

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 1 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

SoE and Periphyton Monitoring Run Guide

Ohau-Waikawa Run 1

STATE OF ENVIRONMENT

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 2 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

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 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 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 FLOTATION 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	SUN BLOCK & HAND SANITISER	VHF RADIO	THROW BAG	PERSONAL LOCATOR BEACON	SAMPLE POLE
						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 3 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		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/stream 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 aqueducts. 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 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

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 4 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
							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 health and safety signage, and be on the lookout for gravel extraction vehicles at the Makahika sites.
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 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 able to make out your surrounding environment stop work immediately. If working

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 5 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

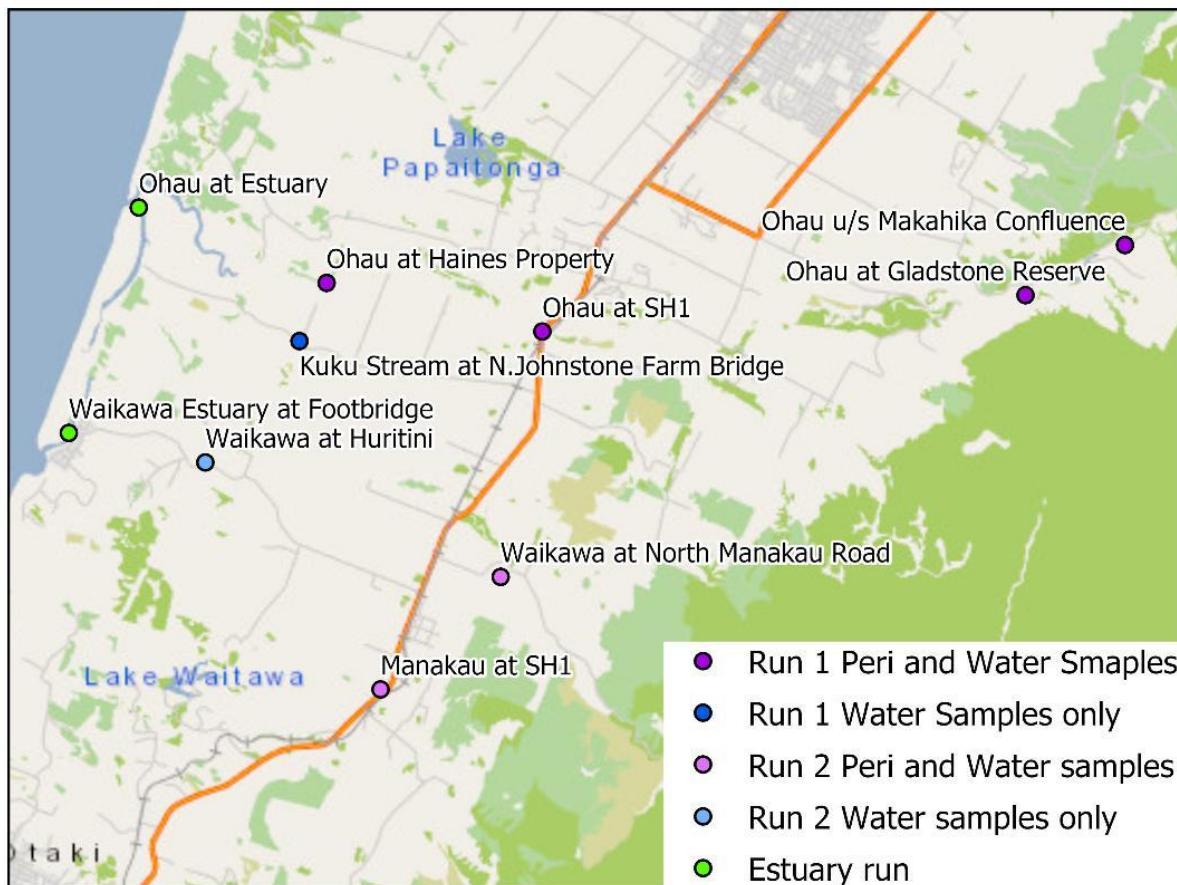
Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
							at night it is advisable to traverse the property in daylight first to map out an action plan outlining walking tracks, vehicle tracks, fence lines, stock positions, ponds, waterways, houses, and sheds as well as other significant items of interest. [HMP12]

Site Information

Hilltop Site Name	Easting/Long (NZTM)	Northing/Lat (NZTM)	Comments
Ohau u/s Makahika Confluence	1799096	5496819	Water Quality Samples SmarTroll, Black disk Chlorophyll a Sample and Visual Assessment
Ohau at Gladstone Reserve	1797434	5495980	Water Quality Samples SmarTroll, Black disk Chlorophyll a Sample and Visual Assessment
Ohau at State Highway Bridge	1789382	5495374	Water Quality Samples SmarTroll, Black disk Chlorophyll a Sample and Visual Assessment
Ohau at Haines Property	1785783	5496186	Water Quality Samples SmarTroll, Black disk Chlorophyll a Sample and Visual Assessment
Kuku Stream at N.Johnstone Farm Bridge	1785330	5495215	Water Quality Samples SmarTroll, Black disk



Hydrology Operations Manual



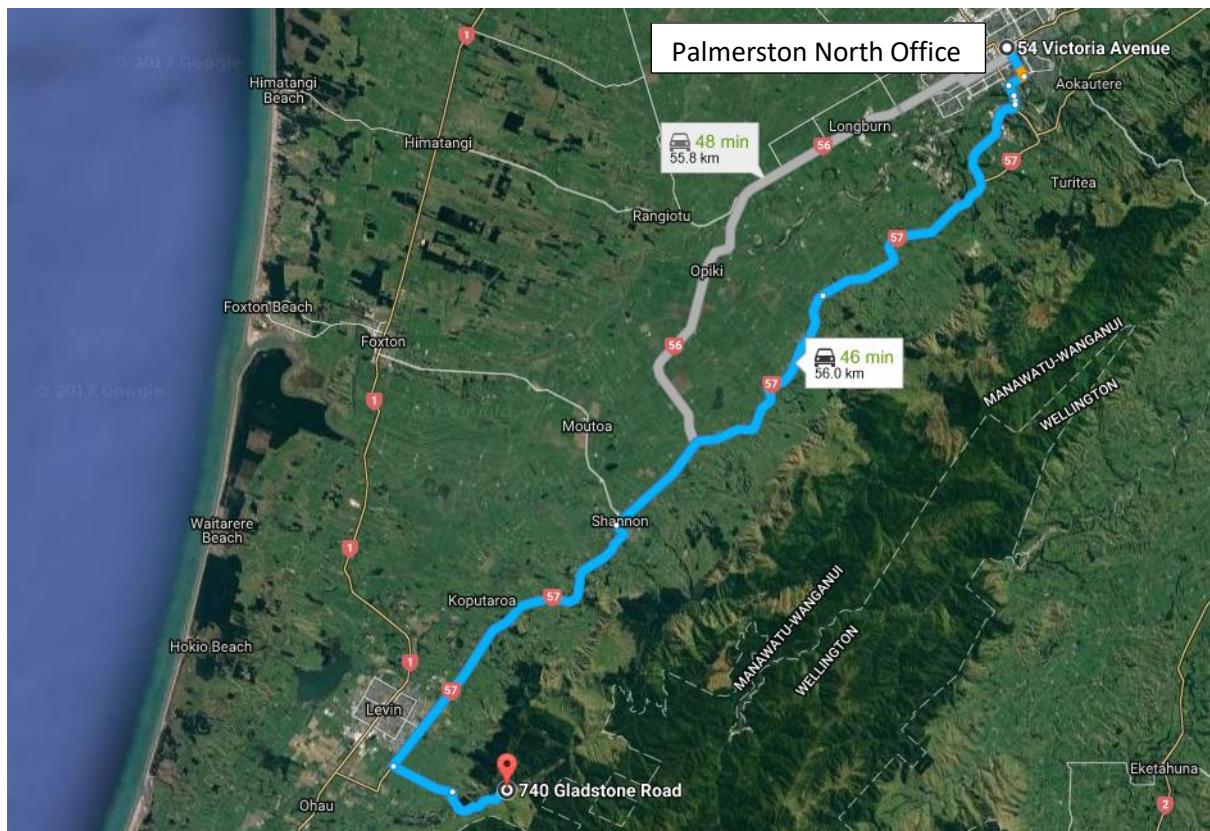
Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 7 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

Equipment Required

Sample Bottles	FIVE(5) sample bottle sets - refer to http://tqm.horizons.govt.nz/Hydrology/SOPs/cd_om_15.4_Appendix_4_ELS%20Bottle%20Guide.xlsx
Sample numbers	FIVE (Water Quality) FOUR (Periphyton)
Equipment	<ul style="list-style-type: none"> • SmarTroll (calibrated) – including iPad • Bathoscope • Pottles (Approx 10) • Scrubbing brush, tooth brush, washer bottle, yellow sample bottle lid and ice cream container • Sampling pole • Black disk, viewer, tape measure, clarity tube • Chilly bins and ice-packs • Disinfectant equipment for sampling equipment • Field sampling books • Sampling numbers for Chla and Water samples • Disinfectant equipment for sampling equipment • Alcohol gel • Personal Locator Beacon • 4WD Vehicle equipped with VHF Radio • Throw Bag
Additional Comments/ Instructions	<p>Ohau at Haines Property: Contact the landowner for permission to sample prior to accessing the property.</p> <p>Dylan Smith- Farm Manager 027 208 9927</p> <p>Toilets:</p> <ul style="list-style-type: none"> • At the farm shed

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 8 of 20
horizons regional council	Hydrology Operations Manual	horizons regional council		

SITE LOCATION MAP – Ohau at u/s Makahika Confluence



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

Drowning	Engulfment	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Remote Area	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Stock/Farm Animals	Electrical-low/high voltage	Machinery- mobile plant	Communication-means of	Reduced Visibility

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
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DIRECTIONS:

- From the Palmerston North office head out along State Highway 57, go through Shannon and continue on towards Levin. Go past the turn off into Levin and turn left onto Tararua Road. There is a big brown road sign opposite this turn off which says Makahika Outdoor Centre.
- Drive to the end of Tararua Road and turn right onto Gladstone Road
- Keep driving along this road, you will pass the Gladstone Reserve (you will come back to this later).
- Continue past Poads Road, for about 750m before the bridge there is a sharp right turn in to a big gravel area.



Hydrology Operations Manual



ACCESS: Park in the gravel extraction area if flows are high, or alternatively drive over the bridge and up the hill, find a suitable place to turn around and park on the downhill section before the bridge.



Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 10 of 20
horizons regional council	Hydrology Operations Manual	horizons regional council		





Hydrology Operations Manual



SITE LOCATION MAP – Ohau at Gladstone Reserve



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

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

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	
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DIRECTIONS:

- From Ohau u/s Makahika Confluence site, continue back down Gladstone Road towards Levin for about 2 minutes until you see Gladstone Reserve to the left.
- Drive into the reserve.
- In summer you will be able to drive right down to the river. In winter there is a gate so you will have to park up near the toilet and walk down.
- Drive/Walk down through the Reserve until you find the Ohau River.
- Find a suitable run to sample.

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 12 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	

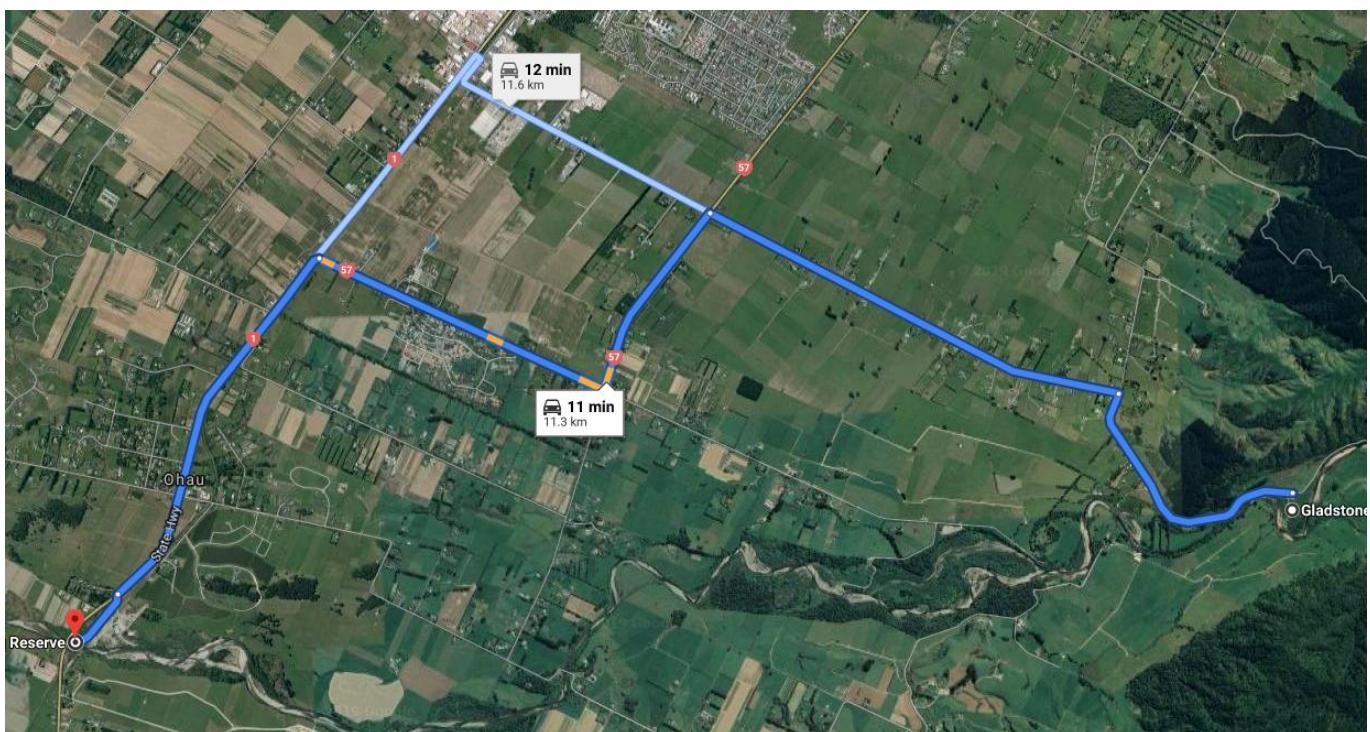




Hydrology Operations Manual



SITE LOCATION MAP – Ohau at State Highway Bridge



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

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	
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DIRECTIONS:

- From Gladstone Reserve, drive back to SH 57 and turn left, follow the road around to the right towards Wellington.
- Turn Left on to SH 1 towards Wellington, drive through Ohau, then turn left on to Parakawau Road.
- Park close to the river and sample downstream of the bridge.



Hydrology Operations Manual

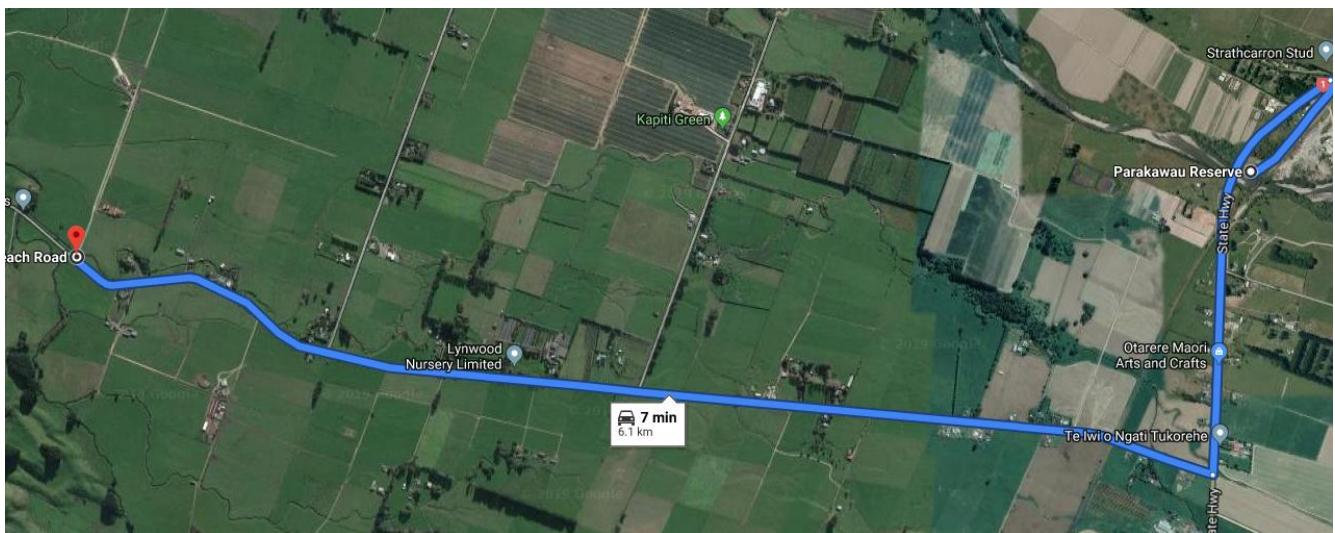


Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 15 of 20
horizons regional council	Hydrology Operations Manual	horizons regional council		



Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 16 of 20
horizons regional council	Hydrology Operations Manual	horizons regional council		

SITE LOCATION MAP – Ohau at Haines Property



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

Drowning	Engulfment	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Remote Area	Stock/Farm Animals	Communication- means of	Reduced Visibility
Potential for difficult rescue	Electrical- low/high voltage	Machinery- mobile plant	Weather/Temperature Extremes	Traffic / Vehicle Movements

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

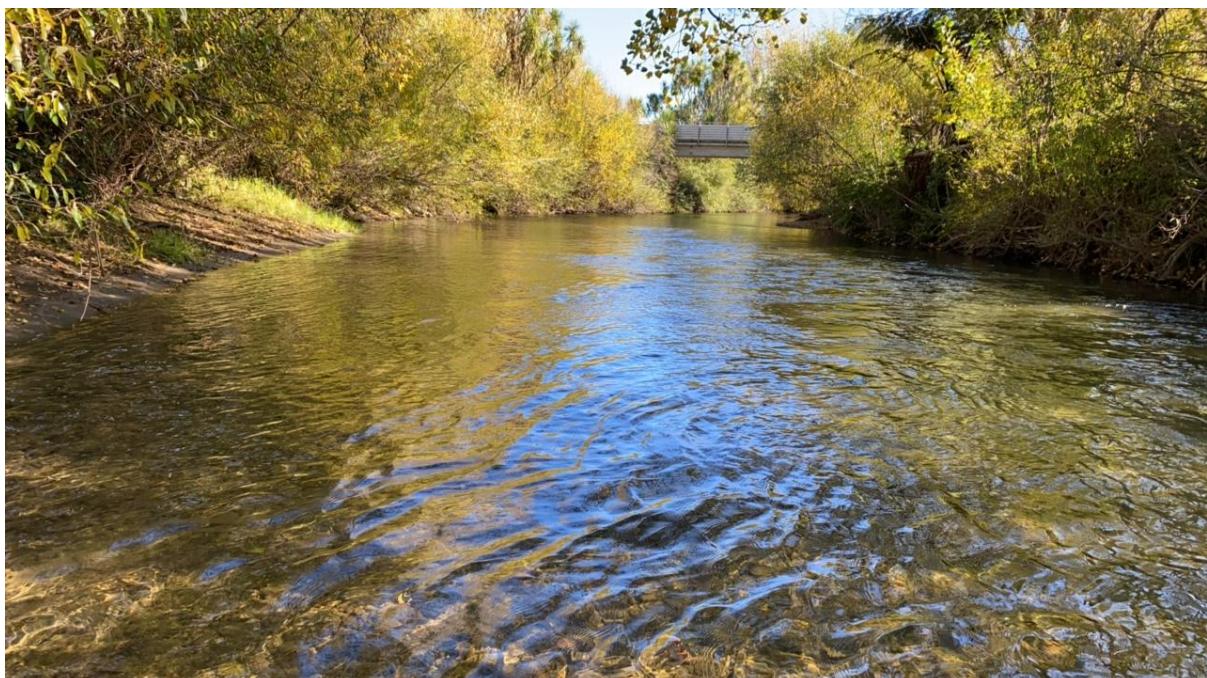
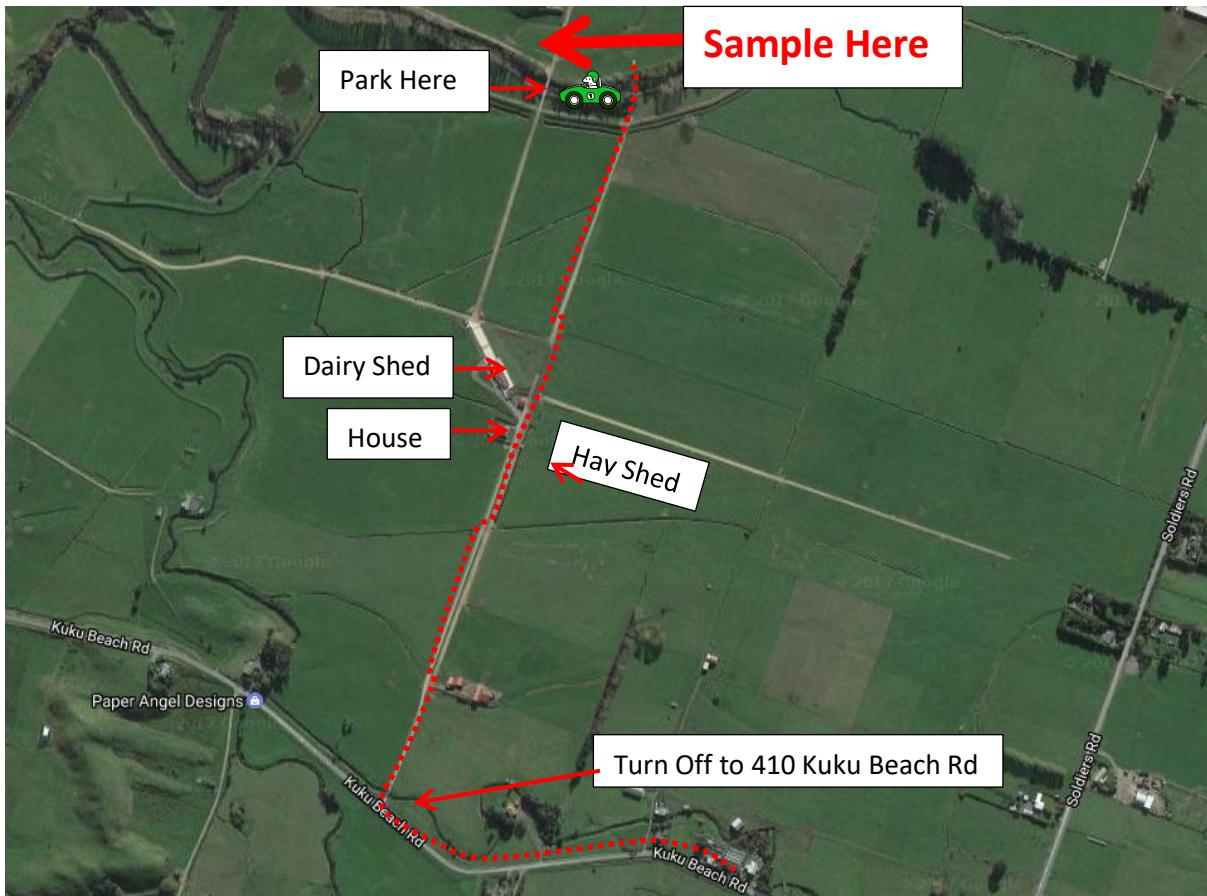
DIRECTIONS:

- From Ohau at SH1 return to SH1 and turn left, continue over the overpass. In the next passing lane you need to turn right at the end of it.
- Follow SH1 until you see Kuku Beach Road. Turn right here.
- Follow Kuku Beach Road for approximately 4 minutes until you reach a small bridge on the right and a red barn in the adjacent paddock. This is 410 Kuku Road (Haines Farm), turn down here.
- Follow the main driveway and then turn in through one of the gates (there are multiple gates) onto the cattle race which runs adjacent to the driveway. Stop in at the cowshed office to sign the visitor's book then head back to the race.
- Follow the race in the same direction heading towards the stopbank in the distance. Continue on straight down the race to the stopbank. Drive on up the stopbank and park the car at the top.
- Walk down the other side of the stopbank and over the electric fence and through the trees down to the river. Sample here.

ACCESS:

- Contact the landowner for permission to sample prior to accessing the property.
Dylan Smith- Farm Manager: 027 208 9927

Sign in at cowshed office in visitors book





Hydrology Operations Manual



SITE LOCATION MAP – Kuku at N.Johnston Farm Bridge



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

Drowning	Engulfment	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Remote Area	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Stock/Farm Animals	Electrical- low/high voltage	Machinery- mobile plant	Communication- means of	Reduced Visibility

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 Haines Property site, drive back down the driveway to Kuku Beach Road
- Turn right and park on the grass directly by the farm bridge
- Park up off the road and sample the creek that runs under the bridge- this is the Kuku Stream.

Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 19 of 20
horizons regional council		Hydrology Operations Manual	horizons regional council	



Version No: Issue Date: Portfolio:	04 24/05/2024 Discrete Water Quality	Horizons Regional Council	Section No: Appendix No: Page:	15.7 24 20 of 20
horizons regional council	Hydrology Operations Manual	horizons regional council		



Head back to the office