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SoE and Periphyton Monitoring Run Guide

Lower Rangitīkei

**STATE OF ENVIRONMENT
(Monthly Sampling)**

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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 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 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	
						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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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

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Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
							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]
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].
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 at night it is advisable to traverse the property in daylight first to

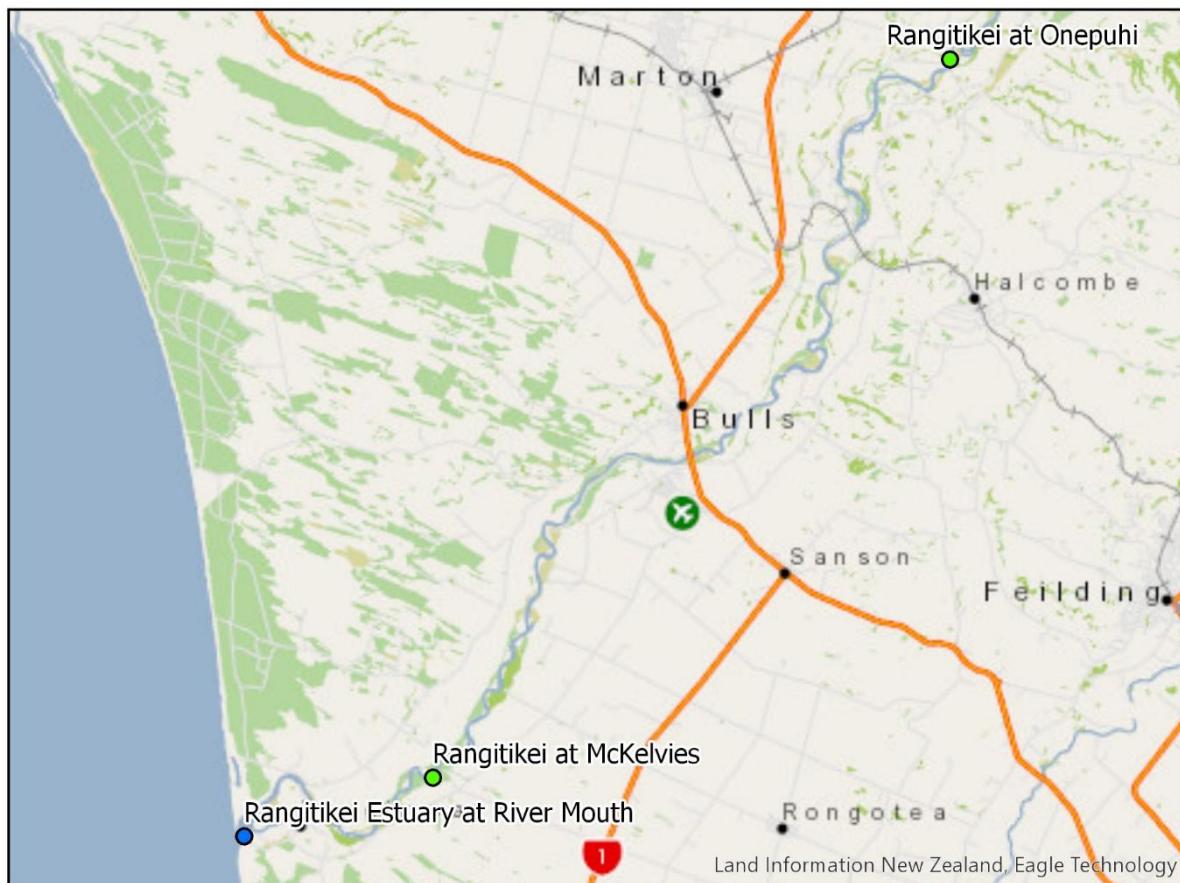
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Known Hazard	Significant		Can it be Eliminated		Can it be Isolated		Method of control
	Yes	No	Yes	No	Yes	No	
							map out an action plan outlining walking tracks, vehicle tracks, fence lines, stock positions, ponds, waterways, houses, and sheds as well as other significant items of interest. [HMP12]

Site Information

Hilltop Site Name	Easting/Long (NZTM)	Northing/Lat (NZTM)	Comments
Rangitīkei at Onepuhi	1811449.77	5561123.95	Take Chlorophyll a Sample, 20-View Visual Assessment of Periphyton Water Quality Samples, SmarTroll Reading and Black Disc
Rangitīkei at McKelvies	1795207	5538539	Take Chlorophyll a Sample, 20-View Visual Assessment of Periphyton
Rangitīkei at McKelvies SOE site	1793500	5537259	Take Water Quality Samples, SmarTroll Reading and Black Disc
Rangitīkei Estuary at River Mouth	1789280	5536693	Take Water Quality Samples and a SmarTroll reading

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Equipment Required

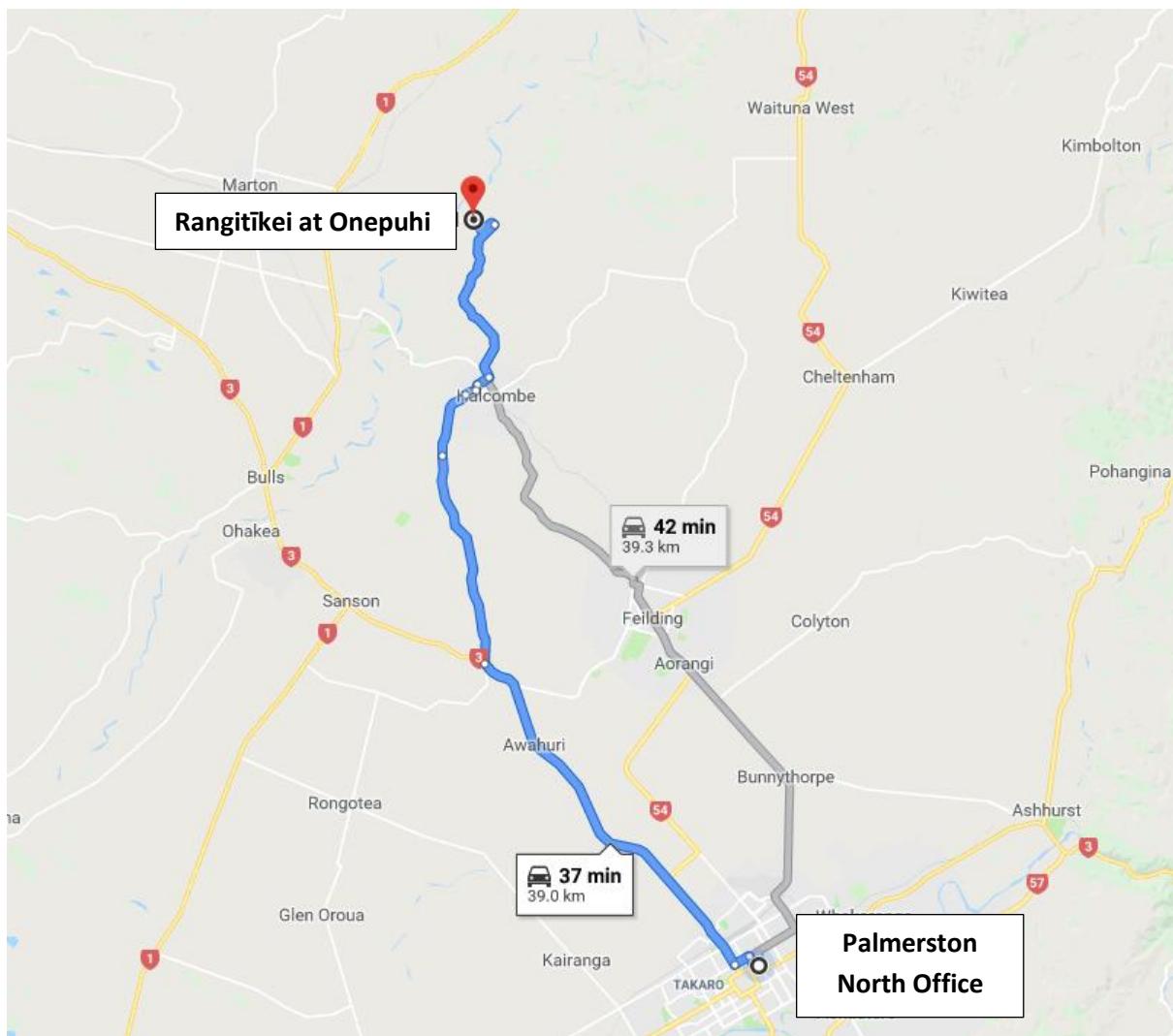
Sample Bottles	Three (3) & Two (2) sample bottle sets - refer to http://tqm.horizons.govt.nz/Hydrology/SOPs/cd_om_15.4_Appendix_4_E_LS%20Bottle%20Guide.xlsx
Sample numbers	Three (Water Quality) Two (Periphyton)
Equipment	<p>Water Quality</p> <ul style="list-style-type: none"> • SmarTroll (calibrated) x 2 – including iPad • Sampling pole • Field sampling books • Sampling numbers for Water Samples <p>Periphyton</p> <ul style="list-style-type: none"> • iPad • Bathoscope • Pottles (Approx 10) • Sample labels • Scrubbing brush, tooth brush, washer bottle, yellow sample bottle lid and ice cream container <p>Both</p> <ul style="list-style-type: none"> • Chilly bins and ice-packs • Disinfectant equipment for sampling equipment • Alcohol gel • Personal Locator Beacon • 4WD Vehicle equipped with VHF Radio • Throw Bag



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SITE LOCATION MAP – Rangitīkei at Onepuhi



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
Engulfment	Communication- means of	Remote Area	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 travel north along State Highway 3 towards Sanson.

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- After Awahuri and the 2 Feilding turns offs you come up the hill, past the Rongotea turn off on your left, take the next right to Halcombe and Memorial Lookout.
- Continue along Mt Stewart-Halcombe rd, which turns into Mt Biggs rd
- Keep left onto Stewart st then turn into Godley st.
- Continue straight through the Stop signs over the railway tracks, then take the next left on to Tokorangi rd
- Continue on till the end of the rd and turn left on to Makino Rd
- Give way and continue straight on Makino rd.
- You will come to a sharp right hand turn, drive as close to the fence as possible, the bank here is a little undercut. You can park up here, if its dry you can follow the first left turn and cross the stream and follow the tracks in 4WD.
- Sample from the main stem of the river.

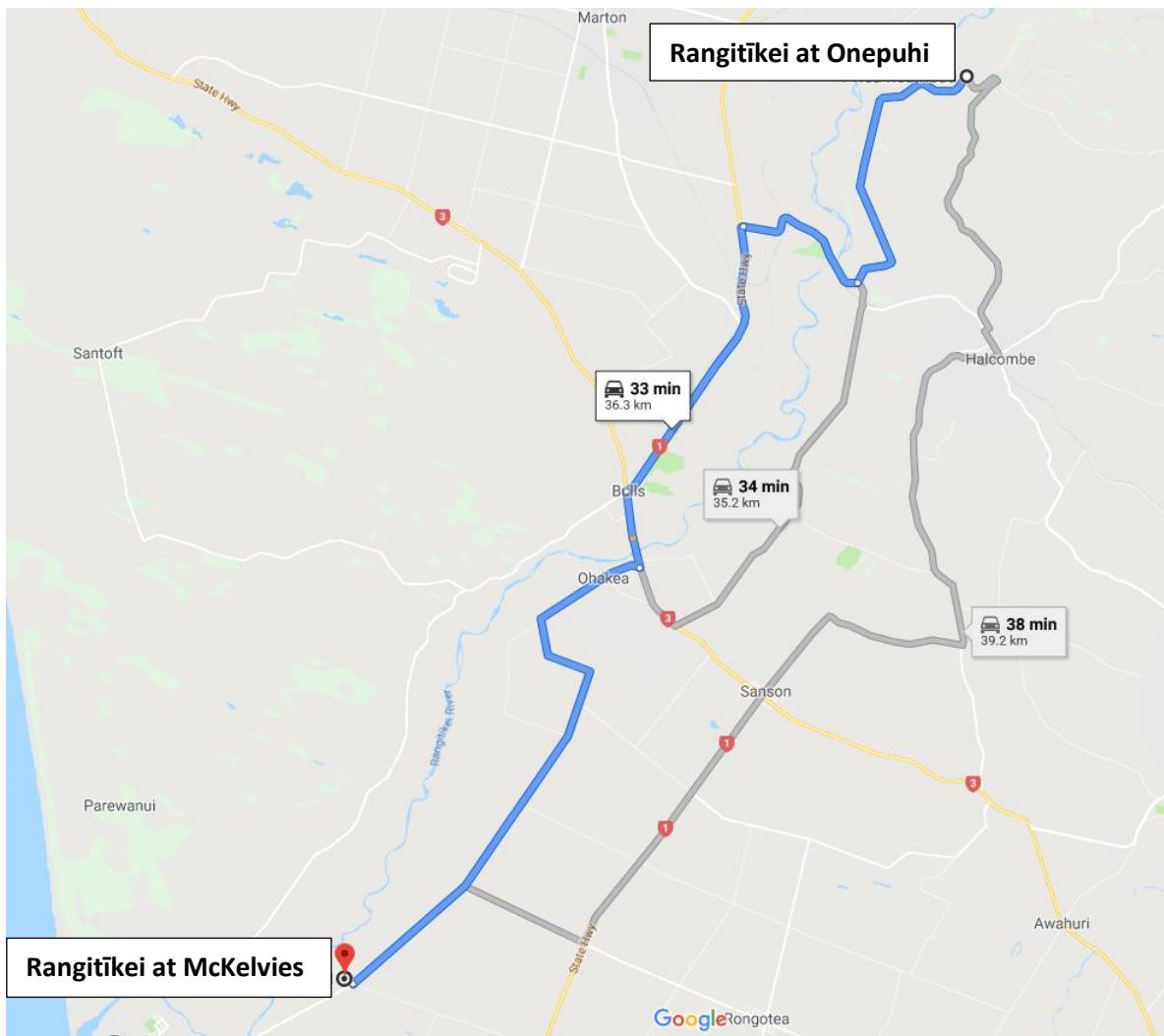
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SITE LOCATION MAP – Rangitīkei at McKelvies



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
Engulfment	Communication- means of	Remote Area	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 Onepuhi site head back to the first intersection and turn right on to Pryces Line.
 - Continue to the end and turn right onto Halcombe road, this becomes Kakariki Rd, continue to the end

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- Turn left onto SH1 head back to Bulls, when in Bulls turn left onto SH3.
- Travel through Bulls and over the bridge across the Rangitikei River. Immediately after this bridge on the right is Tangimoana Road. Take this road.
- Follow Tangimoana Road for approximately 16 kilometres until you reach Rosina Road. Turn right onto Rosina Road.
- Rosina Road will turn into a gravelled road. You will go through a gateway and around a left hand turn, with shrubs surrounding. The road will split with the right hand track dropping down. Take the Left hand track. Follow the track until you reach the river and find a suitable spot to sample. Take a Chlorophyll a sample from 10 rocks and do a 20-view visual assessment.

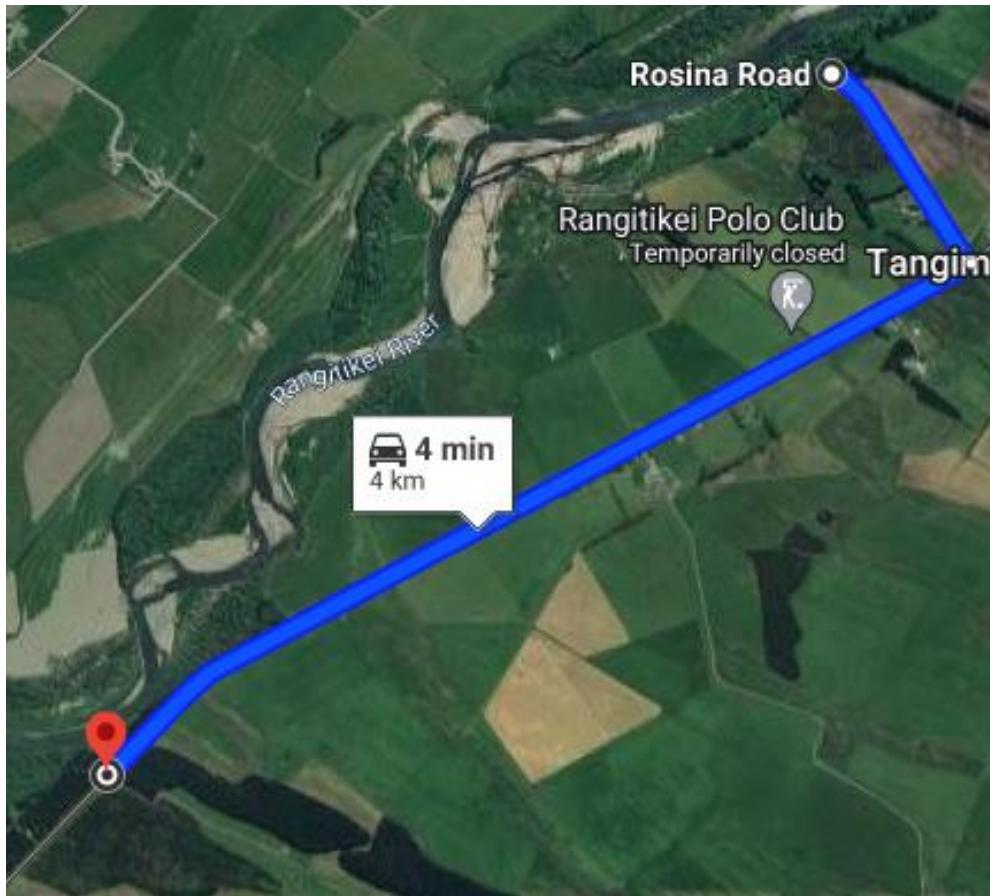


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Site Location – Rangitīkei at McKelvies SOE Site



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
Engulfment	Communication- means of	Remote Area	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 periphyton McKelvies site head back to the road and turn right. Drive for approximately 4 minutes, you will see a big row of trees on the right, just after the trees turn right into a driveway with a double gate.
 - The code for this gate is 0101 (other gates are 1010)
 - Follow the path and you will come across a hydro site.
 - Take water quality samples, Smartrol reading and black disc reading here.

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Drive down the track and say
to the left when it branches off
on

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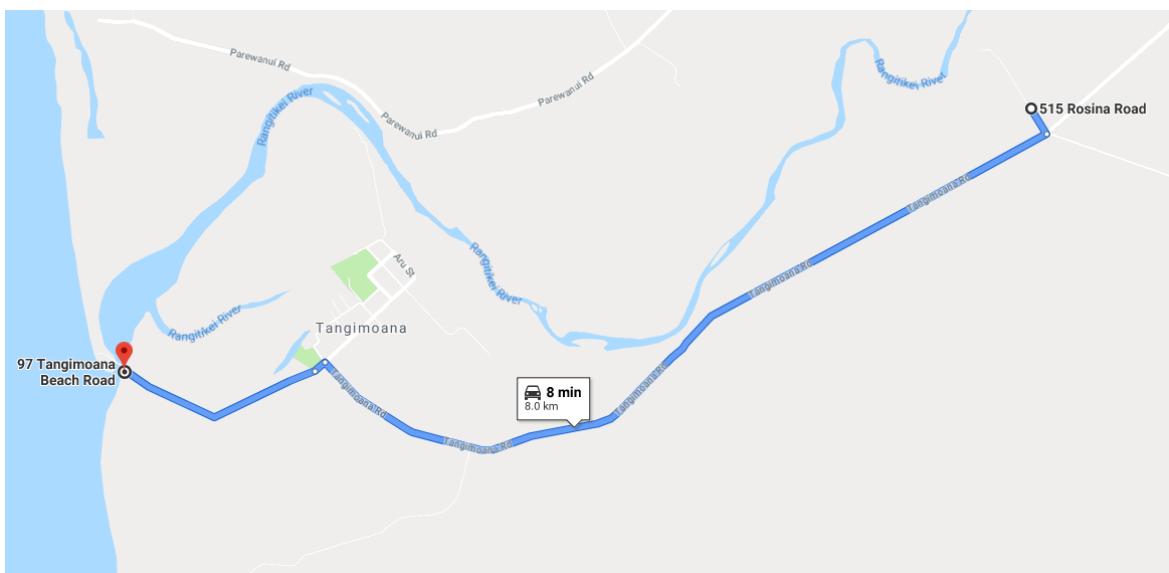
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SITE LOCATION MAP – Rangitīkei Estuary at River Mouth



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POSSIBLE SITE HAZARDS (this does not negate undertaking a hazard review prior to sampling on the day): **These should link back to first page**

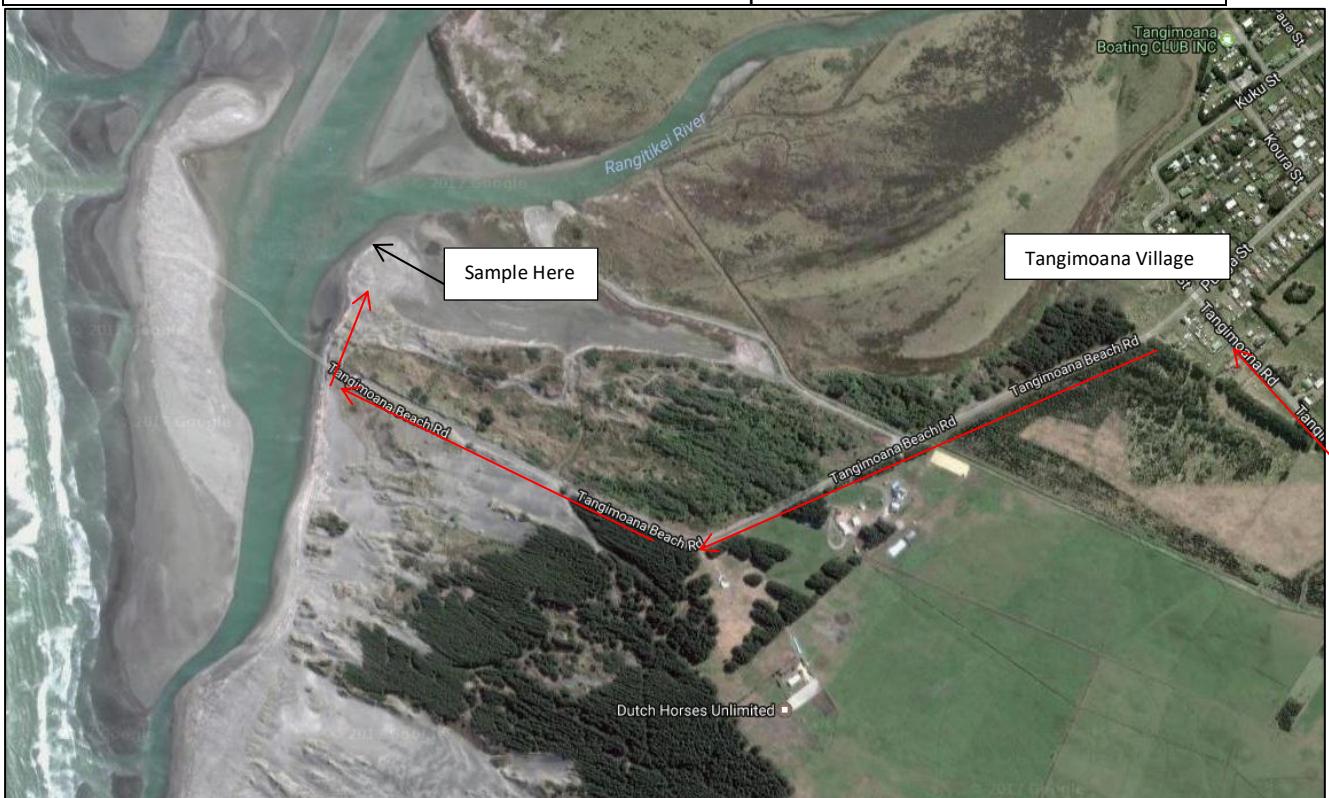
Drowning	UV Radiation	Slippery surfaces	Trip hazards
Difficult entry/exit	Potential for difficult rescue	Weather/Temperature Extremes	Traffic / Vehicle Movements
Engulfment	Communication- means of	Remote Area	Reduced Visibility

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):

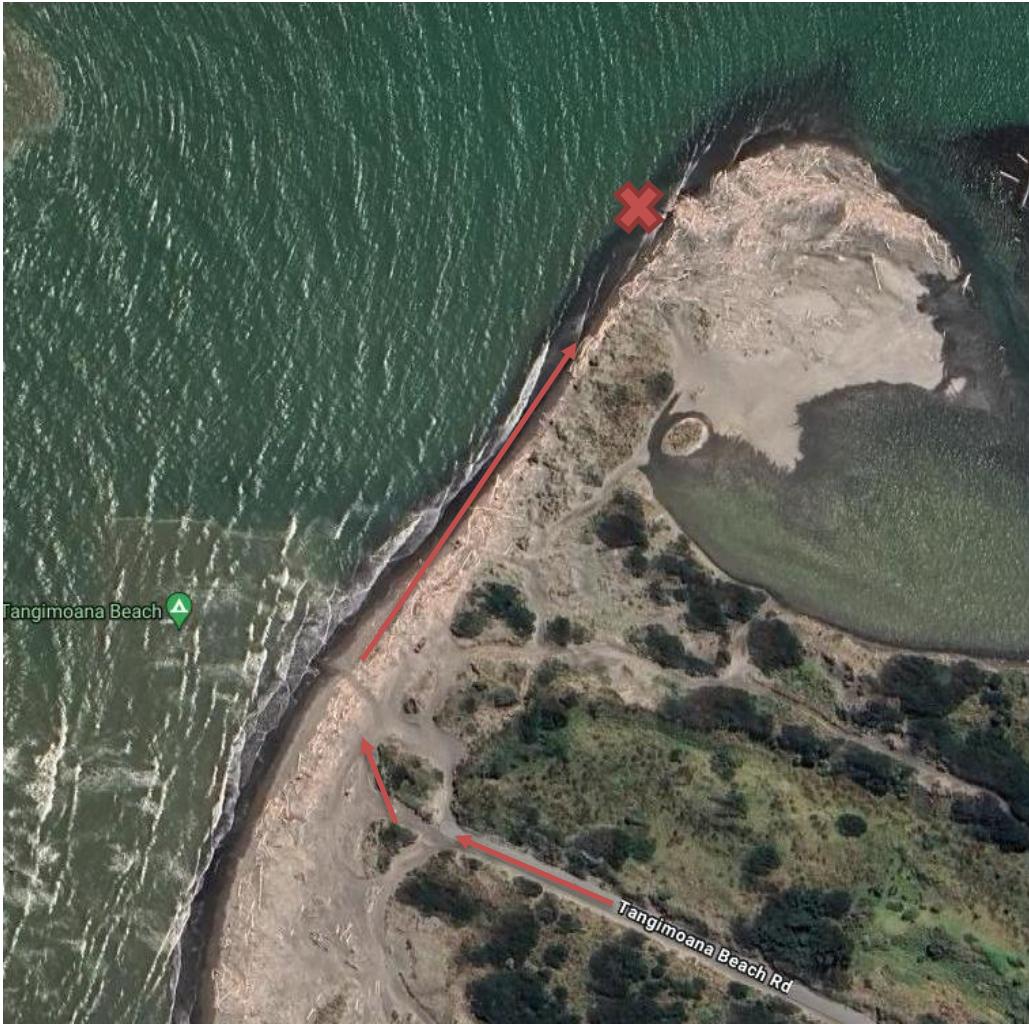
WORK BOOTS / WADERS	PFD	SUNSCREEN & HAND SANITISER	PERSONAL LOCATOR BEACON	THROW BAG	VHF RADIO	HI-VIS	
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DIRECTIONS:

- From Rangitīkei at McKelvies head back to Tangimoana Rd.
 - Turn right onto it towards Tangimoana.
- At the Stop sign in the Tangimoana township turn left onto Punga Street, which becomes Tangimoana Beach rd.
- Continue to the end, turn slightly to the right and find a suitable place to park. If there is not a large amount of debris and you are in a 4WD you can drive across the sand to the sampling site.
 - Collect water samples.



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View towards the coastline



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Return to office

