Riparian Plans

Introduction

Riparian margins are the strips of land that run either side of rivers and streams. In Taranaki, much of the riparian vegetation has been cleared and drained for farming, and this is now adding to the pressure being placed on the region's waterways and water resources.

The Taranaki Regional Council advocates retirement of riparian margins from grazing by livestock, and then protecting the margins by planting suitable vegetation. Its advocacy is particularly focussed on the ring plain dairy lands, where the need for riparian planning is greatest.

Purpose of a riparian plan

In conjunction with individual landowners, Council prepares riparian plans to assist the implementation of riparian management. The plan outlines what should be fenced and/or planted and how to calculate the costs.

By implementing riparian management, water quality will improve and farm management will be made easier.

The plan is supplied at no cost and no obligation to the landowner because Council believes it is a co-operative way to help farmers move towards more sustainable use of their land and better protection of the region's environment.

Contents of a riparian plan

A riparian plan consists of an A3, colour, aerial photograph of the property, which is also laminated. Both existing and proposed, fencing and planting are illustrated graphically on the photograph using a computer software programme. Each section is labelled on the map for implementing the works at an affordable rate. Each type of recommended planting is keyed to a legend for identification. The software automatically calculates the number of plants required for each section, which is then summarised in an accompanying report.

The reverse side consists of a series of tables for planning and budgeting purposes. Table 1 outlines a schedule for the timing of each operation to successfully establish riparian works. Tables A to D allow the landowner to calculate the costs for any section and includes all operations for successful establishment. The last table provides a list of plant species available through Council's native plant scheme that are suitable for the farm's climatic location. Plants can then be ordered through a Land Management Officer.

Retirement fencing and planting of the riparian margin

Once a farmer has determined which section is to be implemented, the information in the plan helps them work out what resources are required and at what cost.

Supplementary information

Information sheets are also included with the plan, which provide more detailed information on related topics. For example, the reasons for and benefits of implementing riparian management, plant establishment and maintenance, specific environmental tolerances of each plant, animal and pest management in riparian margins and channel maintenance.

A video showing how to implement riparian management is also provided.

For further advice or information on sustainable land management contact:

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Taranaki Regional Council,
Private Bag 713
Stratford
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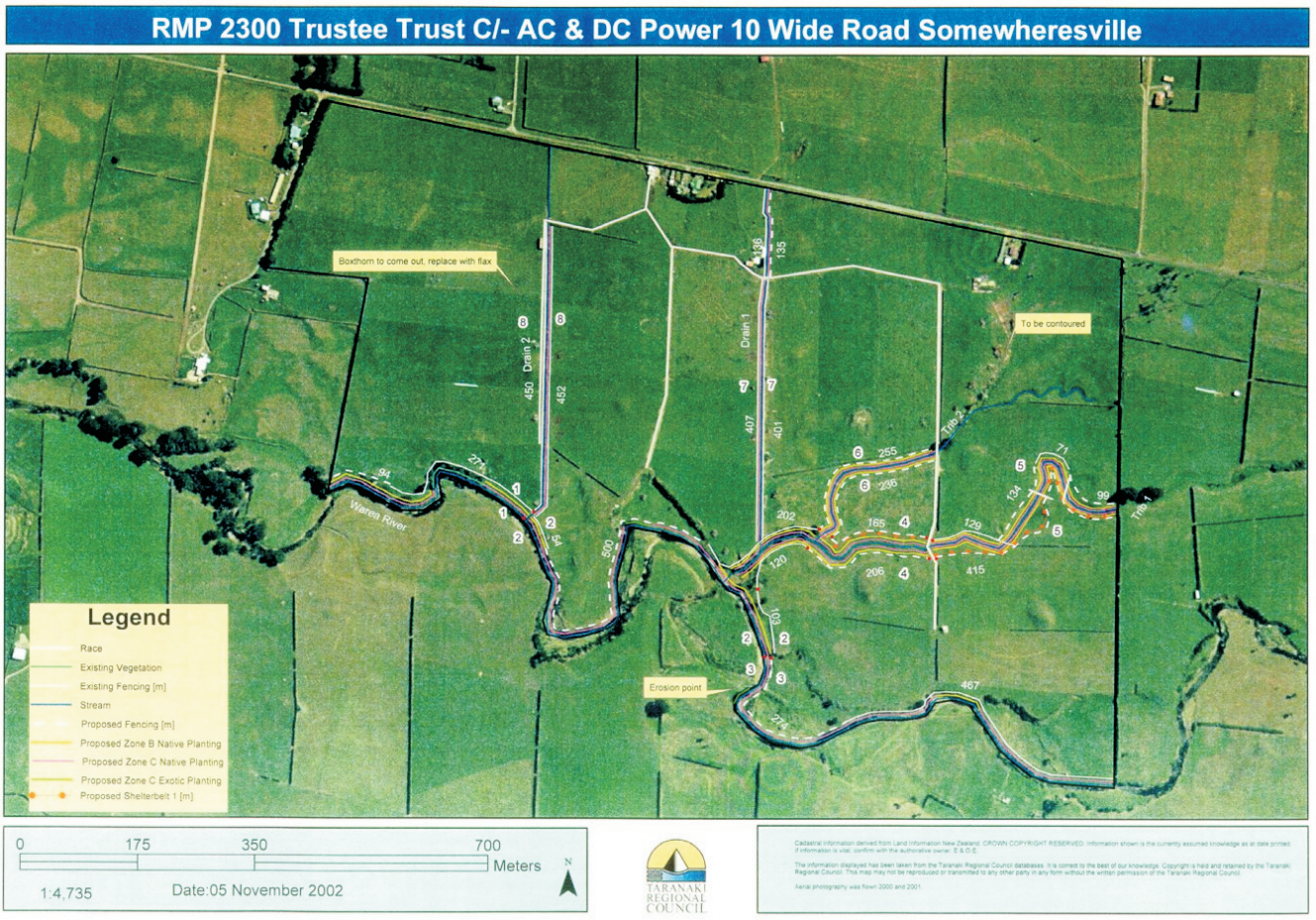

Table 1 Annual implementation

Operation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Order plants	√								√	√	√	√
Pre-plant spray				√	√							
Fencing				√	√							
Collect Plants						√						
Planting						√	√	√				
Releasing				√*		√	√	√	√			
Mortality count	√*											
Blanking						√*	√*					

* Following year

A Fencing cost calculator (Includes materials* and labour)

Any Section	1 wire	2 wire	3 wire	5 wire	7 wire	
Length (m)						
$ per metre 2003 prices	1.50	2.50	3.50	5.50	12.00	
Total $						A

*Materials are appoximately half of the total cost of fencing

B Plant cost calculator

Any Section	Plant Nos.	Plant spacings (m)	**Average** $ per plant 2003 Taranaki Regional Council Plant Scheme	Total	
Zone C Native		1.75	**$1.85**		
Zone B Native		2.75	**$2.20**		
Zone C Exotic[1]		1.0	**$1.00**		
Zone B Exotic[2]					
Total					B

[1]Erosion control plantings-shrub willows
[2]Forestry or shelter plantings

C Planting labour cost calculator*

Number of plants for any section	Planting rate per plant 2003	Total cost $	
	0.70		C

*Where contractors are used, cost may be up to 20% dearer for supervision etc.

D Spraying cost calculator (Includes chemical & labour)

Any section	2003 $per 1m spot	Number of plants	Total	
Pre-plant spot spray	0.10			
Post-Plant release no. 1	0.15			
Post-Plant release no. 2	0.15			
Total Cost				D

E=Total Cost of any section (A+B+C+D)	E

Example of a riparian plan

Plants suitable for your climatic location : C

Plants below will grow in the climatic locations listed and are available through TRC native plant scheme.

Botanical Name	Common Name(s)	Planting Zone	Climatic Location
Carex secta	Purei	C	C,M,U
Cortaderia fulvida	Toetoe	C	C,M,U
Hebe stricta	Koromiko	C	M,U
Phormium tenax	Flax\harakeke	C	C,M,U
Aristotelia serrata	Wineberry\Makomako	B	M,U
Carpodetus serratus	Putaputaweta\Marbleleaf	B	M,U
Coprosma repens	Taupata	B	C
Coprosma robusta	Karamu	B	M,U
Cordyline australis	Cabbage tree\Ti Kouka	B	C,M,U
Corokia macrocarpa	Corokia\Whakataka	B	C
Corynocarpus laevigatus	Karaka	B	C
Dodonaea viscosa	Akeake	B	C,M
Fuchsia excorticata	Kotukutuku\NZ fuchsia	B	M,U
Griselinia littoralis	Broadleaf\Papauma	B	C,M,U
Hoheria sexstylosa	Houhere\Lacebark	B	M,U
Melicytus ramiflorus	Whiteywood\Mahoe	B	M,U
Metrosideros excelsa	Pohutukawa	B	C
Olearia lineata var dartonii	Twiggy tree daisy	B	C
Olearia paniculata	Akiraho	B	C,M
Olearia traversii	Chatham Island Akeake	B	C
Pittosporum crassifolium	Karo	B	C,M
Pittosporum eugenioides	Lemonwood\Tarata	B	M,U
Pittosporum tenuifolium	Kohuhu	B	M,U
Plagianthus regius	Ribbonwood\Manatu	B	M,U
Pseudopanax arboreus	Five finger\Puahou	B	M,U
Sophora microphylla	Kowhai	B	M,U

***C=Coastal:** Within approximately 3 kms of coast, plants can tolerate salt winds but some are also susceptible to frost.

***M=Mid ringplain:** Moderate frost and wind tolerance. From 3 kms of coast to 200 metres above sea level (m.a.s.l.).

***U=Upper ringplain:** High frost tolerance, between 200 and 400 m.a.s.l (up to National Park boundary).

See information sheet No. 25 "Plants for riparian margins" for full details on species tolerances.
Or www.taranakiplants.net.nz