Burklee Limited ("the Landowner")

and

Waikato Regional Council

Environmental Programme Agreement 15362 (2) ("The Agreement")

Prepared by: Alice Trevelyan
Catchment Management Officer
Waikato Regional Council

Waikato
REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

1 Applicant Details and Property Description

Date of Application:	8 April 2019		
Name:	Burklee Ltd Malcolm and Sally Lee		
Personal details removed			
Property Name:	Personal		
Registered Owner (s):	Burklee Ltd		
Farm Manager:	Malcolm Lee		
Legal description:	SEC 8 BLK XV AWAROA SD		
Area (ha):	295.93ha	**Valuation Number:**	06351/035/00
Zone / Area / Scheme:	Lower Waikato		
Catchment:	Naike		
Zone Budget:	Catchment New Works		
Works Cost Table:	13908725		
File Number:	Z15 P362		
Waikato Regional Council contact:	Alice Trevelyan Personal details removed		

2 Objectives

This Environmental Programme Agreement has been prepared for Malcolm and Sally Lee, Burklee Limited, of 550 Dixon Road. This agreement identifies farm specific opportunities for sustainable resource management. The purpose of this agreement is to reduce soil erosion, enhance biodiversity values and improve water quality in streams.

Land management techniques include:

- Exclusion of livestock from waterways and wet areas
- Enhancement of in-stream habitat through shading and reduced sedimentation
- Increased biodiversity values through native planting

The objectives outlined in this Environmental Programme Agreement are consistent with those defined in the Waikato and Waipa River Restoration Strategy.

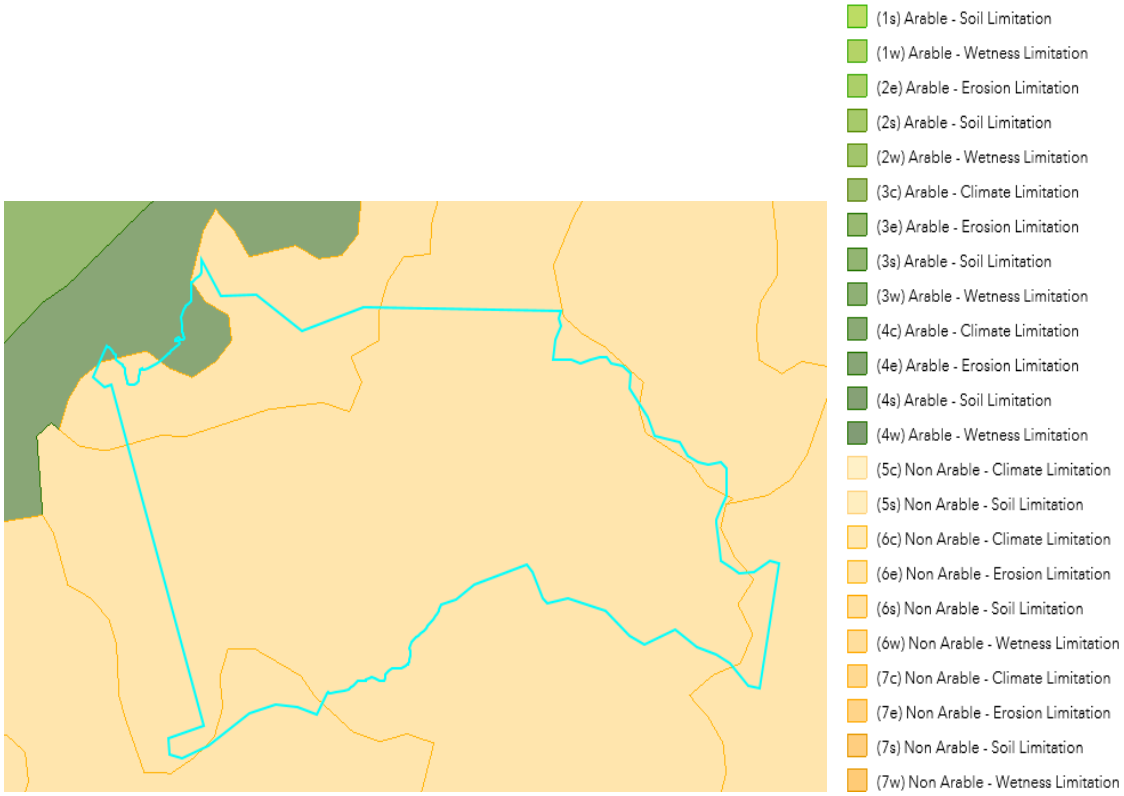
3 Background Information

The Burklee property is 296ha sheep and beef farm in the Naike Catchment. The property is predominantly LUC class 6e, steep non-arable land with erosion as the limiting factor. The property contains several wetland gully systems and streams.

The Naike Catchment is 10,608ha with the predominant land use being dry stock farming. Approximately 87% of the catchment is in pasture with 6230ha estimated to be in LUC class 6e and 7. The area was travelled and established by Waikato-Tainui as its sites between the lakes, the sea and the Waikato River. Old papakainga and midden sites reflect the areas and paths that were populated.

The Naike Catchment is listed as a high priority in the Waikato Waipa River Restoration Strategy (CLW11), with hill country erosion in the catchment contributing to a significant volume of sediment to the catchment streams, Lake Whagapae and the Lower Waikato River.

This Agreement proposes the retirement of 0.62ha of riparian zone, and a 0.58ha wetland. Retired areas will be fenced with a 5 wire electric fence and planted with mixed natives. In addition, 100 poplar poles will be planted in erosion prone areas.



Land Use Classification (LUC) map for 550 Dixon Road, Matira.

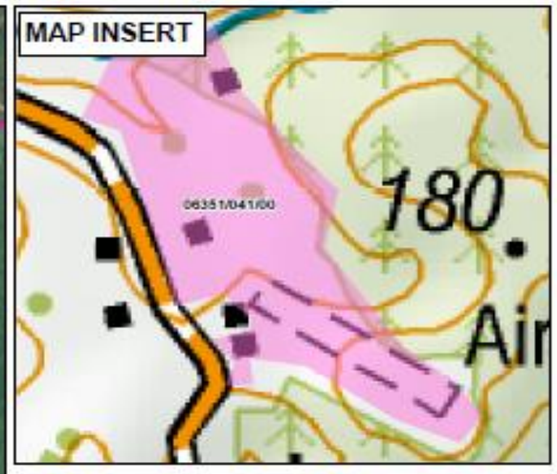
3.1 Summary of Previous Funding

Burklee Limited has received funding for environmental restoration works from Waikato Regional Council since 2006. Works include fencing, indigenous planting and soil conservation plantings (poplars). Waikato Regional Council contribution to works totals $15,665.65.

It is important to note that when a property has received $35,000 (cumulative) of Waikato Regional Council funding, a Memorandum of Encumbrance covenant will be established to protect the works by registering this Environmental Agreement to the properties Certificate of Title.

Costs Info

Category	FY	Task Name	Estimated Total Cost	Actual Total Cost	WPC% of Cost	WRC Actual Total Cost
Soil Conservation Costs	06-07	Year 1	$ 0.00	$ 8,000.00	35	$2,800.00
	09-10	Year 2	$ 1,969.00	$ 1,969.00	35	$689.15
	14-15	Year 3	$ 0.00	$ 2,131.00	35	$745.85
	15-16	Comp 04 and 01	$ 6,810.00	$ 0.00	35	$0.00
	16-17	Comp 04	$ 1,500.00	$ 8,535.00	35	$2,987.25
	17-18		$ 0.00	$ 18,473.00	35	$6,465.55
	Subtotal		**$10,279.00**	**$39,108.00**		**$13,687.80**
Soil Conservation Maintenance Costs	14-15	Planting	$ 0.00	$ 925.00	35	$323.75
	15-16		$ 0.00	$ 2,573.00	35	$900.55
	18-19		$ 0.00	$ 2,153.00	35	$753.55
	Subtotal		**$0.00**	**$5,651.00**		**$1,977.85**



Legend

- existing fence
- Selected Property
- Proposed Compartment
- Proposed Fence

ENVIRONMENTAL PROGRAMME AGREEMENT

550 Dixon Road
Burklee Limited

ACKNOWLEDEMENTS AND DISCLAIMERS

Cadastral information derived from Land Information NZ's online Cadastral Database.
CROWN COPYRIGHT RESERVED.
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Positional accuracy of features may be up to +/- 25 metres.

0 0.0475 0.095 0.19 0.285 0.38 Km

Scale at A3 = 1:3,694

Created by: Alice Trevelyan
Date: 15/04/2019
Version: 1

Waikato Regional Council
Te Kaunihera a Rohe o Waikato

4 Description of Issues and Proposed Solutions

4.1 Wetland Management

4.1.1 Issues

Wetlands are important storage areas for water after heavy rain. Wetlands act like a giant sponge slowing the flow of water off the land, soaking up excess surface water then slowly releasing it. Wetland plants trap suspended sediment in water, whilst bacteria living in wetland soil absorb and break down the nitrogen from run-off and leaching, improving water quality. Draining and grazing of wetlands and seeps reduce their ability to perform these functions.

Stock access is detrimental to wetland form and function and can;

- Inhibit the regeneration of native wetland vegetation due to grazing pressure
- Degradation of existing native vegetation through grazing pressure
- Erosion and pugging of wetland margins
- Damage to bird habitat and nesting areas through stock trampling.

4.1.2 Proposed Solutions

Retire a 0.58ha wetland from grazing. To erect a 5 wire 2 electric fence and plant 750 appropriate wetland species.
Retiring the wetland from grazing will restore ecosystem services and improve water quality leaving the wetland.

Wetland to be retired from grazing and planted with mixed natives.

4.2 Riparian Retirement

4.2.1 Issues

Stream bank erosion is a significant issue in the Naike Catchment. Stock access to waterways is associated with increased sediment concentrations and E.coli loading. Restricting stock access will reduce stream bank erosion (and therefore sediment concentrations) associated with bank disturbance. Restricting stock access will also improve water quality removing the direct deposition of nutrients and E.coli associated with animal defecation. Stream bank vegetation is an important factor in stabilising stream banks. Stock access to stream banks prevents vegetation from establishing, and reduces the density and effectiveness of any existing vegetation. Nutrients and sediment that enter waterways on this property will ultimately flow downstream and contribute to degraded water quality in the wider Naike Catchment.

4.2.1 Proposed Solutions

Fencing and planting of 450m of stream bank, retiring 0.42ha from grazing. The 5 wire fence will be installed above flood level to protect infrastructure. Fencing will provide for the natural hydro-geology of the stream. Riparian planting of 1000 mixed natives will further stabilise the banks, enhance the ecosystem services of the riparian margin providing enhanced instream and riparian habitat; and filter overland flow before it reaches the channel.

Riparian area to be retired from grazing and planted. Black line providing indicative location of proposed fence line

Riparian area to be retired from grazing and planted. Black line providing indicative location of proposed fence line.

4.3 Soil Conservation

4.3.1 Issues

The steep erodible nature of the property and the wider Naike catchment results in the potential for reduced surface cover through scars, slops and earthflows. Sediment and phosphorous runoff is generated by reduced surface cover, especially under high rainfall events. Grazing of steep slopes reduces surface cover, increasing the risk of erosion through decreased soil stability.

4.3.2 Proposed Solutions

Poplars have an extensive root system which bind and hold soil in place. Poplars are relatively fast growing and can tolerate a range of environmental conditions including flooding and drought. In addition to being an excellent tool for stabilising eroding soils, poplars can provide an extra source of stock feed during droughts. Common supplements such as silage, lucerne, feed grains and summer feed crops tend to be in short supply and can be very expensive in drought times. Poplar levels are equivalent to lucerne hay and silage in terms

of their food value per kilogram of dry matter. Poplars can be fed to stock by pruning selective branches, pollarding or coppicing.

100 poplar poles will be planted in erosion prone areas. Poles will be 3m tall and planted with Dynex sleeves. It is recommended that cattle are excluded from newly planted areas for at least the first three years to enable poles to establish root systems. Poplars are naturally a leader dominant tree and best grown as a single leader. They need to be managed by from pruning to protect soil, increase light to pasture and for wood, as outlined in the polar pole management table below. Refer to section 7.1 of this agreement for information on planting techniques.

Poplar Pole Management Plan:

Year	**Poplar Management Pan**
0	Plant pole, re-ram in early summer
3	Reduce to a single leader
5	Prune branches to 4m height using a pole saw
9	Prune branches to 6m height using a pole saw
20+	Progressively harvest and replant another pole nearby

The proposed works outlined in the Environmental Programme Agreement are consistent with the Vision and Strategy outlined for the Naike Catchment in the Waikato Waipa River Restoration Strategy specifically addressing the CLQ11 project goals;

- LUC class 7 soils are managed within their capabilities and are retired from heavy stock grazing
- There is a 40% reduction in suspended sediment in the Maire and Naike streams

Priority hill country soil conservation works for funding in the Naike Catchment include;

- 730ha LUC 6e land

- 730ha LUC 6e land managed with open space pole planting
- 730ha LUC 6e land manged with plantation species (pine or Manuka)
- 113km of fencing of LUC 6e land
- 392 ha LUC7 land managed with plantation species (pine or Manuka)
- 47km of fencing of LUC 7 land
- 3ha reducing sediment to waterways outside LUC class 6e, 7 and 8 land (e.g. dewatering, retiring seepages)
- 38km fencing existing forest
- Pest control for plantings established on LUC 6e and 7 land.

For Reference:

- Clean Streams: A guide to managing waterways on Waikato farms

- Poplar and willow planting. A guide to planting poplar and willow on your property
- Trees on Farms: A guide with local experience of growing trees in the Waikato region.

5 Estimated Costs and Timetable

Name:	**Burklee Ltd 550 Dixon Road**
File:	**Z15 P362**
Zone:	**Lower Waikato**
Funding:	ProjectWatershed - Catchment New

Year One 1st July 2019 to the 30th June 2020

No.	Compartment	Activity	Type	Units	Cost per Unit	Total Cost
5	Riparian Retirement	Conventional Fence	5 w 4e	1130	$10.00	$11,300.00
6	Riparian Retirement	Indigenous Planting		1750	$6.00	$10,500.00
	Space Planting	Poplar/Willow Tree		100	$25.00	$2,500.00
Total:						**$24,300.00**

Funding Summary

Sources of Funding	% of Cost	Total
Soil Conservation		
Property Owner	65%	$15,795.00
Waikato Regional Council	35%	$8,505.00
Total Soil Conservation		**$24,300.00**
Total		**$24,300.00**

In-kind Costs	***Amount***
fencing labour @ 50% fencing cost	$5,650.00
poplar pole planting labour @ 7 per pole	$700.00
planting labour @ $2 per plant	$3,400.00
Total	***$9,750.00***

Total Project Cost	**$24,300.00**
Property Owner Share (before In-kind)	$15,795.00
Waikato Regional Council Share	$8,505.00
Estimated Property In Kind Contribution	$9,750.00
Estimated nett Property Cost (after In-kind)	**$6,045.00**

Note:

- *All costs are GST exclusive*
- *If actual costs are less than estimated costs – refund will be based on actual costs.*
- *If actual costs exceed estimated costs-refund will be based on estimated costs. However, actual costs may be considered if reasonable and depending on budget constraints.*

6 Responsibilities

The Landowner will be responsible for the maintenance of the works, which includes but is not limited to:

6.1 Fencing

Fencing shall be carried out as outlined below:

a) A 5 wire fence will be constructed to exclude stock from the areas indicated on Map '1 – Proposed Works'.

b) Maintenance of the fence will be the responsibility of the Landowner and will be carried as and when necessary to ensure the fencing standards are adhered to and stock are excluded at all times. Assistance of up to 35% of cost may be available from Waikato Regional Council, subject to application and approval.

6.2 Vegetation

The following maintenance will be carried out within areas indicated on Map '1 – Proposed Works'

a) all Total and Boundary Control plant pests be removed; and

b) all efforts will be made to ensure survival of native plants, which may include release spraying.

6.3 Grazing Management

There will be no grazing permitted within areas indicated on Map '1 – Proposed Works'.

6.4 Pest Animal Management

All efforts must be made by the Landowner to control pest animal within the areas indicated on Map '1 – Proposed Works'.

7 General Property Recommendations

7.1 Open Space Pole Planting

Open space poplar pole planting has been recommended as part of this Agreement to assist in providing stability to steep erosion prone land.

Pole Delivery:

- Poles are living plants and must be kept damp and **planted as soon as possible**
- Poles can be stored in a water trough or pond, but not for more than a few weeks.

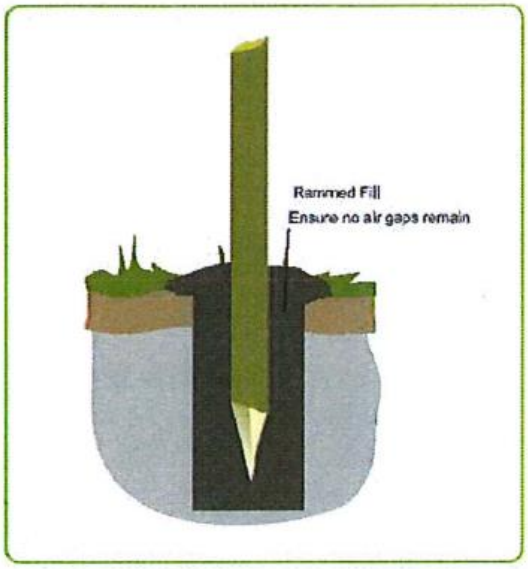
Placement/Assessing the site:

- Plant in a depression or low lying spot where the water will collect to give the pole a better chance of survival over summer.

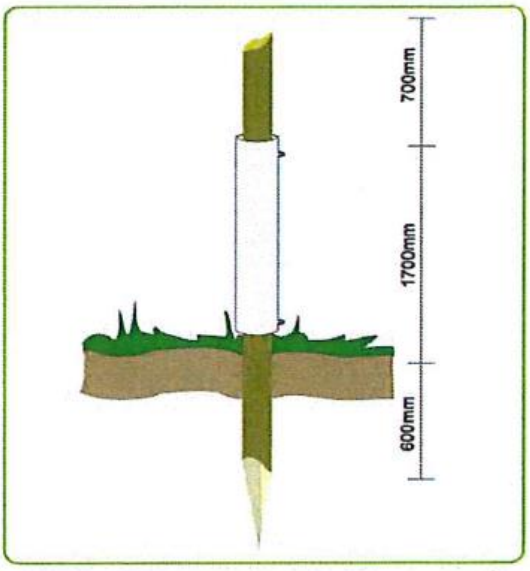
Purpose	Spacing	
General hill slope stabilisation	**12-15m**	Doesn't affect the pasture growth by shading
Slump and slip areas	Plant closer **(5-10m)**	Pruning may be required over time to reduce the effect of shading on pasture.

Planting Method:

- Plant deep and firm. **At least 60-70cm for a 3m pole.**



Pole 'dug' and 'rammed'.



Pole with 1.7 m sleeve. Ensure poles are planted deep – at least 60-70 cm.

Ramming

A pole rammer or pole bar can be used to drive the pole as tightly as possible into the ground with the base of the pole anchored into undisturbed soil. It may be helpful to prepare a pilot hole with a hand auger, crow bar or attachment on a rammer which should be slightly smaller than the diameter of the pole.

Digging or using a post pole borer

A post hole borer or spade can also be used to create a hole. However, ensure poles are rammed tightly into the bottom of the hole. It is recommended that poles are rammed both at planting and again during summer to prevent loosening.

Pole Protection:

- Use dynex (plastic) sleeves to protect from stock

Keep cattle away from poles for at least 6 months

Post Planting Care

- Check and re-ram poles in summer. If the pole is loose air will reach the roots and dry them out causing the pole to die.
- Prune to a single leader. Well maintained plants will better withstand winds and live for longer. Good form will reduce loss of limbs.

Video links/more information: http://www.poplarandwillow.org.nz/library/filter/videos

7.2 Soil management

To minimise sheet, soil slip and gully erosion on moderately steep-to-steep terrain (20-30 degree slopes), stock management should aim to prevent the incidence of bare ground, especially on steeper slopes. Tracks, fence lines, gates and troughs should generally be sited to avoid stock-induced erosion or destabilisation of adjoining slopes. Tracks should be constructed and maintained to control runoff and prevent surface erosion.

For flat to gently rolling terrain (up to 20 degree slopes) the above practises also apply. Where cultivation is required it is recommended that this be carried out on the contour to reduce soil wash from the site.

Winter stock management should aim to avoid soil compaction (pugging) on all land. Such management will help prevent soil erosion, nutrient loss and loss of soil structure. These soil issues often result in increased runoff rates and loss of production from the land. The Landowner is encouraged to use suitable monitoring tools and management advice is available from the following sources:

- Waikato Regional Council Catchment Management Officer at the local Waikato Regional Council Office.
- Managing Treading Damage on Dairy and Beef Farms in New Zealand. AgResearch Ltd, 2003.
- Visual Soil Assessment: Vol. 1, Cropping and Pastoral Grazing on Flat to Rolling Country; and Vol. 3, Hill Country Land Uses. horizons.mw Report No. 20/EXT/425. horizons.mw and Landcare Research NZ Ltd, 2000.

7.3 Water Quality

Controlling erosion and the resulting sediment discharge helps to control phosphorous (P) discharge to waterways. This can be done with good pasture cover by managing stock type and grazing practice, to prevent bare patches and minimise soil loss.

The construction and maintenance of water diversions from tracks to manage stormwater into sumps or onto pasture is recommended. Riparian strips with strong vegetation cover filter sediment to minimise sediment discharge to ephemeral waterways during storm events. Wetland or marsh areas managed as riparian/filter zones are useful for controlling nitrogen (N) discharge, which can occur through overland and groundwater flows. Other options for controlling N discharge include split fertiliser applications when applying urea, utilisation of dairy shed effluent, use of feed/standing pads and reduced stocking rates during winter.

Direct application of fertiliser to waterways should be avoided, while fertiliser application rates and timing should be optimised for maximum pasture uptake and minimum leaching/runoff. A property nutrient budget is recommended to calculate the rates of nitrate leaching and phosphorus runoff, and regular soil testing should be undertaken to monitor changes in soil nutrient levels over time.

In general it is recommended that fertiliser use and application is undertaken in accordance with industry best practice and management advice is available from the following source:

- Waikato Regional Council Catchment Management Officer at the local Waikato Regional Council Office,
- Code of Practice for Fertiliser Use – Pastoral Farming Guide. NZ Fertiliser Manufacturer's Research Association, P O Box 9577, Newmarket, Auckland. Phone 09 415 1359.

7.4 Kauri

Kauri are susceptible to a killer disease caused by a microscopic organism *Phytophthora agathidicida* (kauri dieback). Kauri dieback is found across parts of kauri lands including in the Waitakere Ranges, Waipoua, Great Barrier Island, and on the Coromandel Peninsula in Whangapoua and Hukarahi. Scientists are working hard to find control tools for the disease, but there is currently no known treatment and once a tree is infected it will not survive.

The disease may be spread through as little as a pin prick of soil, therefore reducing soil movement in and near your kauri on your property is the best defense. Soil movement can be reduced by:

- fencing out stock
- controlling pests such as pigs and goats
- ensuring anyone heading into your native forest has cleaned all gear thoroughly as well as their dogs, and
- ensuring machinery coming onto your property is dirt free (for further machinery hygiene information view NCPA *Keep it Clean*).

For more information on kauri dieback visit www.waikatoregion.govt.nz/kauri.

7.5 Biosecurity

Weeds and pest animal pose a threat to existing vegetation and proposed plantings. It is recommended that these threats be controlled, and management advice is available from the following sources:

- Catchment Management Officer at the local Waikato Regional Council Office
- Controlling weeds in riparian margins. A guide to restoration projects and other plantings Booklet, published by Waikato Regional Council
- Waikato Regional Council plant pest and animal pest Biosecurity Officers, phone 0800 BIOSEC (0800 246 732)
- Waikato Regional Council web site: www.waikatoregion.govt.nz/Services/Regional-services/Plant-and-animal-pests/
- Weed Busters web site: www.weedbusters.org.nz

7.6 Biodiversity

The establishment of stock exclusion areas in riparian areas and on steep unproductive land creates opportunities to enhance local biodiversity by encouraging indigenous fauna and flora. It is recommended such opportunities be pursued where practical, and management advice is available from the following sources:

- Waikato Regional Council Catchment Management Officer at the local Waikato Regional Council Office
- Waikato Regional Council web site: http://www.waikatoregion.govt.nz/Environment/Natural-resources/Biodiversity/
- Waikato Biodiversity Forum web site: www.waikatobiodiversity.org.nz
- Landcare Trust: http://www.landcare.org.nz/Biodiversity-for-Farmers
- Department of Conservation: http://www.doc.govt.nz/nature/valuing-nature/biodiversity/

8 Agreement

1. Waikato Regional Council and the Landowner agree to undertake the works in partnership in general accordance with the Objectives, Proposed Solutions and timeframes as outlined in this Agreement, which may be varied or extended subject to consultation with the Landowner and Waikato Regional Council.
2. Annual grant funding to be provided to the Landowner is subject to the works being carried out within the timeframes indicated in the proposal, and where such timeframes are not met annual grant funding may be re-allocated to other programmes (meaning that unless specific arrangements have been made with Waikato Regional Council, no annual grant will be payable to the Landowner).
3. Grant rates will be in accordance with those specified in the Estimated Costs. Grant claims will be considered by Waikato Regional Council on the basis of actual and reasonable costs and relative to Estimated Costs. Proof of actual costs or other supporting documentation must be supplied by the Landowner to Waikato Regional Council.
4. Where the Landowner is registered for GST the Landowner must provide Waikato Regional Council with a valid tax invoice at the time a grant claim is submitted.
5. Funding for works outlined in this Agreement beyond year one is not guaranteed by Waikato Regional Council. Funding is also subject to availability and is reviewed on an annual basis.

6. Where Waikato Regional Council's grant contribution exceeds $35,000 (exclusive of GST), Waikato Regional Council and the Landowner will enter into a Memorandum of Encumbrance or other covenant in respect of this Agreement which shall be registered on the property title and binding on the Landowner and successors in title. This requirement shall also apply to any Waikato Regional Council part-funded project where the external funding in total exceeds $70,000 (exclusive of GST), if no alternative covenant or similar encumbrance applies.
7. The Landowner will at reasonable times allow Waikato Regional Council or its agents, upon prior notification, to inspect the condition of the works and to review related management issues.
8. The Landowner will notify Waikato Regional Council of any pending change of ownership, including subdivision, to facilitate an up-to-date record of Landowner details.
9. The Landowner is responsible for maintenance of works carried out under this Agreement. Grant assistance for the actual and reasonable costs of maintenance may be available from Waikato Regional Council, subject to the rates applicable at the time, application and approval.
10. If the Landowner fails to maintain works implemented under this Agreement, Waikato Regional Council will notify the Landowner in writing specifying the action or repairs required and a suitable timeframe to complete the actions or repairs. If the Landowner fails to comply with the notice Waikato Regional Council by its servants, agents or contractors may (but without obligation to do so) enter upon the property and carry out works deemed necessary and recover costs of doing so from the Landowner.
11. Dispute resolution:
    11.1. In respect of any dispute between the parties arising out of or in connection with this Agreement, the parties shall first attempt to negotiate a resolution.
    11.2. If negotiations fail, either party may elect to have the dispute resolved by a sole mediator jointly appointed by the parties or if the parties cannot agree on the mediator, then a mediator appointed by the President for the time being of the New Zealand Law Society of his or her nominee. The election to mediate is to be made within ten (10) working days of notice of the dispute or at any other time as agreed between the parties.
    11.3. If mediation is not elected or if mediation is unsuccessful then the matter can be referred to arbitration if both parties agree in writing to this occurring. Such agreement must be reached within ten (10) working days after the parties' right to elect mediation has elapsed or the conclusion of the mediation process.
    11.4. If arbitration is not elected pursuant to clause 11.3 then the dispute shall be resolved by the Courts.

12. The Landowner acknowledges that any information held by Waikato Regional Council is subject to the Local Government Official Information and Meetings Act 1987 (LGOIMA). If Waikato Regional Council receives a request from a third party relating to this Agreement Waikato Regional Council will release this Agreement under LGOIMA on the grounds of it being a public document (if registered against the certificate of title) and/or because release of this Agreement is in the public interest as it evidences accountability for the use of public funds.

Signed for and on behalf of the Landowner:

By:_____ ___ (Full Legal Name)	Signature:_____ ___
Position:_____ __	Date:_____ ___
By:_____ ___ (Full Legal Name)	Signature:_____ ___
Position:_____ __	Date:_____ ___

Signed for and on behalf of Waikato Regional Council:

By:_____ ___ (Full Legal Name)	Signature:_____ ___
Position:_____ __	Date:_____ ___

9 Project/Funding Approval

Proposed: (Catchment Management Officer)	
Date:	
Approved: (Zone Manager)	
Date:	