

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 1 of 29
	Hydrology Operations Manual	

SoE and Periphyton Monitoring Run Guide

(With Hydro)

Pohangina

(Monthly Sampling)

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 2 of 29
horizons regional council 	Hydrology Operations Manual	

Job 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 checked="" type="checkbox"/>
Difficult entry/exit	<input checked="" type="checkbox"/>	Falling objects	<input type="checkbox"/>	Communication – means of	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	Soil disturbance/erosion	<input 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 checked="" type="checkbox"/>	Stock/Farm Animals	<input checked="" type="checkbox"/>		

Required PPE & Safety Equipment– 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 / WADERS	PROTECTIVE GLOVES	PERSONAL FLOATATION DEVICE (PFD)
						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HI VIZ	SAFETY HARNESS	SUN BLOCK & HAND SANITISER	VHF RADIO	THROW BAG	PERSONAL LOCATOR BEACON	
						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 3 of 29
horizons regional council 	Hydrology Operations Manual	

Known Hazard	Significant		Can it be Eliminated		Can it be Minimised		Method of control
	Yes	No	Yes	No	Yes	No	
Drowning	✓			✓	✓		Staff should use a sample pole if access into the river/stream is unsafe. PFD's must be worn by staff. Always carry a throw bag when working around water and have a personal locator beacon on hand. It is always preferable to have someone else with you at all times when working around water [HMP 18]
UV Radiation	✓			✓	✓		Horizons provide sunscreen and hats. Staff are encouraged to make use of these. [HMP 17]
Engulfment	✓			✓	✓		Rivers/streams are prone to flash flooding creating the potential for engulfment. Staff must be alert and aware at all times of how the waterways are behaving around them, especially in areas where water is dammed or has structures such as intakes and aquaducts. PFD's must be worn by staff and staff must be trained for working around water. Vehicles must be driven a sensible distance from any river or pond edges. Always carry a throw bag when working around water and have a personal locator beacon on hand. It is always preferable to have someone else with you at all times when working around water [HMP18]
Difficult Entry/Exit	✓			✓	✓		Entry and exit into waterways poses many risks and should be treated with caution. Sampling must be done from stable level ground. Staff should use a sample pole if access into the river/stream is unsafe. PFD's must be worn by staff and staff must be trained for working around water. [HMP18]
Electrical-Low/High Voltage	✓			✓	✓		Many of the rural sampling sites require traversing across farm paddocks equipped with electric fences that contain stock. If unknown, treat every farm fence as electric and avoid direct contact. Contact the landowner for advise on whether or not the fence is live and discuss alternative routes or options for avoiding the fence if possible.
Potential for Difficult Rescue	✓			✓		✓	Sampling must always be done from stable level ground. Staff should use a sample pole if access into the river/stream is unsafe. PFD's must be worn by staff and staff must be trained for working around water. Vehicles must be driven a sensible distance from any river or pond edges. Always carry a throw bag when working around water and have a personal locator beacon on hand. It is always preferable to

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 4 of 29
horizons regional council 	Hydrology Operations Manual	

Known Hazard	Significant		Can it be Eliminated		Can it be Minimised		Method of control
	Yes	No	Yes	No	Yes	No	
							have someone else with you at all times when working around water [HMP18]
Trip Hazards	✓			✓	✓		Prior to sampling, staff must check area is clear of items that pose a risk. Trip Hazards 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	✓			✓	✓		Sampling must be done from stable level. Vehicles must be driven a sensible distance from any river or pond edges. [HMP 18]. Staff driving four wheel drive vehicles must have adequate training [HMP 9]
Machinery-mobile plant	✓			✓	✓		Staff are to obey all safety signage around the gravel quarry at the Manawatu downstream PNCC STP site.
Manual Handling	✓			✓	✓		Staff must wear sampling gloves, eye protection and have access to anti-bacterial hand-gel to sample treated effluent. Hepatitis B vaccinations are offered by HRC. [HMP 30] [HMP 35]
Traffic Vehicle Movements	✓			✓	✓		The designated driver of a vehicle is responsible for ensuring the safety and operational requirements and recommendations are met. All staff working within the road reserve must wear high visibility clothing to AS/NZS 1906.4:2010. This clothing must be fluorescent red orange in colour unless the individual is the site STMS then the garment must be fluorescent lime yellow. [HMP 9] [HMP 16] [HMP 20].
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]
Communications-Means of	✓			✓	✓		Cell phone coverage is not available at all sites. Staff must be capable of communicating via VHF radio in an equipped vehicle. [HMP 24]
Remote Area	✓			✓	✓		Most council vehicles are fitted with the E-Road vehicle locator system. Many vehicles are also fitted with a radio operating on the Horizons digital radio network providing communication and tracking coverages across a majority of the region. [HMP 24]
Temperature/Weather Extremes	✓			✓	✓		During the duration of a sampling run varying types and degrees of weather may be experienced. All sampling staff are to

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 5 of 29
horizons regional council 	Hydrology Operations Manual	

Known Hazard	Significant		Can it be Eliminated		Can it be Minimised		Method of control
	Yes	No	Yes	No	Yes	No	
							have access within their HRC vehicle to additional and appropriate clothing. Staff must have access to suitable PPE and spare clothing within their vehicle. [HMP 18]
Reduced Visibility	✓			✓		✓	If you find you are driving in limited visibility slow your driving speed and turn your fog lights on and watch out for vehicles that aren't using their lights. When working in limited visibility if you cease to be able to make out your surrounding environment stop work immediately. If working at night it is advisable to traverse the property in daylight first to map out an action plan outlining walking tracks, vehicle tracks, fence lines, stock positions, ponds, waterways, houses, and sheds as well as other significant items of interest. [HMP12]

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 6 of 29
	Hydrology Operations Manual	

Site Information

Hilltop Site Name	Easting/Long (NZTM)	Northing/Lat (NZTM)	Comments
Pohangina at Piripiri	1850650	5562353	Chlorophyll a Sample and Visual Assessment, Water Quality and Black Disc
Pohangina at Mais Reach	1836897	5543834	Chlorophyll a Sample and Visual Assessment, Water Quality and Black Disc
Manawatu at Upper Gorge	1839289	5530943	Chlorophyll a Sample and Visual Assessment, Water Quality and Black Disc
Manawatu at Teachers College	1824200	5527170	Chlorophyll a Sample and Visual Assessment
Manawatu at TCol – Hydro Site	1823128	5527488	Water Quality and Black Disc
PNCC STP at Tertiary Treated Effluent	1819031	5526068	Water Quality Samples only
Manawatu at u/s PNCC STP	1819508	5526124	Chlorophyll a Sample and Visual Assessment, Water Quality and Black Disc
Manawatu at d/s PNCC STP	1819188	5525294	Chlorophyll a Sample and Visual Assessment, Water Quality and Black Disc

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

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 7 of 29
horizons regional council 	Hydrology Operations Manual	

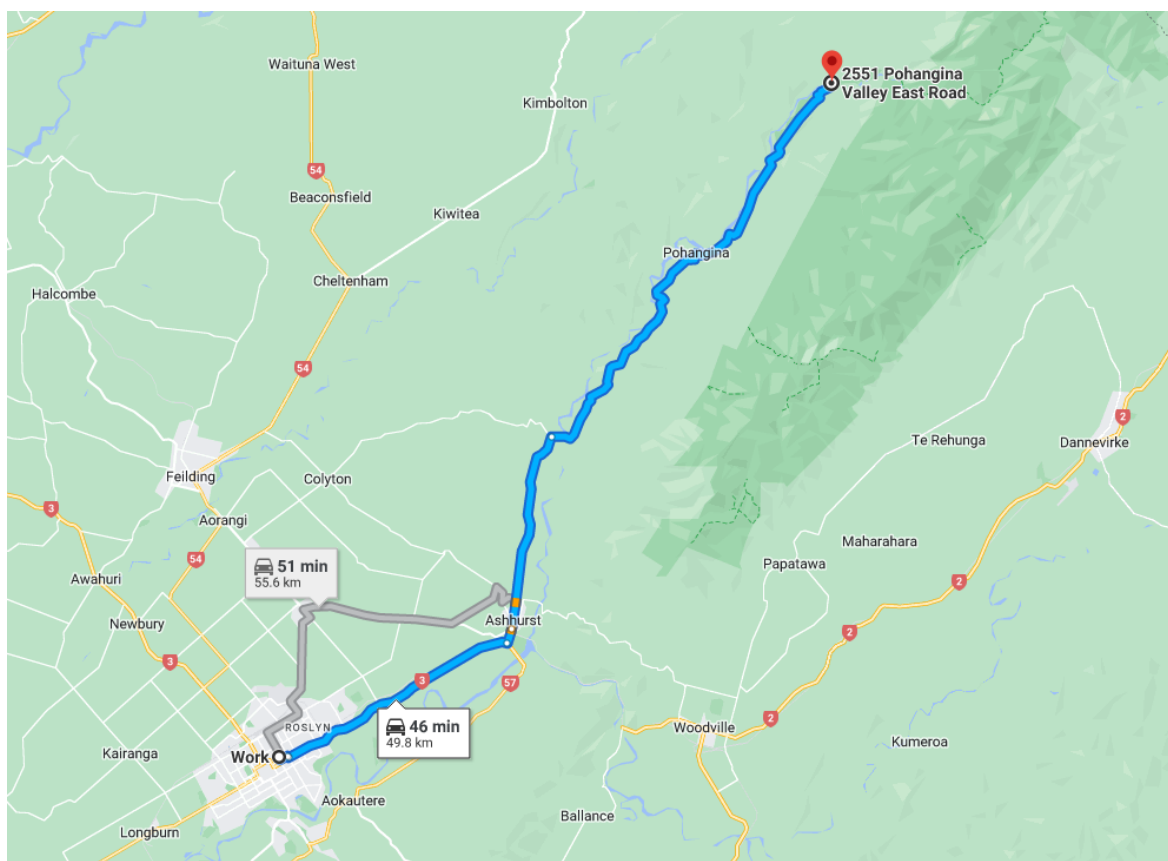


Equipment Required

Sample numbers	SEVEN (Water Quality) SIX (Periphyton)
Equipment	<ul style="list-style-type: none"> • iPad • Bathoscope / Viewer • Pottles (Approx 10) • Scrubbing brush, tooth brush, washer bottle, yellow sample bottle lid, ice cream container • Chilly bins and ice-packs • Alcohol gel • Personal Locator Beacon • 4WD Vehicle equipped with VHF Radio • Throw Bag
Additional Comments/ Instructions	<ul style="list-style-type: none"> • Manawatu at Teachers College & Manawatu u/s PNCC STP – Remember to have PNCC Keys on hand in order to drive down to these sites, otherwise you will have to walk. • Manawatu d/s PNCC STP – You need to collect a key from the weighbridge at the dump.

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 8 of 29
horizons regional council	Hydrology Operations Manual	

SITE LOCATION MAP – Pohangina at Piripiri



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Remote Area	Communication- means of	Reduced Visibility	Engulfment

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):

WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
---------------------------	-----	-------------------------------------	-------------------------------	-----------	-----------	--------	--

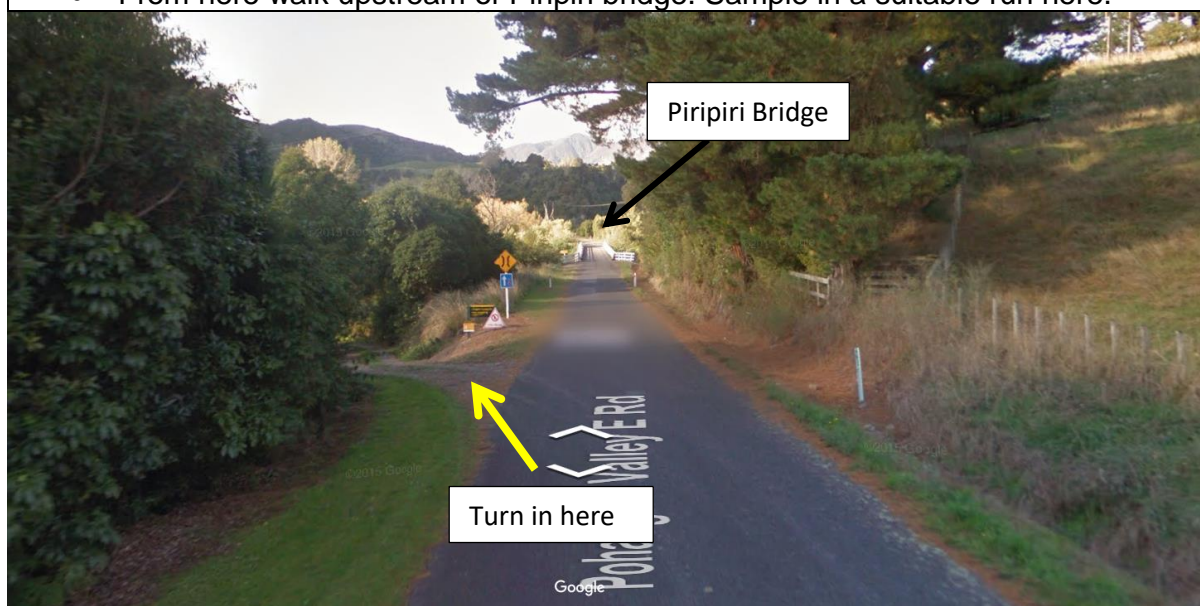
DIRECTIONS:

- From the Palmerston North office head north-east along SH3 towards Ashhurst.
- In Ashhurst turn left onto Cambridge Avenue. Pass through the town heading north into the Pohangina valley. The road name will change from Cambridge Avenue to Pohangina Road once you are out of Ashhurst.
- Carry on out into the 100 km zone along Pohangina Road and stay on this road for the next 8.5 kilometres. On your right there will be a turn off for Pohangina-Valley-East Road. At this turn there will also be a sign for Camp Rangī. Take this turn.
- Follow Pohangina-Valley-East Road for approximately 25 kilometres. Along the way you will see on the right hand side Highland Home Christian Camp. The road here splits with

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 9 of 29
horizons regional council 	Hydrology Operations Manual	

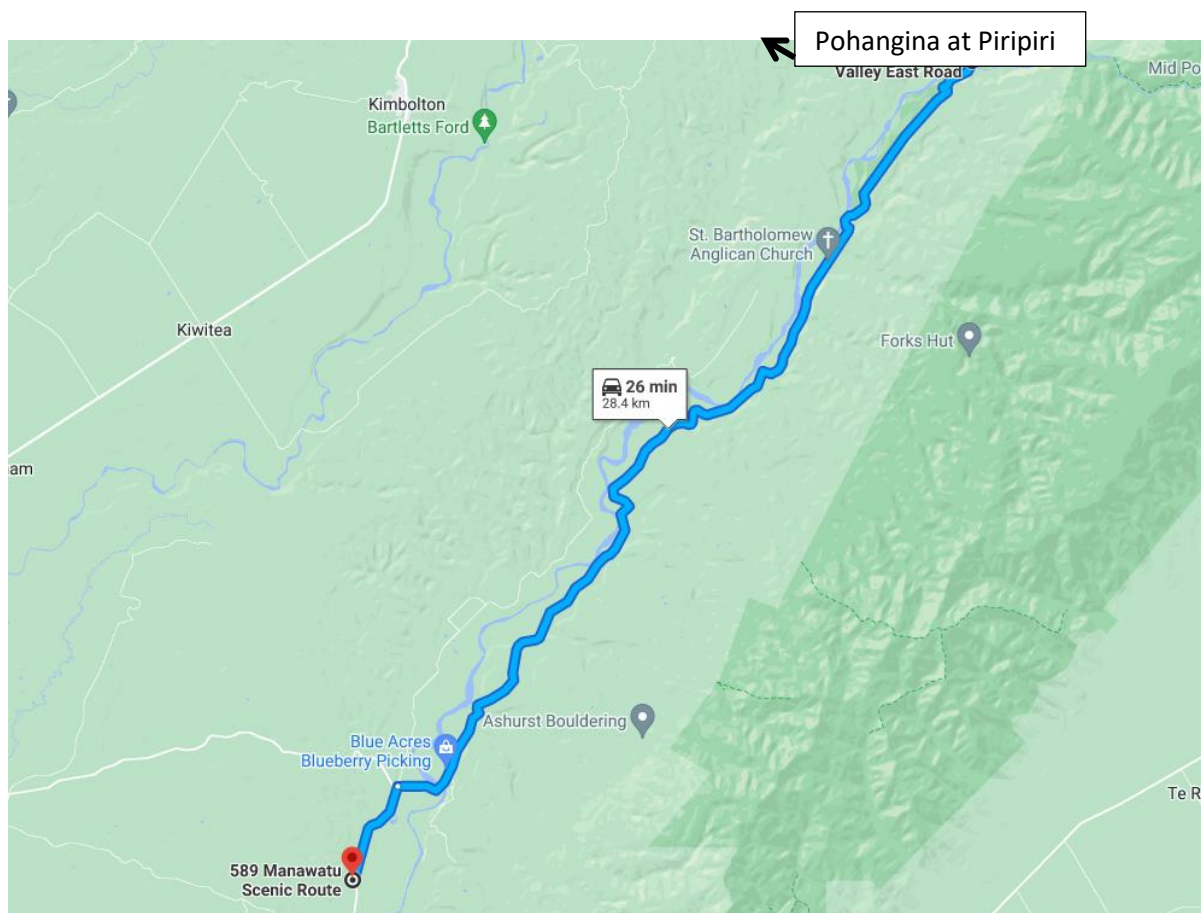
Pohangina-Valley-East Road coming off on the right and Churchill drive on the left. Stay on Pohangina-Valley-East Road.

- Approximately 12 kilometres after you pass the Highland Home Christian Camp you will come to Piripiri Bridge.
- Before you cross Piripiri Bridge there is a track leading down from the road to the left. There is a DOC sign here which says Piripiri campsite. Follow this track down until its end and park here.
- From here walk upstream of Piripiri bridge. Sample in a suitable run here.



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 10 of 29
horizons regional council	Hydrology Operations Manual	

SITE LOCATION MAP – Pohangina at Mais Reach



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Stock/Farm Animals	Communication- means of	Reduced Visibility	Engulfment

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):

WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS
---------------------	-----	----------------------------	-------------------------	-----------	-----------	--------

DIRECTIONS:

- From the Piripiri site head back the way you came towards Ashhurst along Pohangina-Valley-East Road. Turn left back onto Pohangina Road when you reach the road end.
- After turning back onto Pohangina Road continue back towards Ashhurst for approximately 1.5 to 2 kilometres. There is a left turn into Mai farm which can be slightly difficult to find. It is opposite a large green woolshed on the right. When you enter the driveway there is a house on the left hand side and a paddock on the right.

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 11 of 29
horizons regional council 	Hydrology Operations Manual	

- Once in the driveway follow it down a steep hill to a milking shed. Drive past the milking shed and take a sharp left hand turn after it. Continue following the track.
- The track will continue straight for a few hundred metres then split. Take the right hand turn towards the hayshed. Immediately past the shed there is a left hand turn follow this around the shed. Stay on the track and it will take you down to the river.
- Once down to the river you can either park here and walk or drive down the gravel beach (depending on the condition of the beach).
- **Sample below stream confluence (upstream on the true left) it is changeable.**
- Sample water quality at the hydro site



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 12 of 29
horizons regional council 	Hydrology Operations Manual	

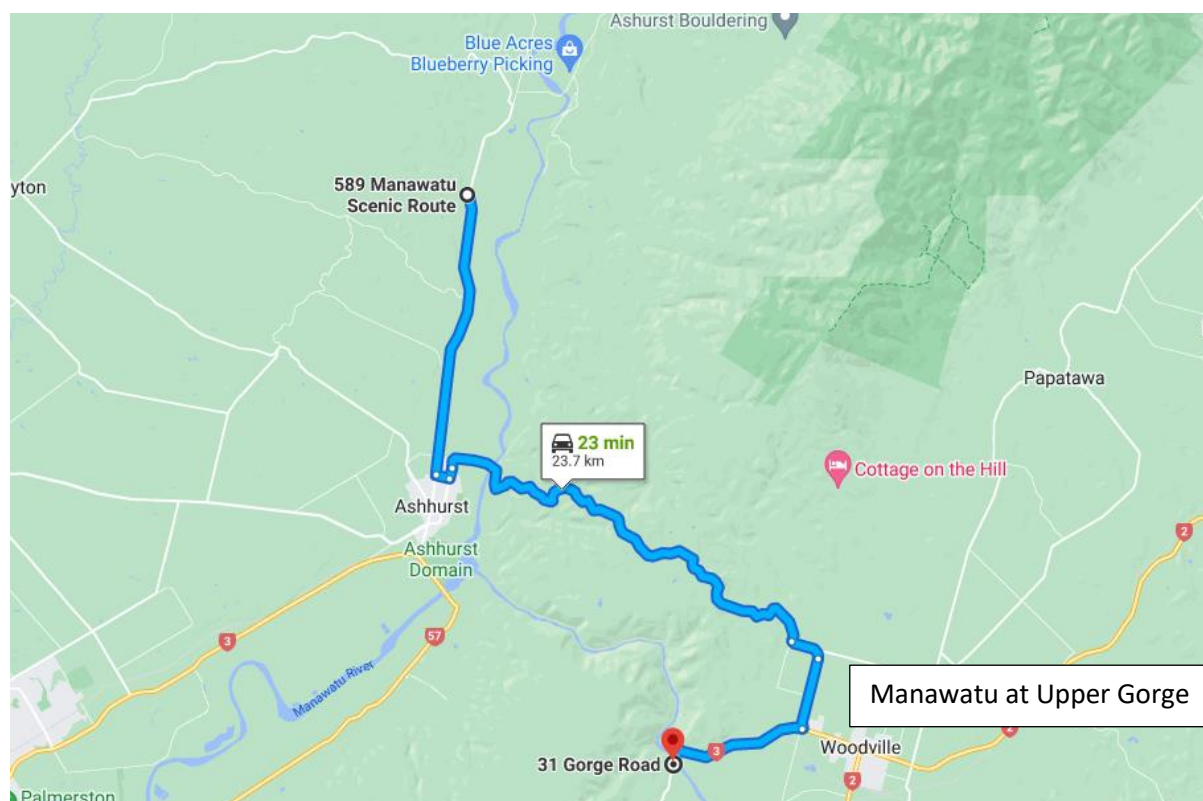


Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 13 of 29
horizons regional council 	Hydrology Operations Manual	



SITE LOCATION MAP – Manawatu at Upper Gorge

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 14 of 29
horizons regional council	Hydrology Operations Manual	



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Communication- means of	Reduced Visibility	Engulfment	

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):

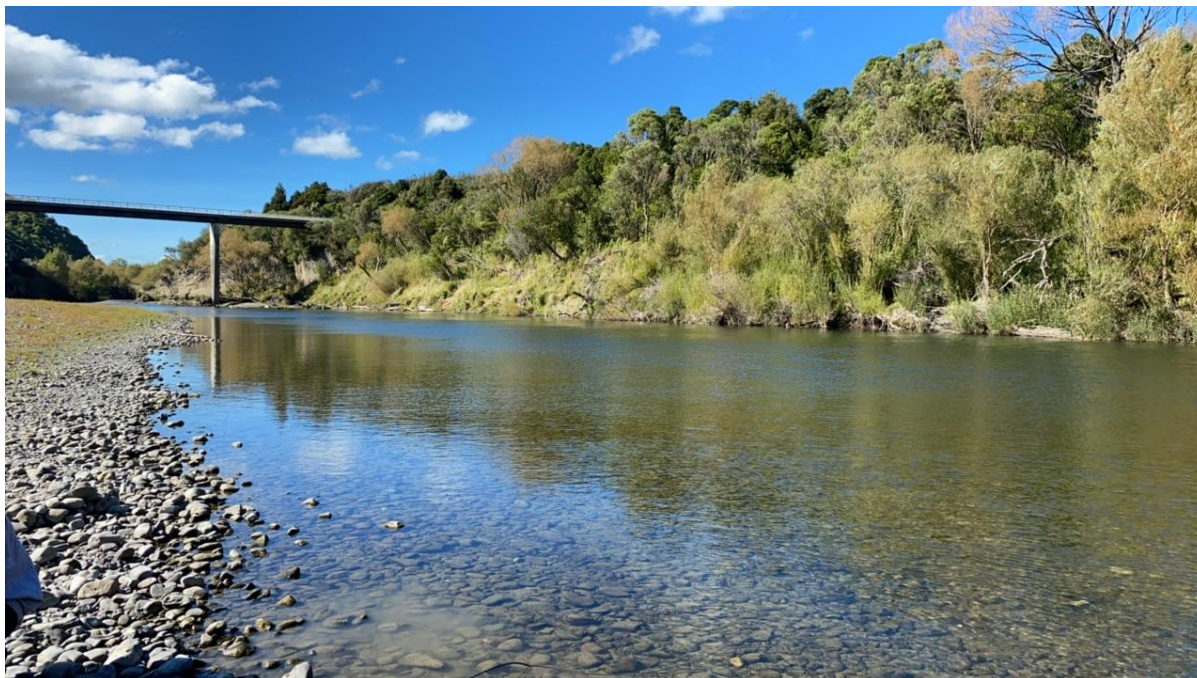
WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
---------------------	-----	----------------------------	-------------------------	-----------	-----------	--------	--

DIRECTIONS:

- From Mais Reach travel back to Ashhurst along Pohangina Road.
- When you come into Ashhurst take the first left onto North Street and follow this to the intersection with Saddle Road. Turn left onto Saddle Road and follow for about 11km.
- When you come to the other side of the ranges Saddle Road will change to Oxford Road and will continue right onto Woodlands Road.
- Follow Woodlands Road for about 2km to the intersection with SH3 (Napier Road). Turn right onto SH3.
- Stay on SH3 for about 3km, you will come some road-closed signage, ignore this and continue on down the road for about another 400m. On your left you will signage for Ferry Reserve, turn in here.
- Drive down into the reserve. Follow the track that runs parallel to the river until you reach a track which leads down to the river- Park here.

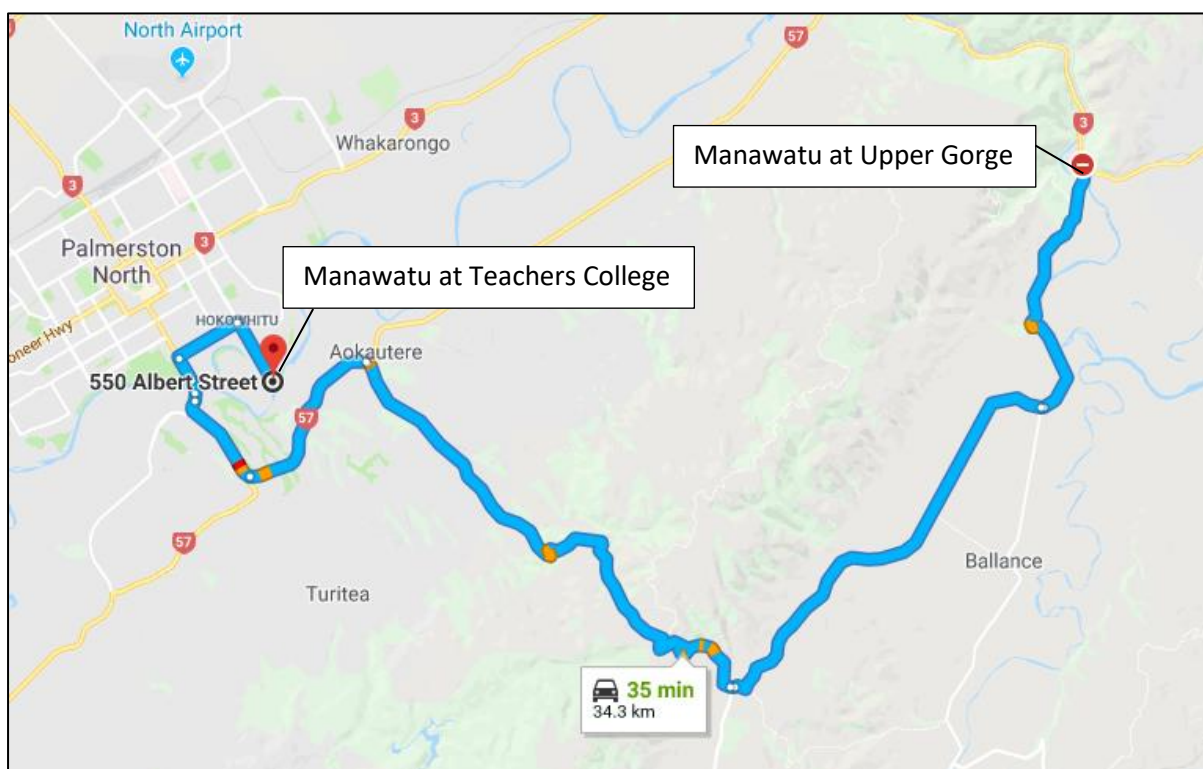
Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 15 of 29
horizons regional council 	Hydrology Operations Manual	

- Sample any point between the two bridges depending on the river flow and the changing riffle/run sequence.
- Closer to Balance bridge at the moment so drive right to the end of the reserve before accessing the river.



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 16 of 29
horizons regional council 	Hydrology Operations Manual	

SITE LOCATION MAP – Manawatu at Teachers College



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Reduced Visibility	Engulfment		

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):

WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
---------------------	-----	----------------------------	-------------------------	-----------	-----------	--------	--

DIRECTIONS:

- From Upper Gorge head back towards Ballance Bridge and turn right onto Gorge Road.
- Follow Gorge Road for about 5km, you will come to an intersection- turn right onto Ballance Valley Road.

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 17 of 29
horizons regional council 	Hydrology Operations Manual	

- Follow Ballance Road for about 9km, you will come to another intersection- carry on straight onto Pahiatua-Aokautere Road.
- Stay on Pahiatua-Aokautere Road to the end then turn left onto Aokautere Drive. Follow Aokautere Drive through Summerhill into Palmerston North. You will go over the Fitzherbert Bridge, at the first set of traffic lights turn right onto Te Awe Awe Street.
- Drive to the end of Te Awe Awe Street and turn right onto Albert Street.
- At the end of Albert Street you will see a gate that leads over the stopbank to the river. If you have the PNCC Key open this gate and drive on, otherwise park up here and continue on foot. Remember to lock the gate after you if you open it, otherwise members of the public may see it as an opportunity to drive their vehicles into the reserve and may get locked in when you leave.
- From the top of the stopbank you will be able to see the Manawatu River and large cliffs. Head down to the river in the direction of the cliffs. You will pass under some trees then out onto a gravel beach. Sample here.

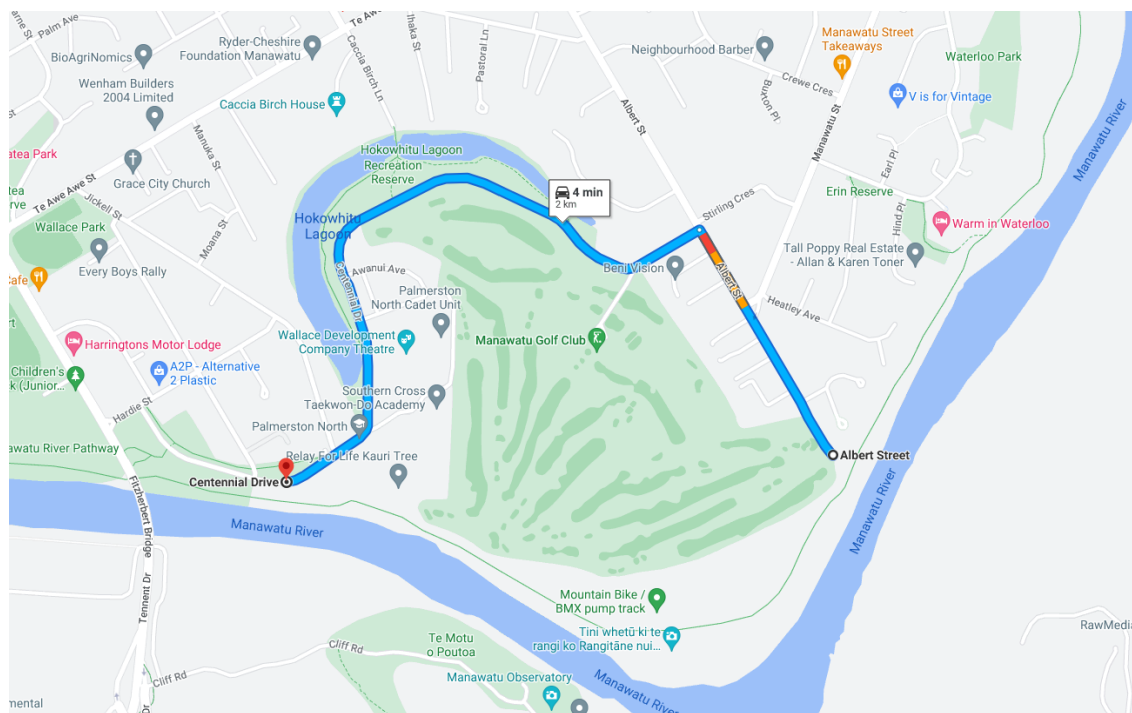


Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 18 of 29
horizons regional council 	Hydrology Operations Manual	



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 19 of 29
horizons regional council 	Hydrology Operations Manual	

SITE LOCATION MAP – Manawatū at Tcol (Hydro Site)



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Reduced Visibility	Engulfment		

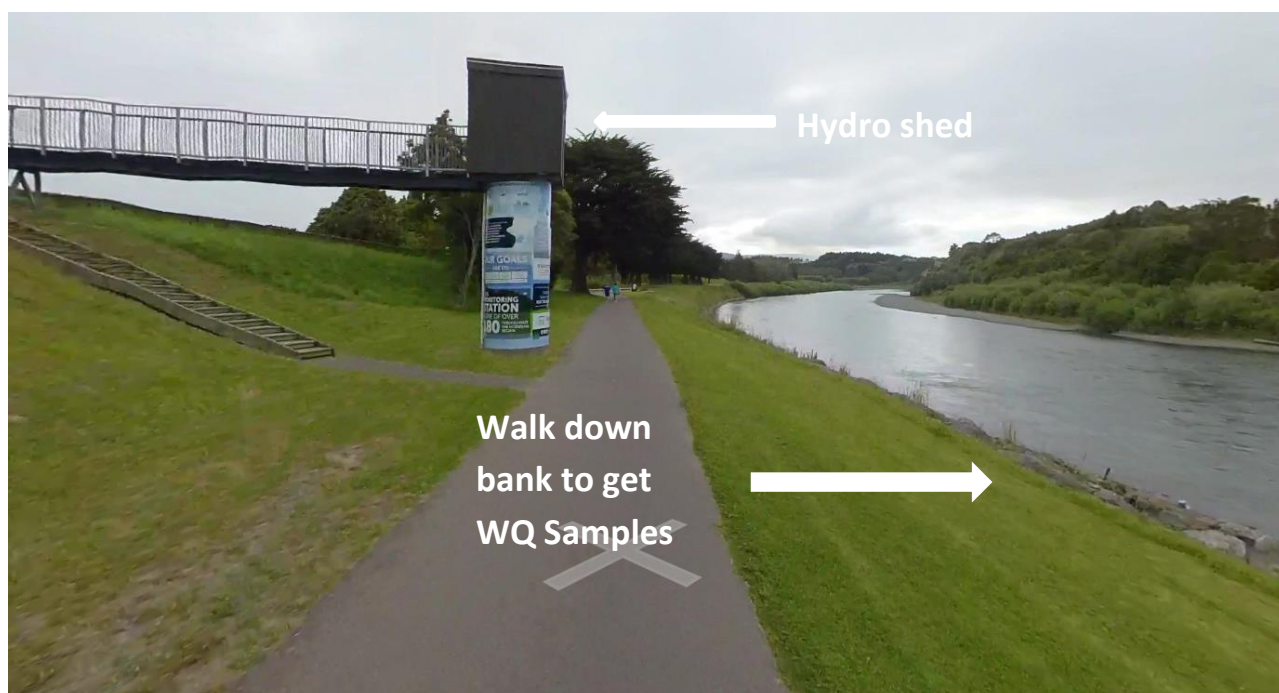
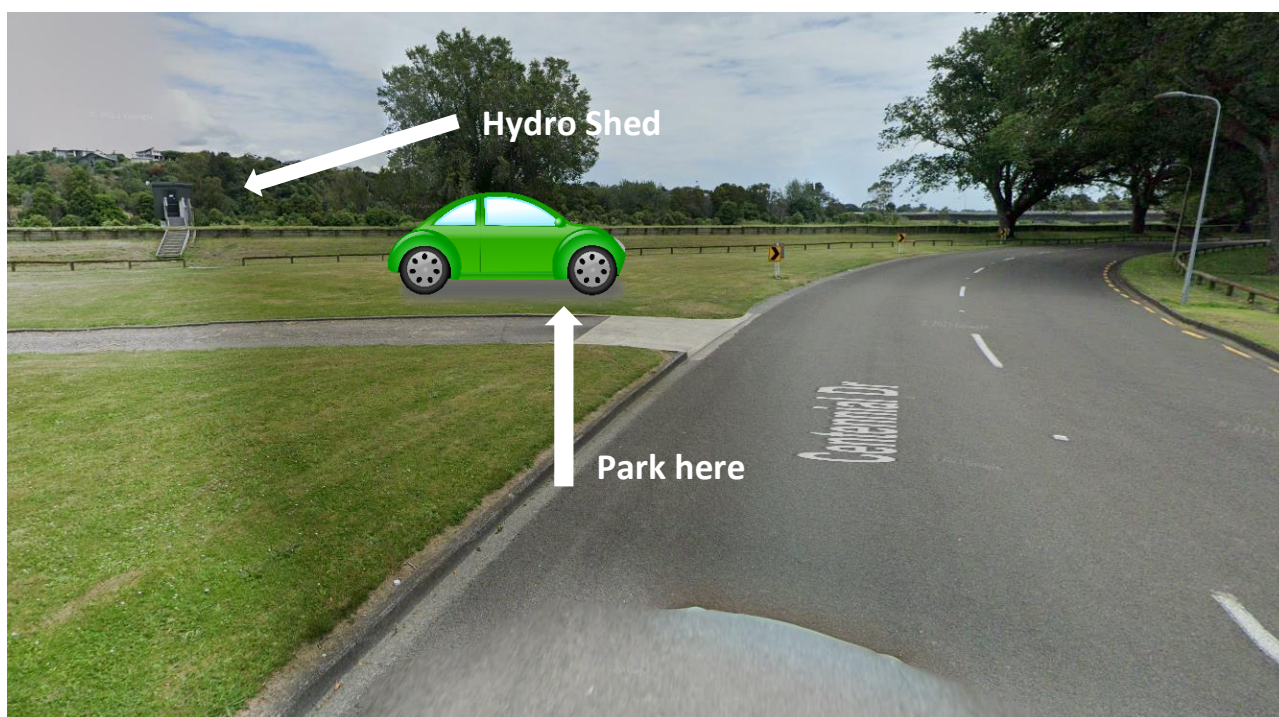
REQUIRED PPE (in accordance with above hazards – this does not negate undertaking a hazard review prior to sampling on the day and/or using additional PPE if deemed necessary):

WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
---------------------------	-----	-------------------------------------	-------------------------------	-----------	-----------	--------	--

DIRECTIONS:

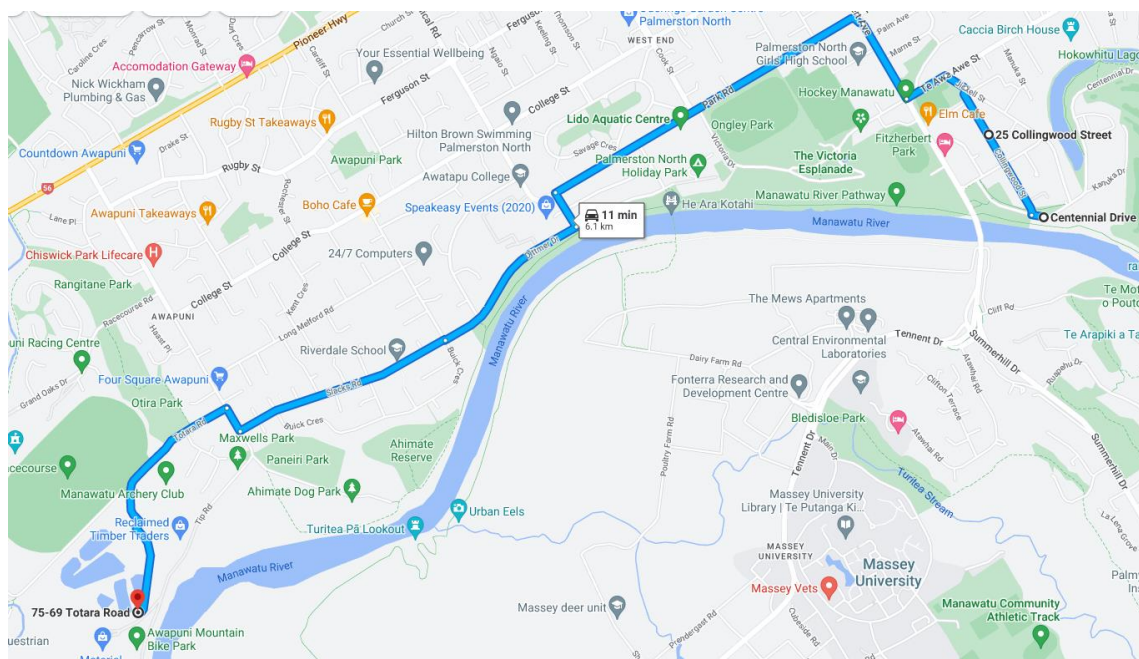
- From Teachers College drive back up Albert Street the way you came and turn left down Centennial Drive
- Continue down Centennial drive and park on the left by the Hydro recorder site (see pics)
- To take water quality samples walk down the path to the walking track, then carefully climb down the rocks to the river.

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 20 of 29
horizons regional council 	Hydrology Operations Manual	



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 21 of 29
horizons regional council 	Hydrology Operations Manual	

SITE LOCATION MAP – PNCC STP at Tertiary Treated Effluent



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

Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Reduced Visibility	Engulfment		

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):

WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
---------------------------	-----	-------------------------------------	-------------------------------	-----------	-----------	--------	--

DIRECTIONS:

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 22 of 29
	Hydrology Operations Manual	

- From the Hydro Tcol site continue down Centennial Drive and turn right onto Collingwood Street.
- Turn left onto Jickell Street, then left onto Te Awe Awe Street.
- At the lights turn right onto Fitzherbert Ave.
- At the next lights turn left onto Park Road, follow this for 3 minutes. Then turn left onto Katene Street.
- At the end of Katene Street turn right onto Dittmer Drive. Continue Dittmer Drive as it turns into Slacks Road.
- At the end of Slacks Road turn right and then left onto Totara Road.
- Follow Totara Road into the STP
- Park outside the main office – you will need to sign in here and ask someone to open the gate for you.

ACCESS:

- Sign in at the Office & ask a staff member to open the gate.
- Drive through the plant gates (on the right after the office) and follow the road to the left.
- Follow this road until you can see the wetland and turn off to the right.
- You should be on a paved access road between the wetland and some processing buildings.
- Park up by the sheds/buildings.
- Walk along the side carefully and sample the 'channel' before it flows into the wetland (see picture below).
- Sometimes there is no discharge into the channel and wetland area, you may notice the overflow structure may be discharging instead (the effluent runs to the final discharge point bypassing the wetlands. In this instance take a sample from this overflow structure and note the sample location and document (i.e. photograph).
- Sign out at the Office.

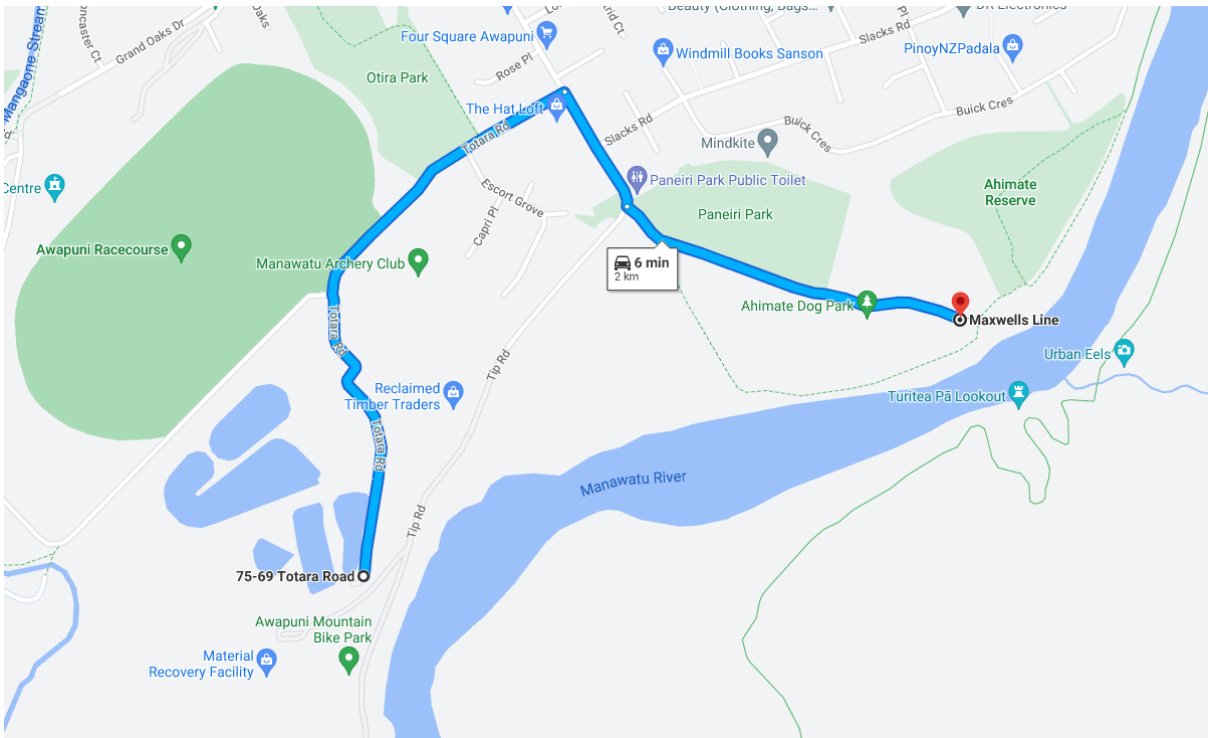
Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 23 of 29
horizons regional council 	Hydrology Operations Manual	



Detail Map of PNCC at Tertiary Treated Effluent Sample Site



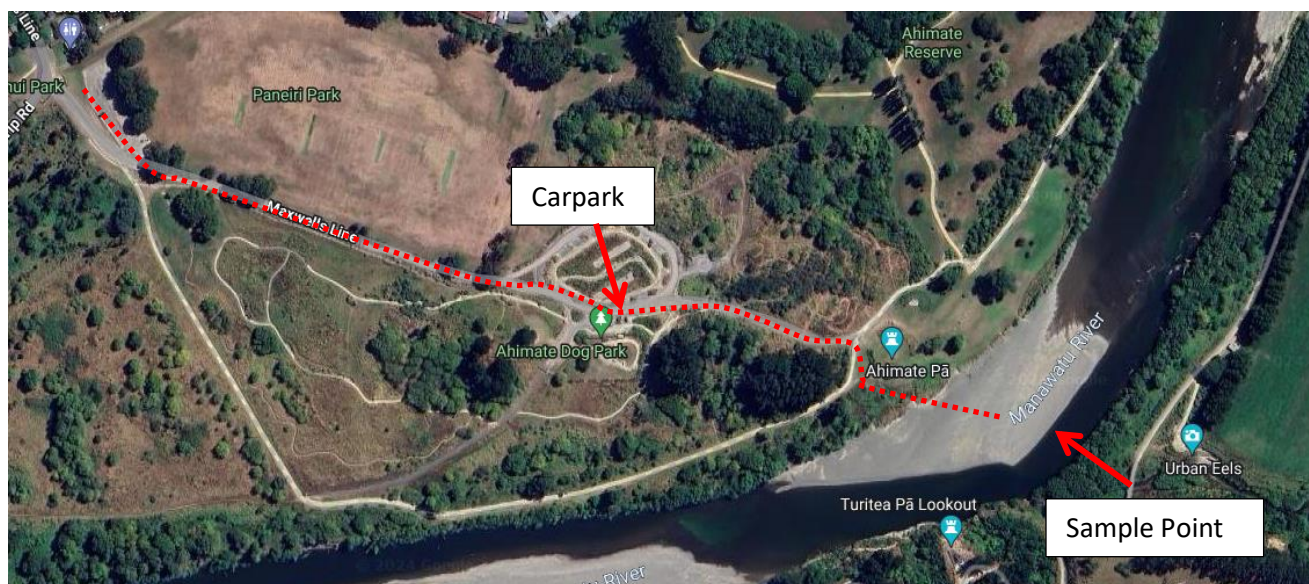
SITE LOCATION MAP – Manawatu at u/s PNCC STP



POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):							
Drowning		UV Radiation		Slippery surfaces		Trip hazards	
Difficult entry/exit		Potential for difficult rescue		Weather/Temperature Extremes		Traffic / Vehicle Movements	
Reduced Visibility		Engulfment					
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):							
WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
DIRECTIONS: <ul style="list-style-type: none">• Head back up Totara Road and turn left at the T intersection, onto Maxwells Line.• Shortly after you will see the signs for Paneiri park, turn in here. Drive right down to the 2nd parking area and then around the loop at the opposite end of the loop you will see a Path down into the reserve. Park on the loop.• Go through. Depending on the flows and river works there are 2 good sampling spots. One us of the access so walk straight. Access the river here heading u/s a little							

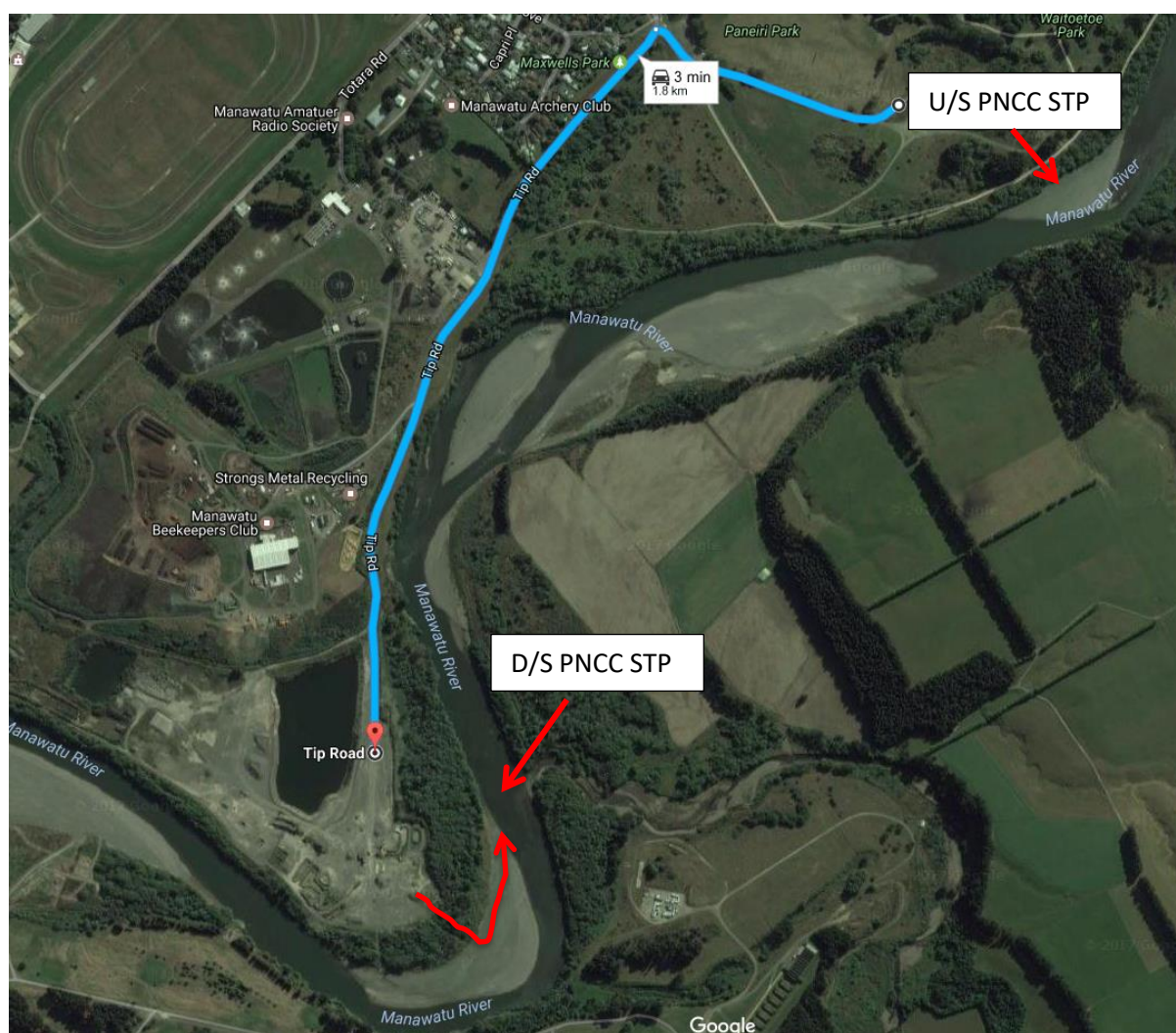
Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 25 of 29
horizons regional council 	Hydrology Operations Manual	

- The other good access is below the swimming hole. When you go through the gate turn to your right. The when you see the Manawatu river sign. Walk to the river and then below the pool. Watch the riffle below it is very swift but find a reach between the riffle and pool.



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 26 of 29
horizons regional council	Hydrology Operations Manual	

SITE LOCATION MAP – Manawatu at d/s PNCC STP



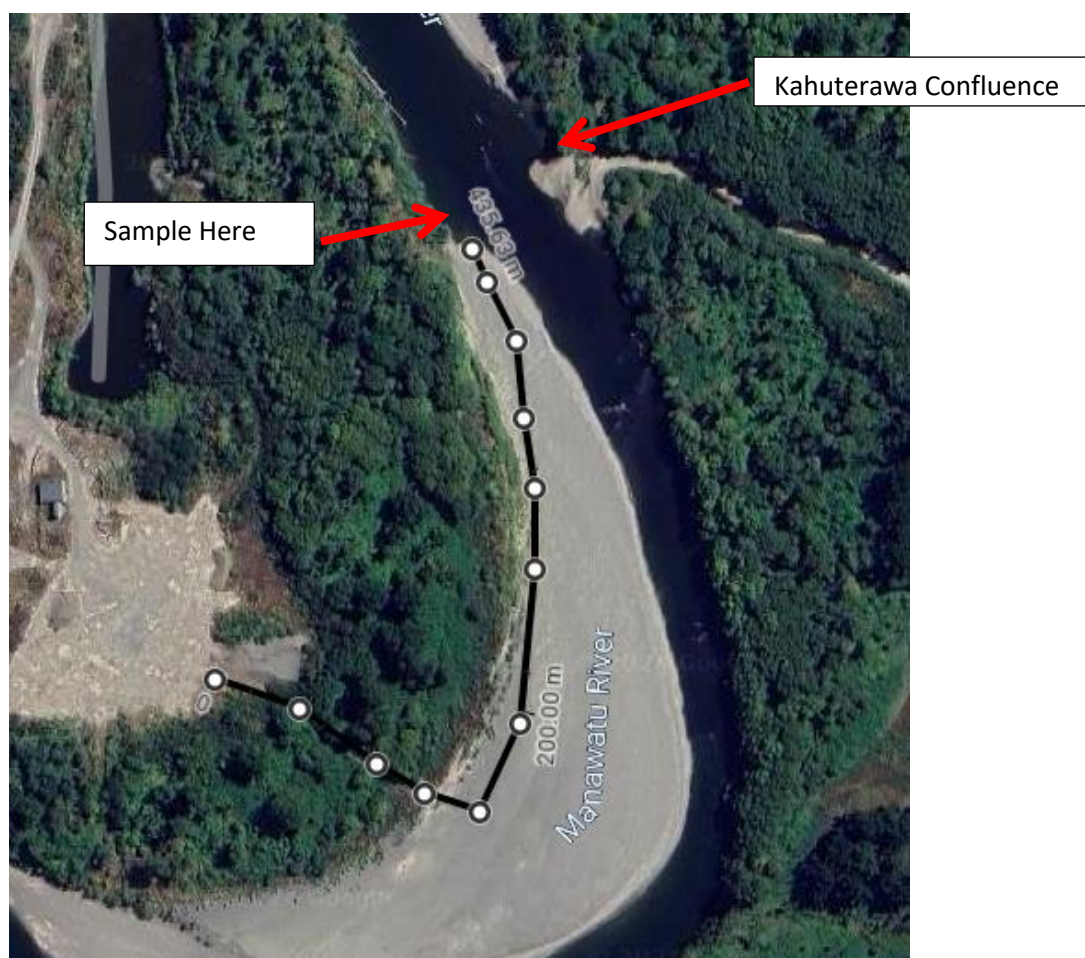
POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day):

Drowning	UV Radiation	Slippery surfaces	Trip hazards
----------	--------------	-------------------	--------------

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 27 of 29
	Hydrology Operations Manual	

Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Reduced Visibility	Engulfment	Machinery- mobile plant	
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):			
WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON
		THROW BAG	VHF RADIO
		HI-VIS	
DIRECTIONS: <ul style="list-style-type: none"> From Paneiri Park turn left onto Tip Road. This (unsurprisingly) takes you to the rubbish dump. This road splits to go up to the rubbish dump. Stick to the left hand branch next to the river and you will come to a gravel quarry. You need a key to unlock the gate. Head in following the track past what used to be the office. You do not need to sign in as the quarry is closed and unattended. Head to the left towards the trees in the direction of the river and you should find a track which heads through the trees to the river- follow this. If you stick to the track it should bring you out onto a gravel beach next to the river. Head upstream until the beach begins to run out. This will be your sample point. It is important to note that there is a tributary on the far side (true left) of the river. Try and sample up stream of this. If not stick to the true right where there hasn't been any mixing. 			

Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 28 of 29
horizons regional council 	Hydrology Operations Manual	



Version No: 06 Issue Date: 20/08/2024 Portfolio: Discrete Water Quality	Horizons Regional Council	Section No: 15.7 Appendix No: 35 Page: 29 of 29
	Hydrology Operations Manual	