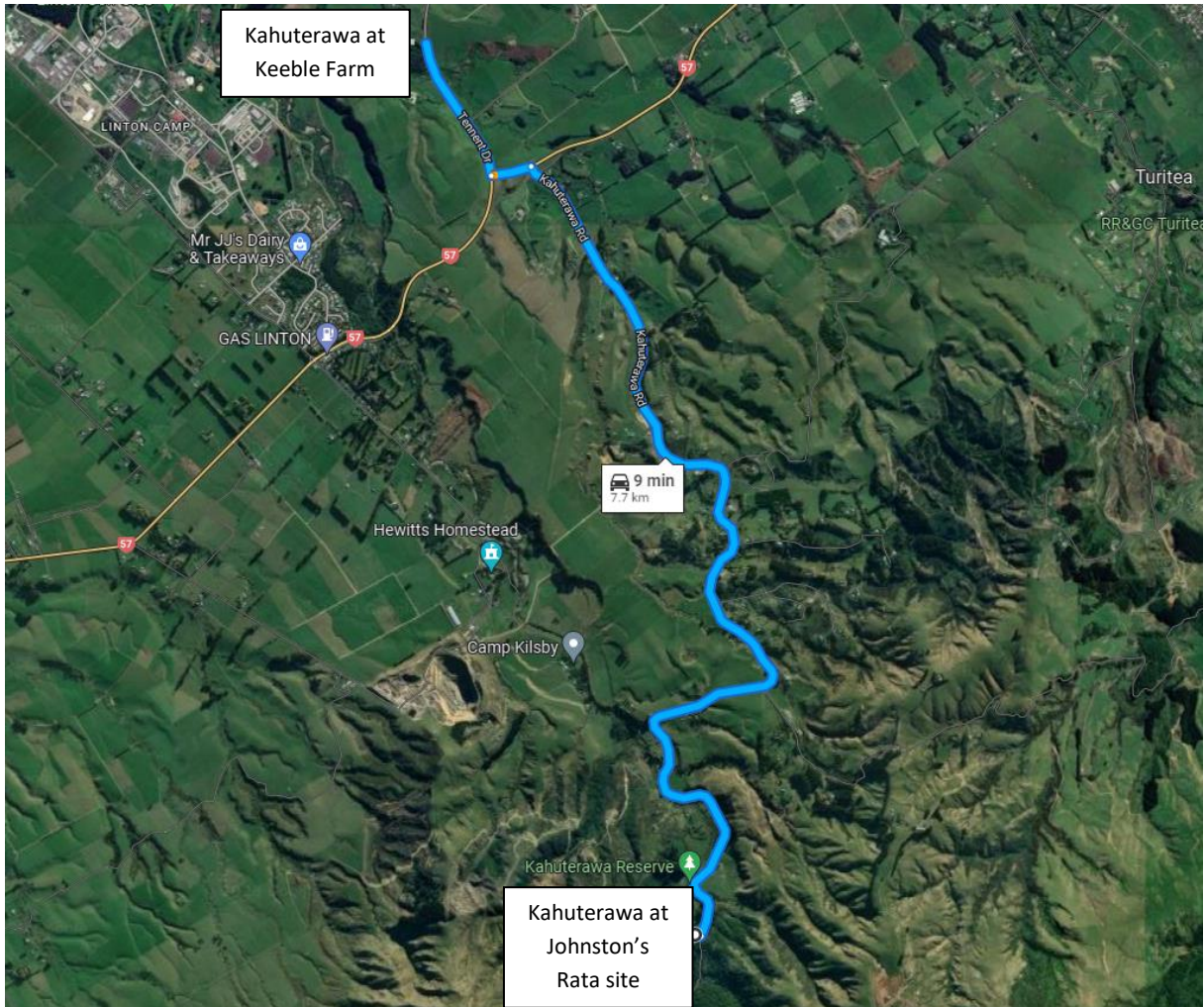


Looking upstream at Kahuterawa at Johnston's Rata Site. Note the ESG attached to the boulder.

Looking downstream at Kahuterawa at Johnston's Rata Site.



Kahuterawa at Keebles Farm



POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):

Drowning - River	Traffic / vehicle movements – narrow road access	Slippery surfaces – cobbles, periphyton	Electric Fences
Trip hazards – cobbles, uneven ground	UV Radiation		

REQUIRED PPE (in accordance with above hazards – this does not negate undertaking a hazard review prior to sampling on the day and/or using additional PPE if deemed necessary):

VEHICLE BEACON 	HI VIZ 	PFD 	WADERS 	HAND SANITISER 
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DIRECTIONS:

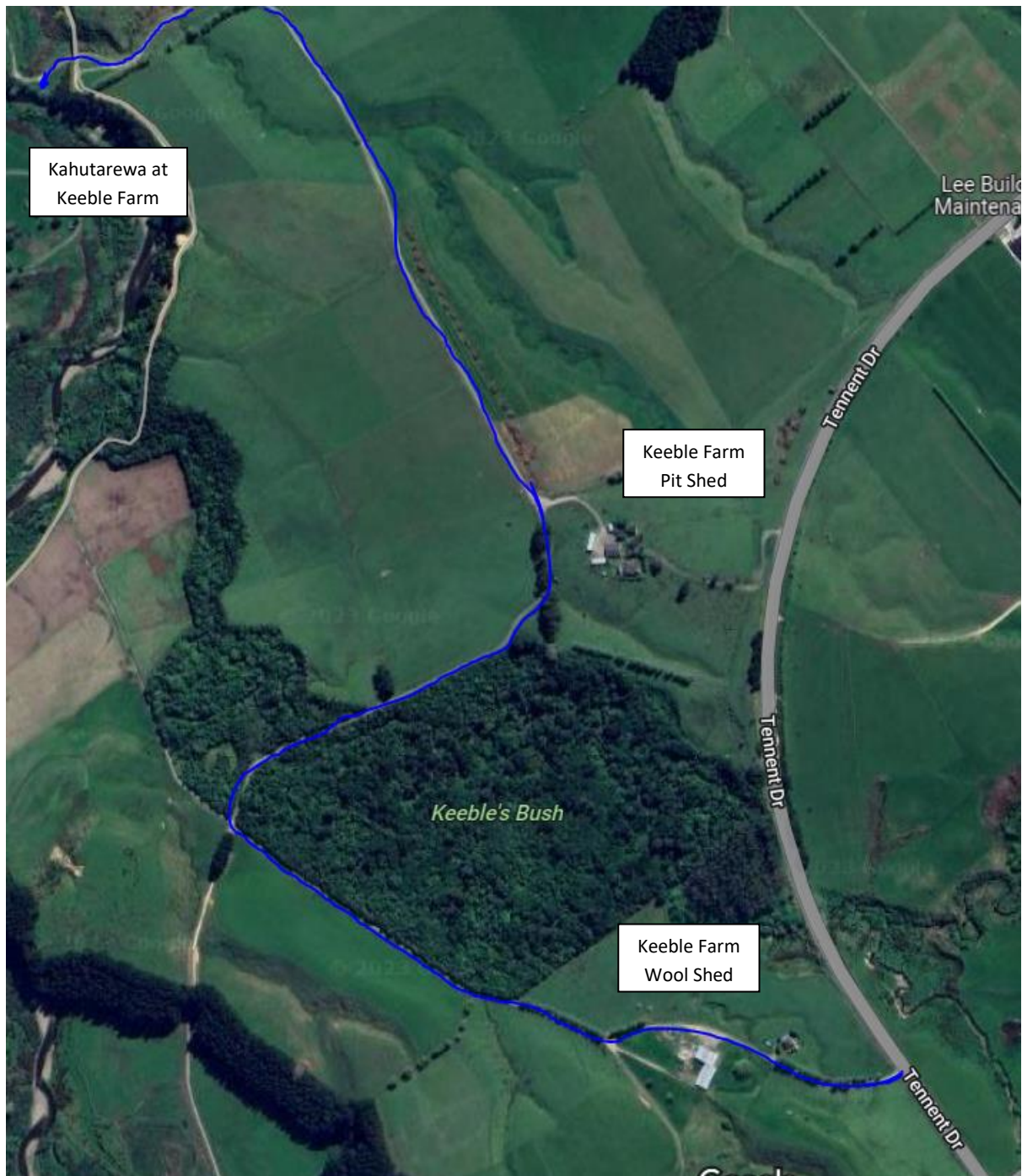
- From *Johnstons Rata*, head back to Old West Rd.
- Turn left onto Old West Rd and Right on to Tennent Drive towards Palmerston North.
- As you go up the hill you will see the sign for Keeble farm PIT SHED – this is the SECOND Keeble Farm Sign.
- Turn in and drive to the shed to sign in.
- After signing in, drive along the farm track to the intersection, take the RIGHT hand track.
- Continue to the next intersection and take the LEFT track down toward the River.
- Park at the bottom of the hill.

ACCESS:

- Access is through the gate on the left.
- The bank is steep in parts. Take care when accessing the river.

ALTERNATIVE ACCESS:

- The gate to the Pit Shed can sometimes be padlocked shut. If this is the case drive back to the first Keeble Farm sign you went past (Wool Shed).
- The same sign in process exists for the Wool Shed as the Pit Shed.
- Drive along the farm track to the intersection, take the RIGHT hand track.
- Continue to the next intersection and take the RIGHT track.
- Follow the track, you will see the track to the Pit Shed on your right (for reference as to where you are).
- Continue to the next intersection and take the LEFT track down toward the River.
- Park at the bottom of the hill.

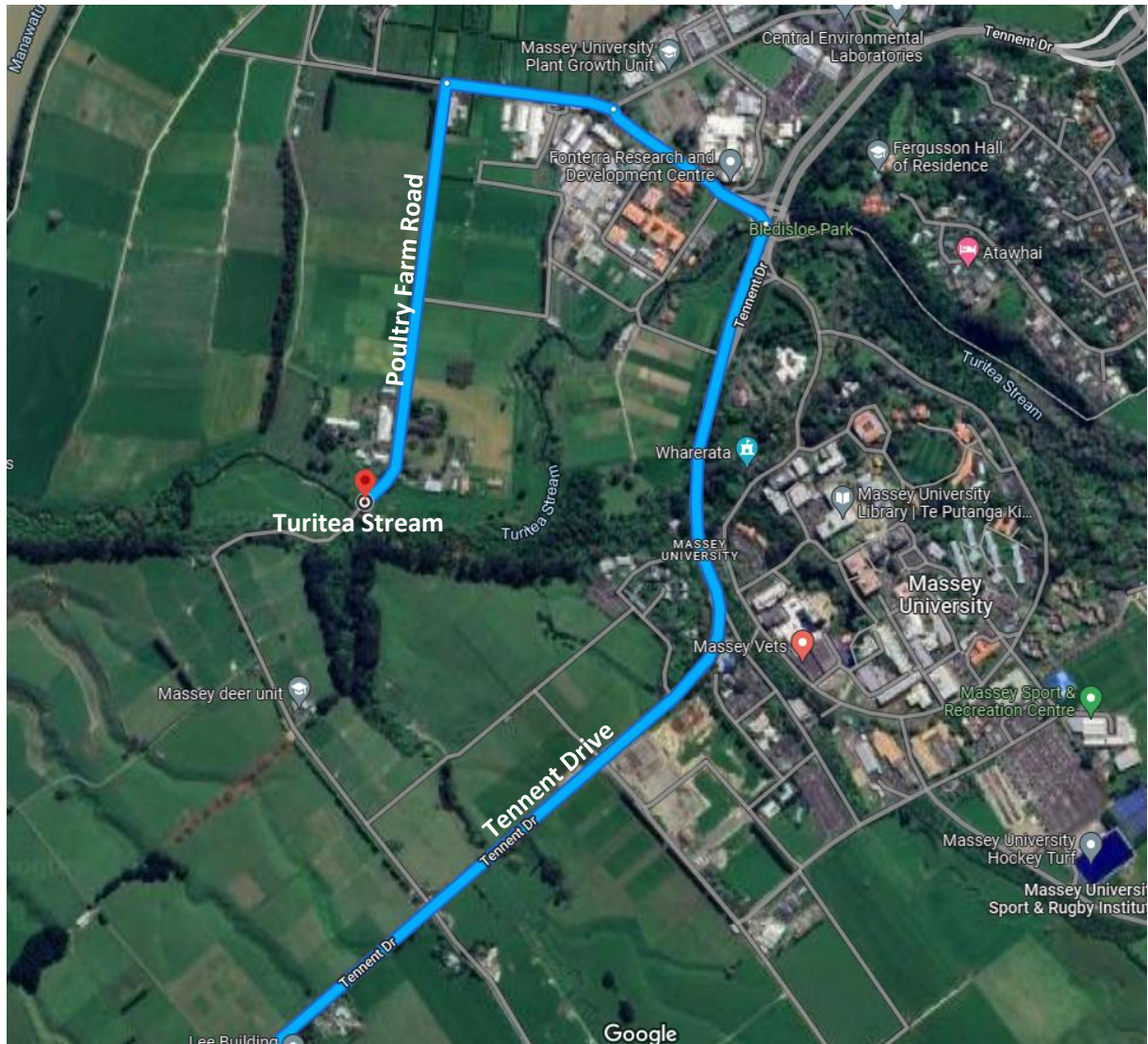


Alternative access Map








Kahuterawa at Keebles Farm.

SITE LOCATION MAP –Turitea at No1 Diary



Turitea at No1 Diary

POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):				
Drowning - River	Traffic / vehicle movements – single lane bridge	Slippery surfaces – cobbles, periphyton	Electric Fences	
Trip hazards – cobbles, uneven ground	UV Radiation			
REQUIRED PPE (in accordance with above hazards – this does not negate undertaking a hazard review prior to sampling on the day and/or using additional PPE if deemed necessary):				
VEHICLE BEACON	HI VIZ	PFD	WADERS	HAND SANITIZER
				
DIRECTIONS: <ul style="list-style-type: none"> From the <i>Keebles Farm</i> site, head back to Palmerston North on Tennent Drive. Turn LEFT onto Dairy Farm Road (Massey University is on the left). Keep driving past the Science Institutes until you come to the Dairy Farm Road/ Batchelor Road junction. Stay on Dairy Farm Road by turning LEFT. Turn LEFT onto Poultry Farm Road. Continue to the site, which is located at the small road bridge immediately after the No1 Diary Buildings. Park off the road by the buildings and walk down. 				
ACCESS: <ul style="list-style-type: none"> Ensure you are wearing your hi-vis and other PPE. The farm manager should have been contracted prior to arrival. Due to degrading banks sample upstream of the bridge where the gauging x-section is -accessed via paddock on true right hand bank. Gauge the site – best location is approx. 10 upstream of the bridge. 				



Turitea at No1 Diary - view from direction to travel to site.



Turitea at No1 Diary - sample/gauging site 10m us of bridge looking downstream toward bridge.