# FARM ENVIRONMENT PLAN TEMPLATE

Mahere Tātauira Taiao Ahuwhenua







## **PROPERTY DETAILS**

Farm trading name (if applicable)	Te Toko Station Trust		
Full name (owners)	Graeme Roberts Osborne, Judith Anne Osborne, Kenneth Roger Wiggins		
Healthy Rivers Farm Identifier	Office use only		
CONTACT DETAILS FOR OWNER(S)			
Postal address	2879 Hauturu Road, RD 8, Te Kuiti 3988		
Phone	(07) 8788362		
Email address	janette@briarpatch.co.nz		
CONTACT DETAILS OF PERSON RESPO	ONSIBLE FOR THE FARM (IF DIFFERENT FROM FARM OWNER)		
Postal address	2879 Hauturu Road, RD 8, Te Kuiti 3988		
Phone	(07) 8788362 021890933 0278570009		
Email	janette@briarpatch.co.nz		
PROPERTY OWNER (IF DIFFERENT FR	OM ABOVE OWNERS)		
Property address	2879 Hauturu Road, RD 8, Te Kuiti 3988		
Valuation reference <sup>1</sup>	05811/021/01		
Legal description(s) of land parcels <sup>1</sup>	Fee Simple, 1/1, Part Section 3 Block V Orahiri Survey District, 4,475,494 m2		
Total area (ha)	1329.19		
Effective area (ha)	1066		
Land use activities	Drystock farming		
Other relevant property identifier, dairy supply number, farm IQ			
HEALTHY RIVERS/WAI ORA			
Freshwater Management Unit <sup>2</sup>	Waipa Freshwater Management Unit		
Sub-catchment name <sup>2</sup>	Moakurarua Sub-catchment		
Sub-catchment priority <sup>2</sup>	Priority 1		
CERTIFIED FARM ENVIRONMENT PLANNER			
Name	Dr Debbie Care		
Contact details	0275736590		
Identifier/certification reference	Office use only		
Sign-off			
Date			

 $<sup>^{\</sup>mathtt{1}}$  Obtainable from Waikato Regional Council or district council rates documentation.

 $<sup>^{2}</sup>$  Not sure which sub-catchment you're in? Visit waikatoregion.govt.nz and click on Find My Farm.

#### **FARM MAP**

# https://arcg.is/1CiHTa

Use the map(s) to identify the location of the property, its features and uses, existing infrastructure (including fences and mitigations), relevant contaminant loss risks areas, and the location of proposed actions.

Finalise the aerial plan of the property and include all relevant features listed below.

Farm maps can be requested from Waikato Regional Council.

#### MAP FEATURE CHECK LIST

Where relevant, the farm map must clearly show:

Yards, animal holding Area, property boundary Actively eroding areas1 Mitigation actions (existing and future) Effluent application Area Overland flow paths<sup>1</sup>/intermittent Cultivated area flow path waterways Effluent accumulation areas1 Location land uses<sup>2</sup> Areas prone to flooding<sup>1</sup> Retired forestry area Feed out areas1 Paddocks Dams QE II or other covenanted areas Stock crossing structures (existing and future) Soil types Waterbodies<sup>3</sup> Cultivation setbacks Existing fences adjacent to Slope classes waterbodies<sup>3</sup> Erosion prone areas<sup>1</sup> Cultivated land above 15 degrees Riparian areas Tracks and races Soil conservation areas

<sup>&</sup>lt;sup>1</sup> Critical source areas

<sup>&</sup>lt;sup>2</sup>This may be in the form of Overseer Blocks, or Land Management Units

<sup>&</sup>lt;sup>3</sup> Any river, drain or wetland that continually contains surface water

## FARM STORY (OPTIONAL)

Use this section is to help tell the story of your property. What is the history of the property? What are your goals? It also can be used to note of some of the work that has already been carried out that you are proud of and want others to know about.

#### **TELL US ABOUT YOUR PROPERTY. INCLUDE:**

We consider ourselves custodians of the land. We bought the 1310 ha block in 1984 and have progressively worked to future proof the farm. If you look after the land it will look after you. We want to leave a legacy, to leave the land better than when we found it so everyone can enjoy it.

It is all a work in progress

https://arcg.is/1CiHTa

#### TELL US ABOUT THE WORK YOU HAVE ALREADY DONE. INCLUDE:

Key areas of the farm have been fenced. Several areas of bush have been fenced and stock proofed, including a large QEII covenant block and several smaller blocks, some of which have been funded by WRC, and some self-funded.

Left gullies to regenerate. With 3m of rainfall every year we get seepages squirting out of the gullies, and it is common sense to let them regenerate and keep stock out of them. 14 hectares are in QEII covenant. These areas are very steep and were difficult to muster so it made sense.

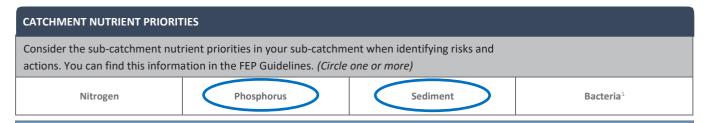
Pole planting on steep or eroding faces is a continuous job with pole planting being the main means of controlling these areas. Some of the pole were funded by WRC and some are made and planted on farm (map issue 3, 6, 7, 21, 26, 28, 29, 31, 32) Areas next to creeks and water ways have been planted and some areas have been fenced but more are being done as time and money allow.

In the last season the farm has changed its stocking policy to not finish beef through the second winter and increase the amount of sheep on the property – this meant considerable investment in sheep in the last 18 months.

Some new bridges and culverts have been built to keep animals out of waterways (map issue 16, 25) A weir for sediment and flow control is in place in the main stream (map issue 14) and sediment ponds are present (map issue 24)

#### WHOLE FARM RISK OVERVIEW

In this section, consider your entire farm to determine risk factors that apply to it as a whole. These whole farm risks will be used to guide decision making in the Farm Environment Plan Risks and Actions section on page 10.



#### **FARM SYSTEM AND INTENSITY**

Description of farm system and intensity, including fertiliser and supplementary feed inputs.

Description of cultivation, cropping and pasture renewal practices.

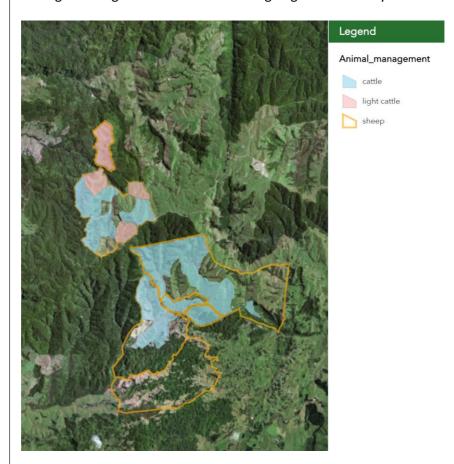
N, P, sediment and bacteria.

Drystock farm running 250 breeding cattle (Angus) and 2900 sheep on average as well as 13 llamas across 1066ha effective area

150 conventional bales of hay as supplementary feed

No crops or cultivation

The main risk on this property is erosion leading to sediment and P loss, with some pathogen risks. In the last season the farm has changed its stocking policy to not finish beef through the second winter and increase the amount of sheep on the property – this meant considerable investment in sheep in the last 18 months. Land management Units (blocks) are mapped reflect these changes. The main control mechanisms are land retirement (with QEII covenants and other mechanisms including WRC funding) and the use of poles to manage eroding areas. This has been ongoing for the last 3 years and still going.



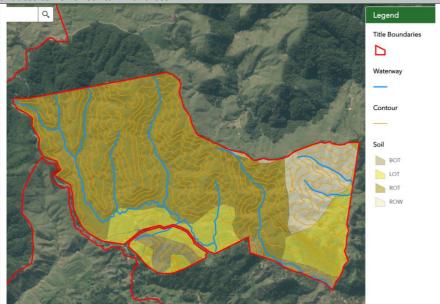
#### **SOIL TYPE**

Description of how soil type and land use contributes to risk of contaminant loss.

265ha recent orthic, 38.4ha raw orthic Allophanic, 49.5ha raw recent orthic, 20ha brown orthic

Prone to erosion and sediment loss from stock and rain events, relatively free-draining

Papa 'soft rock' in places

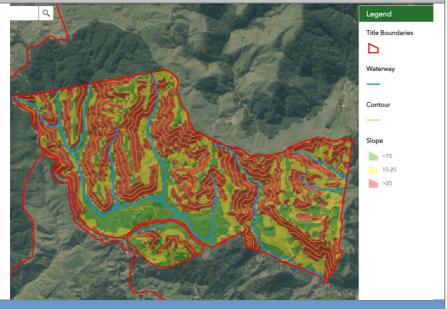


#### **TOPOGAPHY**

Description of how topography and land use contribute to risk of contaminant loss.

Most of the property is steep country prone to erosion

Some wet low-lying areas



#### **CLIMATE**

Description of climate, drought and frequency of flood events, and how this may influence the risk of contaminant loss.

3008mm of rain (average from the last 6 years of on-farm records) Occasional heavy rain events Generally "summer safe" Prevailing wind is W

<sup>&</sup>lt;sup>1</sup> Microbial pathogens

# FARM BLOCK DESCRIPTION LMU STRENGTH AND WEAKNESS ASSESSMENT

Farm or OVERSEER blocks, or Land Management Units (LMUs), are areas of land that can be farmed or managed in a similar way because of underlying physical similarities. For each block or LMU, complete a strength and weakness risk assessment. Add more blocks as required. Use this assessment to inform changes that will maintain and improve the soil and minimise contaminant loss.

If the block is an effluent application block or an irrigated block, complete descriptions of these systems on the next page.

#### **LAND MANAGEMENT UNIT**

Name

#### Limestone

Description, uses and management

Block of 226.12ha of grassy valleys nestled between bush and rocks. Extensive sheep grazing block, low numbers of mixed age cattle (40). Pastoral

#### **STRENGTHS AND WEAKNESSES:**

#### Strengths;

Natural beauty & fossils Good shelter for stock High rainfall No eczema Wetlands and ponds Good tracks and access

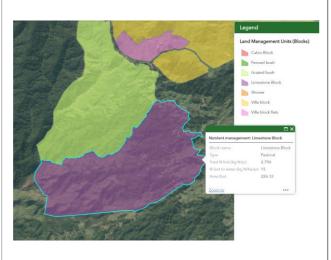
#### Weaknesses;

Lack of water Tomos Bluffs Lack of cell phone reception

#### **NOTES AND MITIGATION IDEAS**

Match stock class and animal weight to contour to minimise sediment loss

#### Look at tourism



#### LAND MANAGEMENT UNIT

Name

#### Villa Flat

Description, uses and management

Block of 25.91ha comprising of flat/rolling area close to house and farm amenities. Pastoral

#### **STRENGTHS AND WEAKNESSES:**

#### Strengths;

Flat/rolling
Handy to all amenities
More fertile and grows
grass
Has better grass species
Smaller paddocks
Mature pole plantings

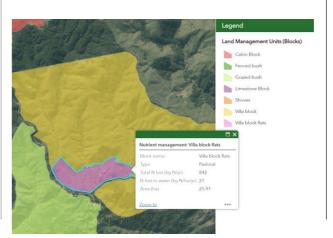
#### Weaknesses;

Tomos – stock disappear Gets wet and sodden in winter

#### **NOTES AND MITIGATION IDEAS**

Reticulate water and fence creek

The block isn't large and is a lower priority compared to the steep areas of the farm. Is a messy and time-consuming job as there will be a lot of refencing to do to stock proof the creek and allow for stock flow on the flats



#### LAND MANAGEMENT UNIT

#### Villa

Description, uses and management

Home farm block of 412.51ha close to farm amenities. Both cattle and sheep (plus llamas). Pastoral

#### **STRENGTHS AND WEAKNESSES:**

#### Strengths;

Handy to all amenities (in a relative sense, other blocks are 3km away) Good natural water Easy to muster Good fertility compared to other blocks Stock do well Summer safe No eczema

#### Weaknesses;

Terrain is quite steep High altitude & rainfall Exposed to the south so cold

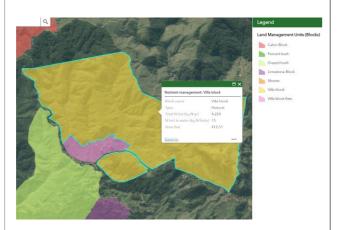
#### NOTES AND MITIGATION IDEAS

Pole plant up main creek and in the areas where there is some erosion on steep guts

There are some paddocks that cattle are excluded from to mitigate sediment and erosion

Reticulated water in place

Need to fence the main creek



#### **LAND MANAGEMENT UNIT**

#### Cabin

Description, uses and management

Block of 215.76ha of easier slope country but gorse-y block. Both cattle and sheep. Pastoral

#### STRENGTHS AND WEAKNESSES:

#### Strengths;

Summer safe Easier contour Fantastic natural water Smaller paddocks Good access

#### Weaknesses;

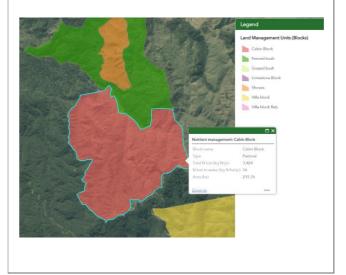
Low soil fertility Gorse problems Very broken terrain with lots of guts and gullies

#### NOTES AND MITIGATION IDEAS

Managed by stock class (have bought more sheep)

May plant pine trees but may still slip as it is sand country over papa

Have planted poles in erosion prone areas



#### LAND MANAGEMENT UNIT

#### **Shoves**

Description, uses and management

Remote, steep block of 36.25ha full of tomos. Pastoral

#### **STRENGTHS AND WEAKNESSES:**

Strengths;

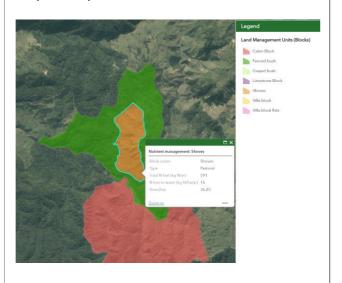
Weaknesses;

Grows grass

Access very difficult 3km from amenities and have to cross a river to get to it

#### **NOTES AND MITIGATION IDEAS**

#### May one day retire this area



#### LAND MANAGEMENT UNIT

#### **Fenced Bush**

Description, uses and management

Block of 163.48ha of fully fenced native bush. Steep. No stock access

#### **STRENGTHS AND WEAKNESSES:**

Strengths;

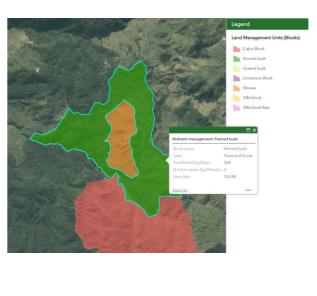
Biodiversity and bird life Makes mustering easy Attracts rain Stops erosion in the block and therefore no sediment, P etc. Aesthetically pleasing

#### Weaknesses;

Not productive

#### **NOTES AND MITIGATION IDEAS**

#### None needed



#### LAND MANAGEMENT UNIT

#### **Grazed Bush**

Description, uses and management

Block of 202.69ha of attractive bush area with varied terrain. Native bush and pastoral

#### STRENGTHS AND WEAKNESSES:

#### Strengths;

Good shade and shelter for stock Aesthetically pleasing and good for tourism Not many surface waterways as most flows underground

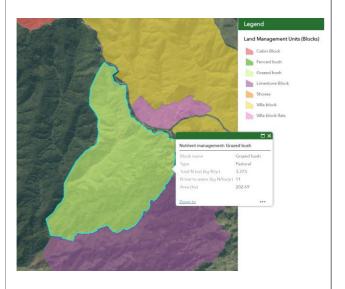
#### Weaknesses;

Shortage of water Stock like to hide so difficult to muster Some parts impossible to fence

#### **NOTES AND MITIGATION IDEAS**

Will consider matching stock class and animal weight to contour to minimise sediment loss

Would like to install reticulated water troughs eventually



# **INFRASTRUCTURE MANAGEMENT**

Use this section to consider how effluent and freshwater irrigation is managed on your farm. Any risks identified should be added to the Farm Environment Plan Risks and Actions section on page 10.

EFFLUENT SYSTEM
POND VOLUME
N/A
POND SEALING EVIDENCE
N/A
DAIRY YARD EFFLUENT CONTAINMENT
N/A
WOOLSHED EFFLUENT CONTAINMENT
Yes, all effluent contained
STOCK YARD EFFLUENT CONTAINMENT
Yes, all effluent contained
STANDOFF PAD/WINTERING BARN OR ANIMAL HOUSING
N/A
STABLES OR YEARLING BOXES
N/A
SOLIDS OR SLUDGE STORAGE, SEPARATION AND APPLICATION
N/A
EFFLUENT APPLICATION MANAGEMENT, IRRIGATOR TYPE
N/A
IRRIGATION RATE, SCHEDULING
N/A
EFFLUENT IRRIGATION AREA (HA)
N/A

FRESHWATER IRRIGATION
AREA IRRIGATED (HA)
N/A
TYPE OF IRRIGATOR
N/A
WATER SOURCE
N/A
WAIKATO REGIONAL COUNIL CONSENT
N/A
WATER METER
N/A
APPLICATION DEPTH AND UNIFORMITY
N/A
METHOD(S) OF SCHEDULING AND CALCULATING IRRIGATION REQUIREMENTS
N/A
OTHER INFORMATION
N/A

### **NUTRIENT MANAGEMENT**

You can work with a Certified Farm Nutrient Advisor (CFNA) to get an OVERSEER nutrient budget and Nitrogen Reference Point. Consider your nutrient management plan, specifically focusing on N and P, and what actions will be needed.

If appropriate, risks and actions should be added to the Risks and Actions table on page 10.

#### **NITROGEN MANAGEMENT**

	KG N/HA/YR
What is the 75th percentile of nitrogen leaching for the FMU?	Not known
Nitrogen Reference Point	13 (15/16 season)
Current Nitrogen leaching	Not known

#### Changes to system, if needed1

None needed

Predicted Nitrogen leaching <sup>2</sup>	13	
$^{1}$ Changes to system are needed if the NRP is above the 75th percentile value. Please summarise the actions nec	essary to achieve reductions to the 75th per	entile

value by 1 July 2026.

<sup>2</sup> Nitrogen leaching value anticipated once actions have been completed.

#### PHOSPHORUS MANAGEMENT

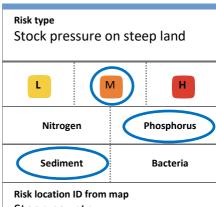
ВLОСК	OLSEN P TEST	AGRONOMIC OPTIMUM	ACTIONS
Limestone	16	20-30	Soil test nutrient blocks
Villa Flat	16	20-30	(default Olsen P Test values used here)
Villa	8	20-30	
Cabin	8	20-30	
Shoves	8	20-30	
Grazed Bush	16	20-30	

Refer to the Fertilizer Association Guides at fertiliser.org.nz

# FARM ENVIRONMENT PLAN RISKS AND ACTIONS

These tables identify all the risks on farm and what will be done to manage them. For help with good management practices/ideas for mitigations, please refer to the Farm Environment Plan Guide

**Note:** some risks may have no actions, single actions or multiple actions (and vice-versa). Where multiple actions are needed, please complete a new table. Where no action is required, an explanation should be provided in the notes/commentary section.



Steep country

Mitigation action type
Stock management

Mitigation location ID from map Steep country

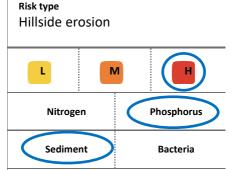
#### Action detail

Changed stocking policy to not finish beef through the second winter and increase the amount of sheep on the property – this has meant considerable investment in sheep in the last 18 months

Time frame for completion or ongoing Last season (16/17) and ongoing

Notes/commentary
Area may be used for sheep at any time

No stocking rate specified but management is expected to not increase the risk to soil



Risk location ID from map Steep areas – gullies, guts, stream banks

Mitigation action type Pole planting

Mitigation location ID from map 3, 6, 7, 8, 21, 26, 27, 28, 29, 31, 32

#### Action detail

Extensive pole planting around eroding areas including stream banks and steep unproductive areas.

More to be completed in the coming year (June 2019)
Some unsuccessful due to stock damage – fencing around these planted areas to be completed

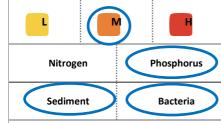
Time frame for completion or ongoing Some already completed and ongoing to be completed next year (June 2019)

#### Notes/commentary

Some completed with funding from WRC



Risk type
Stock access to waterways



Risk location ID from map Waterways

Mitigation action type Stock exclusion

Mitigation location ID from map Waterways

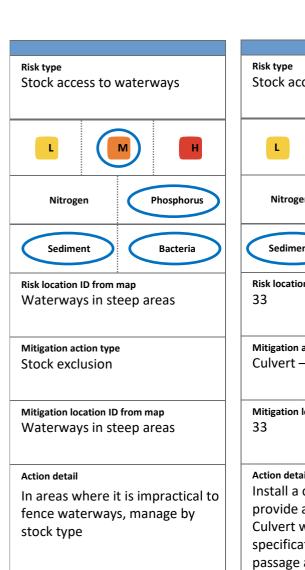
#### Action detail

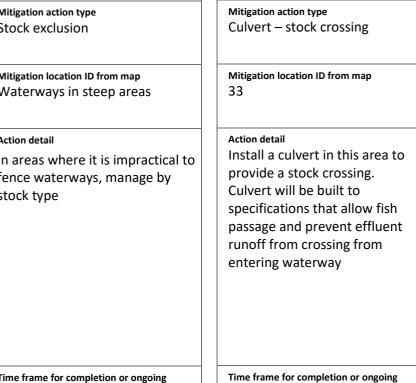
Fence waterways (where practical) to prevent stock access Stock exclusion setback will be no less than 3m from the edge of the bed of the waterway

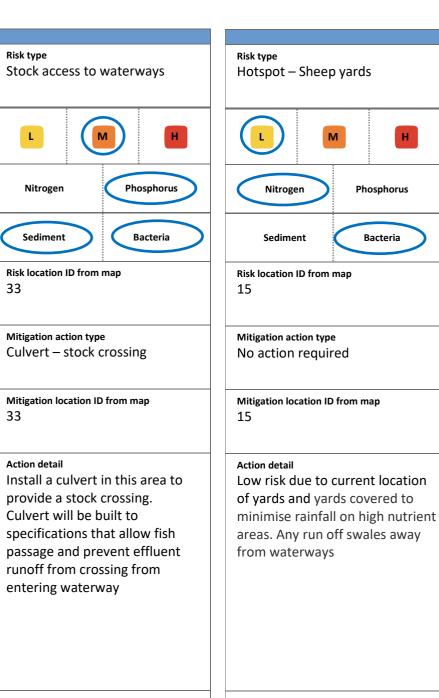
Time frame for completion or ongoing June 2020

#### Notes/commentary

Except in sheep-only country where waterways are not required to be fenced







Time frame for completion or ongoing Ongoing from January 2020

Notes/commentary

Notes/commentary

June 2020

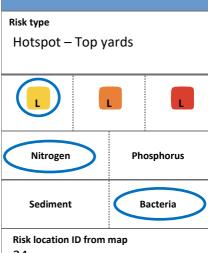
Time frame for completion or ongoing  $\ensuremath{N/A}$ 



Notes/commentary



It's a good idea to take photos of risks and actions to show changes over time. This can be use to support decision making.



34

Mitigation action type
No action required

Mitigation location ID from map 34

#### Action detail

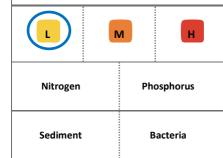
Low risk due to current location of yards. Any run off swales away from waterways

Time frame for completion or ongoing  $\ensuremath{N/A}$ 

#### Notes/commentary



Risk type Hotspot – Farm dump



Risk location ID from map 22

Mitigation action type Investigate recycling options

 $\begin{array}{l} \text{Mitigation location ID from map} \\ 22 \end{array}$ 

#### **Action detail**

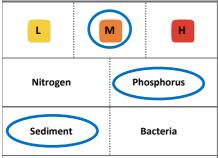
Low risk due to current location of dump site but some investigation into recycling options needs to be done to minimise amount of refuse dumped

Time frame for completion or ongoing January 2019

Notes/commentary
Most waste dumped here poses
little P, N or bacteria risk —
inorganic



Risk type Stock camps



Risk location ID from map N/A

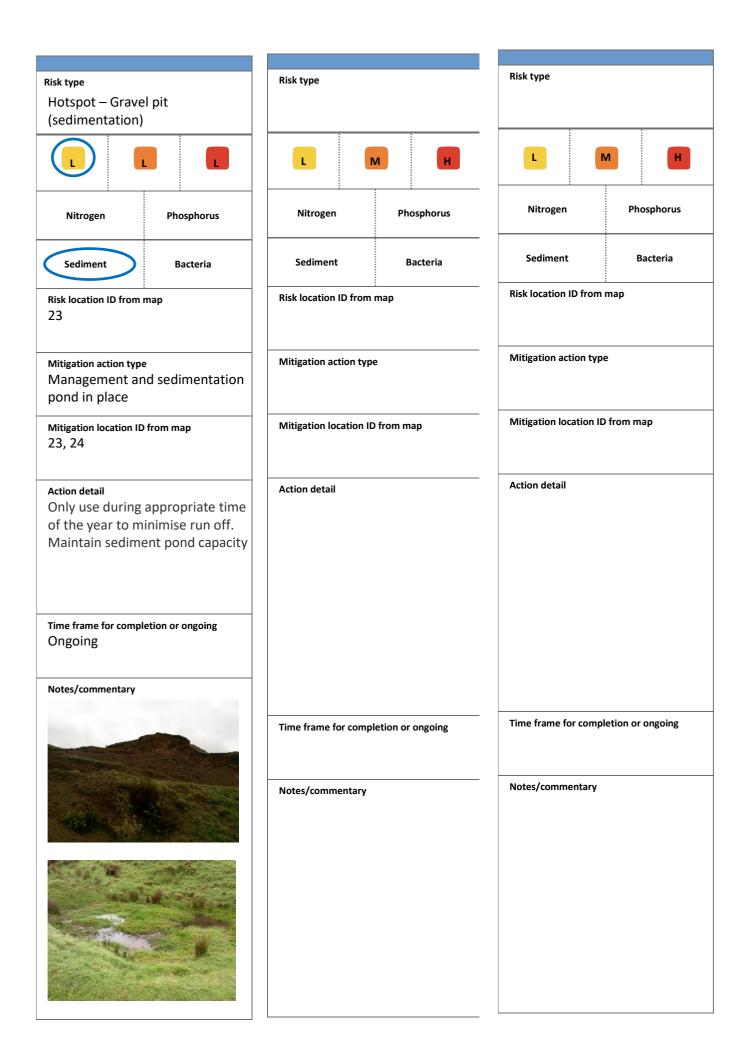
Mitigation action type
Stock management

 $\label{eq:mitigation} \mbox{Mitigation location ID from map} \\ \mbox{N/A}$ 

Action detail Feed out to stock no less than 30m of a waterway

Time frame for completion or ongoing Ongoing from January 2019

Notes/commentary



# YOUR PLAN OF ACTIONS (OPTIONAL)

It may be helpful to summarise the actions in the Farm Environment Plan Risks and Actions table, particularly by due date.

	LOCATION (MAP REFERENCE)	ACTION DETAIL	TIME FRAME FOR COMPLETION OR IMPLEMENTATION OF ONGOING ACTIONS	РНОТО
	2	Fenced native bush under QEII Trust	Completed N/A	A Control of the Cont
	3	Hillside erosion mitigated by pole planting in gully head	Completed N/A	
	4	Planting of stream banks for bank stabilisation	Completed N/A	
REQUIRED ACTIONS	6	Hillside erosion mitigated by pole planting around eroding areas	Completed N/A	
	7	Hillside erosion mitigated by pole planting in gully	Completed N/A	
	8	Pole planting of slip – mitigation of eroding area	Completed N/A	

11	Sediment detention pond and bund in place	Completed N/A	
12	Native bush fenced with WRC funding	Completed N/A	
13	WRC funded planting	Completed N/A	
14	Weir to control flow and contain sediment	Completed N/A	
16	Stock exclusion – bridge in place for stock crossing	Completed N/A	
17	Culvert retention with logs	Completed N/A	
18	New crossing in place Crossing just completed - made larger and higher to better manage higher flows	Completed N/A	
21	Established poles – hillside stabilisation	Completed N/A	

25	New 5ft culvert in place	Completed N/A	ALL HI
26	Hillside erosion mitigated by pole planting in slumped gully Cattle excluded. No fence	Completed N/A	le de la constant de
27	Hillside erosion mitigated by pole planting in steep areas – sheep-only paddock	Completed N/A	
28	Hillside erosion mitigated by pole planting – some done, more to be completed in coming year	Completed N/A	
29	Pole planting for stabilsation on stream bank	Completed N/A	
30	Ringfern left to control erosion/stabilise bank beside sidling	Completed N/A	
31	Hillside erosion mitigated by pole planting around eroding areas	Completed N/A	THE STATE OF THE S

32	Hillside erosion mitigated by pole planting around eroding areas	Completed N/A	
35	Wetland in sheep-only paddock	Completed N/A	
36	Native bush fenced with WRC funding	Completed N/A	
15	Low risk due to current location of yards and yards covered to minimise rainfall on high nutrient areas. Any run off swales away from waterways	N/A	
34	Hot spot – Top yards Low risk due to current location of yards. Any run off swales away from waterways	N/A	
23	Gravel Pit – Sediment Hotspot Management - Only use during appropriate time of the year to minimise run off	Ongoing	
24	Gravel pit sedimentation pond – Maintain pond capacity	Ongoing	ALLA THE THE

3	Steep country	Stock pressure on steep land Changed stocking policy to not finish beef through the second winter and increase the amount of sheep on the property – this has meant considerable investment in sheep in the last 18 months	Last season (16/17 and ongoing)	
ŗ	5	New bridge installed across creek. Fencing needs to be completed	December 2018	
1	N/A	Stock camp management Feed out to stock no less than 30m of a waterway	Ongoing from January 2019	
	22	Low risk due to current location of dump site but some investigation into recycling options needs to be done to minimise amount of refuse dumped	January 2019	
8	Steep areas – gullies, guts, stream banks	More pole planting for hillside erosions to be completed in the coming year	By June 2019	
	Waterways in steep areas	Stock access to waterways In areas where it is impractical to fence waterways, manage by stock type	Ongoing from January 2020	
3	33	Stock access to waterways Install a culvert in this area to provide a stock crossing. Culvert will be built to specifications that allow fish passage and prevent effluent runoff from crossing from entering waterway	June 2020	
\	Waterways	Stock access to waterways Fence waterways (where practical) to prevent stock access Stock exclusion setback will be no less than 3m from the edge of the bed of the waterway	June 2020	



Use this checklist to ensure you have completed all necessary assessments in the FEP.



Stock exclusion assessment

Riparian management assessment

Cultivation management assessment

Critical source area assessment

This information has been provided based on Waikato Regional Council's interpretation of the proposed plan. The proposed plan is at the early stages of the Schedule 1 process and the provisions are therefore likely to be subject to further change through that process. While Waikato Regional Council has exercised all reasonable skill and care in providing this information, council accepts no liability in contract, tort or otherwise, for any loss, damage, injury or expense (whether direct, indirect or consequential) arising out of the provision of this information or its use by you or any other party. Should you have specific concerns regarding the proposed provisions, we encourage you to make a submission and/or seek your own legal advice.

**HE TAIAO MAURIORA HEALTHY ENVIRONMENT** 

HE ŌHANGA PAKARI STRONG ECONOMY

**HE HAPORI HIHIRI VIBRANT COMMUNITIES** 



₩ WAIKATOREGION.GOVT.NZ/H



₩ HEALTHYRIVERS@WAIKATORE



0800 800



