

## Executive summary

This report reviews the Taranaki Regional Council's performance and achievement on its land management functions for the 2007/2008 year.

The implementation of the Sustainable Land Management Programme continues to be the Council's operational focus for land management. This programme focuses on the provision of advice and advocacy through property planning services whereby plans are prepared addressing sustainability issues on a site-specific basis within individual properties. The success of this programme and the Council's essentially non-regulatory approach to addressing land management issues in the region is reflected in the number of requests received by the Council and the action taken by the farming community to address land stabilisation and riparian issues.

Set out below is a summary of the main land management activities carried out by the Council in 2007/2008:

- Prepared 21 comprehensive farm plans and one agroforestry plan covering an additional 15 355 hectares of hill country. This means that at 30 June 2008, the Council has prepared a total of 269 comprehensive farm plans and 24 agroforestry plans, which together cover 178,580 hectares.
- Prepared 301 riparian management plans covering 1 584 kilometres of stream bank. This means that at 30 June 2008, the Council has prepared a total of 2009 riparian management plans, which cumulatively cover 10 818 kilometres of stream bank.
- Monitoring confirms that land occupiers are implementing the recommendations set out in riparian management plans but at a slow pace. As at 30 June 2008, landowners had fenced 504 km of stream bank and planted 426 km of stream bank by way of implementing their riparian plans. Taking the existing fencing and planting into consideration, this means that 60 % of stream banks are fenced and 57% of stream banks that require protection with vegetation are protected by either existing vegetation or new plantings.
- Prepared 7 conservation plans addressing site-specific soil conservation and water quality issues.
- Liaised with and provided supplementary advice to property plan holders on 2 487 occasions.
- Responded, within ten working days, to 554 requests for general advice and assistance on sustainable land management, soil conservation and riparian management practices.
- Provided a total of 256 438 plants for soil conservation and riparian enhancement purposes, at cost, to 670 plan holders.
- Through the Council's sustainable land management programme, the Council is working with land holders to adopt land use practices and techniques that avoid or minimise soil erosion in the hill country and which maintain and improve water quality in ring plain streams. With continued land holder and community support for this programme and other land management activities, the Council believes it will continue to meet its land management objective of promoting sustainable land and riparian management.



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# 1. Introduction

## 1.1. Purpose

This report reviews the Taranaki Regional Council's performance and achievements on its land management functions for the 2007/2008 year.

## 1.2. Background

The Taranaki Regional Council has responsibilities for sustainable land management in the Taranaki region derived from the Resource Management Act 1991 and the Soil Conservation and Rivers Control Act 1941.

Over 60% of Taranaki's total land area of 723 610 hectares has been developed for pastoral farming. The rest is mainly indigenous forest cover (half of which lies in the Egmont National Park and other Crown reserves) with some exotic forest cover. Good management of the region's land resource is essential for Taranaki's environmental and economic future. The soil resource, which supports the flora and fauna, and is the base for the region's primary production, must be carefully managed.

Under the Resource Management Act, Council has prepared the *Regional Policy Statement for Taranaki* (1994), the *Regional Fresh Water Plan for Taranaki* (2001), and the *Regional Soil Plan for Taranaki* (2001). These policy documents, amongst other things, promote sustainable land use, soil conservation and appropriate riparian management.

The Council promotes sustainable land management through advisory and regulatory methods. The focus is on the use of non-regulatory methods whereby advisory and extension services are provided to land occupiers to promote voluntary change towards sustainable land management practices.

The property planning service involves Council, on request from interested land occupiers, preparing five types of farm plans. These are:

- **Comprehensive farm plans:** These are prepared for properties in erosion prone parts of the eastern hill country and look at all aspects of a farming operation including land and stock management and specifically address management practices that protect soil and water resources while maximising the productive capability of the property. If forestry is seen as part of the property's future viability, this plan can also include an agroforestry plan.
- **Agroforestry plans:** These are prepared primarily for properties in the hill country but on occasion can be applied to other parts of the region. These plans are based upon a computer programme designed to model the physical and financial effects of a sustained planting to felling regime on a property.
- **Conservation plans:** These are prepared primarily for properties with individual site-specific soil or water conservation problems that do not require long term input and planning. Examples include shelterbelts and sand drift control.
- **Riparian plans:** These are prepared primarily for properties on the ring plain but on occasion can be applied to other parts of the region. These provide

advice on the retirement and re-vegetation of land along the banks of rivers and streams for the purpose of enhancing water quality.

- **Biodiversity Plans:** These are prepared for Key Native Ecosystems and set out recommended actions for taking an integrated management approach to safeguarding the biodiversity values at these sites. Actions cover recommendations for legal protection, fencing, planting, weed management, pest control and monitoring. They can span a number of properties where the Key Native Ecosystem site is on multiple properties.

Set out below are the objectives and performance measures of the Council's significant land management activities.

### 1.2.1. Objective

The overall objectives for land management activities for 2007/2008, as set out in the Council's *Annual Plan, 2007/2008*, are:

*"To promote sustainable land and riparian management by providing property-planning services that identify actions for land use and management on an individual property basis", and*

*"To promote sustainable land and riparian management to the regional community through advocacy and facilitation".*

### 1.2.2. Performance measures

In response to the above objectives, the Council adopted the following performance measures for 2007/2008 in its *Annual Plan, 2007/2008*:

- Provide property planning services to landholders, comprising comprehensive farm plans, agroforestry plans and conservation plans. The target for 2007/08 is for plans covering not less than an additional 15 000 hectares from an estimated 30 properties;
- Provide riparian management plans to landowners. The target for 2007/2008 is for plans covering not less than an additional 1 250 kilometres from an estimated 300 properties;
- Liaise with and provide supplementary advice to approximately 2,250 property owners for whom plans have been prepared;
- Monitor and report on progress on implementation of all sustainable land management plans;
- Respond to 100% of requests (approximately 600 per annum) for general advice and assistance on sustainable land management, soil conservation and riparian management practices within ten working days;



*John Hutchings (Fonterra) and Council CEO, Basil Chamberlain join forces to promote the benefits of riparian planting.*

- Provide servicing and support to the Taranaki Tree Trust and assistance to other organisations involved in promoting sustainable land management;
- Provide, on a cost-recovery basis, suitable plants for land stabilisation, soil conservation and water protection programmes. The target for 2007/2008 is to provide an estimated 230 000 plants for these purposes.

## 2. Report on progress

### 2.1. Preparation of comprehensive and agroforestry plans

Each year, the Council receives requests from land occupiers to prepare comprehensive farm plans or agroforestry plans for their properties.



*Comprehensive farm plans provide landowners with advice and information on managing erodible land.*

Comprehensive farm plans cover all environmental aspects of a farming operation including land and stock management while maximising the productive capability of the property. The plans are based upon a detailed land resource inventory and include an analysis of soils, geology, vegetation, slope and erosion. Land use and management recommendations promoting the stabilisation and

protection of the productive capability of the soils within the property are also included in the Plan. The comprehensive farm plan format has evolved over the past three years to indicate production potentials for the different land units and provide some basic economic analyses.

In 2007/2008, the Land Management Section of the Council prepared 21 comprehensive farm plans covering an additional 14 648 hectares of farmland in the hill country and on the coastal terraces.

The Council may also receive requests from land occupiers to prepare agroforestry plans for their properties. The Council prepares these plans for land occupiers interested in diversification by establishing woodlots or plantations.

Agroforestry plans involve the use of the Agroforestry Estate Model to generate a number of scenarios taking into account land use capability and the nature and extent of forestry in which the land occupier is interested. In 2007/2008, the Council prepared one agroforestry plan covering 707ha.

As at 30 June 2008, a total of 293 comprehensive farm plans and agroforestry plans have been prepared covering 178, 580 hectares (Table 1). The most 'at risk' area in terms of soil erosion occurs on steep slopes in the hill country and on the coastal terraces – particularly, pasture land on Class VIe, VIIe and VIII land.

The coverage of the comprehensive plans and agroforestry plans throughout Taranaki is shown in Appendix I.

**Table 1: Comprehensive and agroforestry plans prepared**

Year	Comprehensive plans		Agroforestry plans		Total	
	No. of plans	Ha	No. of plans	Ha	No. of plans	Ha
Prior to 2000/01	91	55 708	20	11 444	111	68 441
2001/2002	23	11 516	0	0	23	11 516
2002/2003	17	14 532	2	812	19	15 344
2003/2004	37	14 917	1	412	38	15 329
2004/2005	41	25 827	0	0	41	25 827
2005/2006	19	11 737	0	0	0	11 737
2006/2007	30	15 031	0	0	30	15 031
2007/2008	21	14 648	1	707	22	15 355
<b>Total</b>						<b>178 580</b>

### **2.1.1. Monitoring implementation of plans**

Landowners with comprehensive farm plans or agroforestry plans are contacted annually and information gathered on changes they have made to their farming practices and land use as a result of the plans.

In 2007/2008 the Council completed the job of digitising farm plans developed before 2002 to bring them up to the current GIS format so that a monitoring programme can be developed. In addition, changes in land use that have been made as a result of implementing the farm plans have also been digitised.

Once the monitoring software has been developed, the Council will be able to accurately report on progress with implementing recommendations in the farm plans.

### **2.1.2. Promoting sustainable land management**

In addition to the preparation and implementation of property plans, the Council continued to support the Taranaki Monitor Farm at Tikorangi and the Taranaki Shelter and Farm Forestry Association.

Council staff organised a series of meetings for farmers to provide an opportunity for information to be passed on about opportunities for carbon farming. The carbon farming seminars were held at Uruti in November and at Douglas and Waverley in February. Hillcountry farmers were the main target.

Some 60 people at the Uruti seminar, 80 at Douglas and 40 at Waverley heard speakers and presentations from the Taranaki Regional Council, MAF, the forestry industry and carbon brokers.



*Eighty people attended the Taranaki Regional Council's carbon farming seminar in Douglas, one of three held around the region.*

A major emphasis was the potential business opportunities that exist for land owners in climate change initiatives such as the proposed Forestry Emissions Trading Scheme, the Permanent Forest Sink Initiative and the Afforestation Grants Scheme.

The Permanent Forest Sink Initiative in particular offers hill country land owners new scope for developing useful new income streams off steep, highly erosion-prone, infertile land – while at the same time meeting the sorts of soil conservation objectives pursued by the Council.

There is flexibility too, so the land owner can decide which land pockets might be best for reversion to scrub and which would be best for planting trees.

No matter what the option, such vegetation in this steep country will help to reduce soil loss and prevent sediment run-off into streams and so enhance water quality throughout the entire catchment.

Climate change policies are presently in a state of political hiatus and the future direction will be classified when the emissions trading scheme legislation is progressed.

## 2.2. Preparation of riparian management plans

Each year, Council targets and receives requests from land occupiers to prepare riparian management plans for their property. Riparian management plans focus upon the protection of watercourses, primarily on the ring plain. These plans set out recommendations for the retirement or re-vegetation of land along the banks of rivers and streams for the purpose of enhancing water quality.

Complementing the planning service is the provision of riparian plants at cost to plan holders. To make riparian planting more affordable, Council contracts nurseries to supply, in bulk, suitable indigenous plants, and then passes on the savings to



*An example of a riparian plan prepared using GIS technology*

participating land occupiers (see section 2.5.2 below).

In 2007/2008, Council staff surveyed and prepared 301 riparian management plans covering 1 584 kilometres of stream bank.

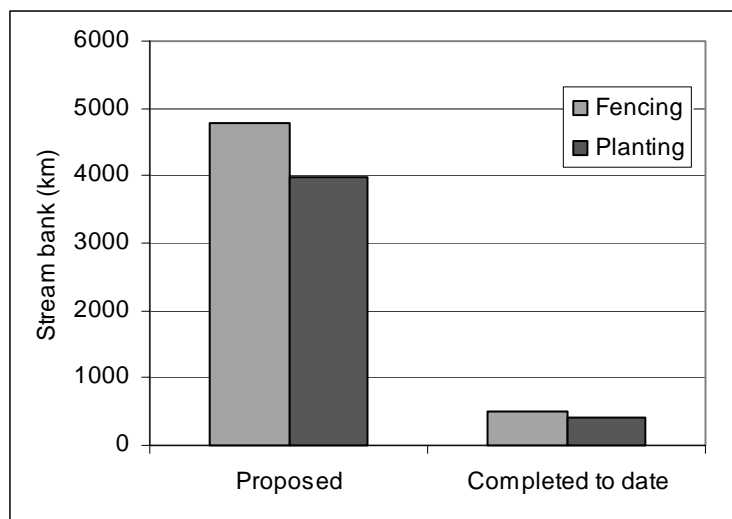
This means that to date, the Council has prepared 2009 riparian management plans that cover a total of 10 818 kilometres of stream bank<sup>1</sup>.

The coverage of the riparian plans throughout Taranaki over time is shown in Appendix II.

### 2.2.1. Monitoring implementation of riparian plans

Since 2004/2005, the Council has been monitoring the implementation of riparian management plans in terms of additional riparian fencing and planting carried out following the preparation of the plan. This monitoring confirms that land occupiers are implementing the recommendations set out in riparian management plans but at a slow pace.

As at the end of June 08, landowners have fenced 504 km of stream bank and planted 426 km of stream bank (Figure 1).



**Figure 1:** Extent of proposed fencing and planting that has been completed

Taking the existing fencing and planting into consideration, this means that 6 539 km of stream banks are fenced (60% of the total covered by a riparian plan) and 4705 km of stream banks are protected by vegetation (existing or newly planted). This is 57% of the length identified as relevant for planting.

Council's riparian programme is a key component of the Dairying and Clean Streams Accord. Progress with targets in the Accord is reported on separately.

### 2.2.2. Promoting the riparian programme

In order to promote the riparian programme and to encourage uptake of the riparian plan recommendations by landowners, the Council has worked in partnership with Fonterra to develop a joint communication strategy.

<sup>1</sup> 8257km of that has relevancy for planting (the difference being lengths of stream bank where planting is not an issue such as steep banks, where streams have moved etc

The purpose of the strategy is “To increase implementation of riparian plans in Taranaki to meet the targets of the Regional Action Plan”. The aim of the plan, is to move the focus from “awareness raising” to achieving a specific behaviour, which is the fencing and planting riparian margins.

A mixture of activities and methods has been set out in the plan in order to reach farmers and the media with relevant messages through a number of different channels. This financial year, a number of press releases on various angles to do with riparian management, were published in the major newspapers in the region.

The primary message to dairy farmers is “Fence and plant your riparian margins”. The plan identifies a number of secondary messages such as the importance of riparian fencing and planting for the environment, and farm management and to future-proof dairy production and the industry.



*Winners of the 2008 riparian prizes*

The plan identifies a number of barriers to landowners completing riparian works, such as the lack of time or labour to carry out the work, the lack of the necessary skills and the low priority in a busy farm management programme.

A new initiative this year was to let a tender for the provision of planting contract services for landowners who were undertaking their first lot of riparian planting. The Council facilitated the matching up of contractors with landowners and over 50 000 plants were planted as a result. Feedback from all involved in the scheme was positive.

One of the actions from the communications plan involved Fonterra sponsoring two major prizes to encourage farmers into riparian management. A package of 700 riparian plants, preplanting preparation, planting and maintenance valued at \$3 500, and a Sony wide-screen television set were provided. Seventy riparian plan holders, who ordered over 400 riparian plants before 1 May 2008 received \$50 RD1 vouchers. The promotion was a success, with increased plant orders arriving earlier to make the prize-winning cut-off date.



*David McLeod, Blue Read and Shona Glentworth at the riparian planting day.*

Another significant action from the communications plan was a joint corporate planting day between Fonterra and the Council, using high profile farming leaders, such as Blue Read, the Chair of the Fonterra Shareholders Council, to promote the riparian programme at a national level. A high level of media interest was generated with feature

stories appearing on both TV One and TV Three news.

### 2.3. Conservation plans

Each year, the Council receives requests from land occupiers to prepare conservation plans for their property.

Conservation plans are prepared primarily for properties with localised site-specific land or water conservation problems e.g., shelter establishment, sand restoration, wetland protection, and erosion control.

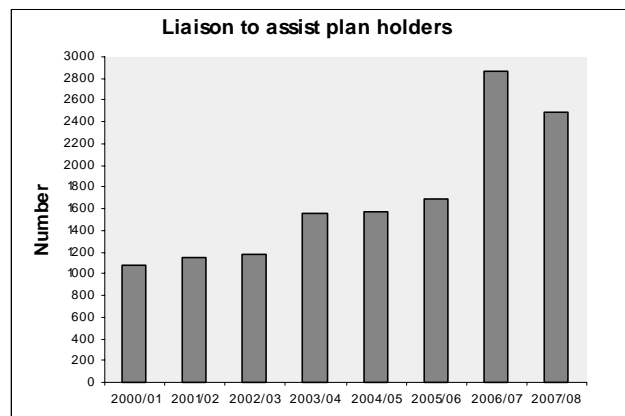
The advice set out in conservation plans do not require long term or on-going input and planning.

In 2007/2008, the Council prepared 7 conservation plans. As at 30 June 2008, the Council had prepared 224 conservation plans.

### 2.4. On-going liaison

On-going one to one liaison between Council and property plan holders is the most important component of ensuring that the plan holders implement the plans' recommendations over time.

In 2007/2008, the Council liaised with and provided supplementary advice on 2487 occasions to landholders with existing property plans. This was comparable to last financial year (2874) but considerably higher than previous years where the average had been about 1600 occasions. This reflects both the increased number of plan holders and the Council's commitment to on-going liaison with those landowners.



**Figure 2:** Number of times Council provided support to plan holders

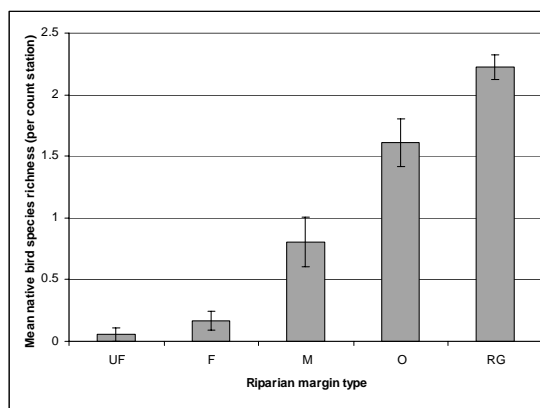


*Riparian vegetation along the Tangatara stream, before and after riparian planting.*

## 2.5. Research and investigations

Riparian management has been a key focus for the Taranaki Regional Council. While riparian planting is intended initially to provide benefits for aquatic biodiversity and water quality, little is known about its effects on terrestrial biodiversity. A study has therefore been undertaken to investigate whether and to what extent riparian management has impacted on native terrestrial biodiversity values.

The biodiversity values, as measured by the richness and abundance of plant and bird species was measured and compared in different types of riparian margins. Sites included riparian margins that were still grazed (UF), some that had just been fenced (F), margins with medium aged plantings (4 – 8years)(M), margins that had been planted 8-12 years ago (O) and margins with remnant or naturally regenerated vegetation 20+years old (RG).



**Figure 3:** Bird diversity in riparian areas of various ages.

The preliminary results seem to indicate that:

- Riparian planting leads to an increase in native plant species richness overtime: a trend that is particularly notable for fern species (as these are not typically planted).
- The use by native and introduced birds of grazed and un-vegetated fenced riparian margins tends to be very low
- Planted margins of at least a moderate age (4+ yrs) and margins with naturally regenerated vegetation 20+ years old both have significantly higher native bird abundances than grazed and un-vegetated fenced margins (Figure 3).
- As planted riparian vegetation ages, there is an increase in abundance and richness of native bird species.
- Native bird abundances and plant diversity in older plantings (8-12 years) are likely to continue to increase.

Overall the study indicates that planting of riparian margins is creating new habitat for native plant and bird species where none existed previously and is leading to an improvement in the biodiversity of the region. Fenced margins with naturally regenerated vegetation 20+ years old are also making a positive contribution to the biodiversity to the region biodiversity.

## 2.6. Requests for general advice and assistance

### 2.6.1. Planting material

Each year the Council receives and responds to numerous requests from the public for information on sustainable land management. Public requests may relate to vegetation clearance, native logging, implementation rate of the sustainable land management programme and riparian management strategy, aerial photography, planting advice and new property plan enquiries.

Council officers also distribute a large number of pamphlets and other educational material to interested individuals and organisations in relation to sustainable land management.

In 2007/2008, the Council received and responded to 554 requests for advice and assistance on a wide variety of land management related issues (compared with 633 information requests the preceding year). Most of these requests related to practices, and, to a lesser extent information requests from other agencies. All requests for general advice and assistance were responded to within ten working days.

### 2.6.2. Planting material

The Council has two plant production schemes whereby it grows or obtains quality conservation planting material and makes these plants available to property plan holders at cost. The provision of planting material at cost is a key component in the success of the Council's soil conservation and riparian management programmes.

The first scheme involves Council supplying low cost poplar and willow plants for soil stability purposes. During the 2007/2008 year the Council provided 12 569 poplars and willows to 73 plan holders.

The second scheme is the 'Riparian Plant Scheme'. This scheme involves the Council contracting nurseries to supply suitable native riparian planting material. By bulk purchasing these plants, the cost of the plants is reduced and the Council then passes on these savings to riparian management plan holders.

Table 3: Number of plants supplied

Year	Poplar & willows	Riparian plants	Total
1996/1997	0	15 655	15 655
1997/1998	7 094	25 000	32 094
1998/1999	9 918	32 630	42 548
1999/2000	10 458	51 320	61 778
2000/2001	8 691	69 400	78 091
2001/2002	9 700	92 000	101 700
2002/2003	9 500	115 000	124 500
2003/2004	0	95 018	95 018
2004/2005	12 700	219 000	231 700
2005/2006	6 874	150 691	157 565
2006/2007	4212	200 038	204 250
2007/08	12569	243 869	256 438
<b>Total</b>	<b>91 716</b>	<b>1 309 621</b>	<b>1 401 337</b>

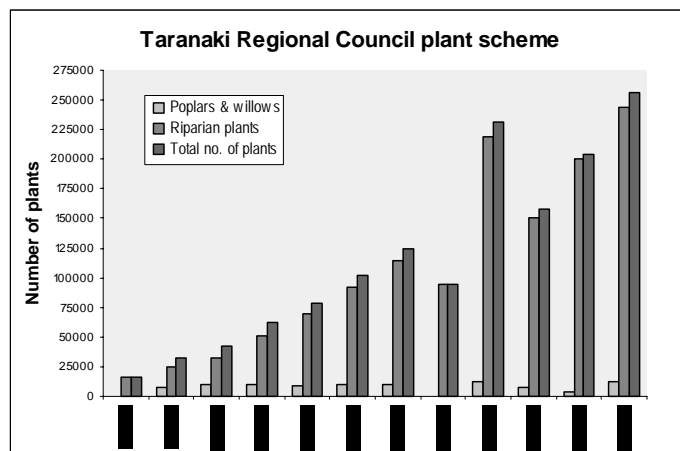


Figure 4: Number of plants supplied

In 2007/2008 the Council supplied 243 869 plants to 597 property plan holders (13 nurseries supplied plants to the scheme).

In 2007/2008, the Council supplied a total of 256 438 plants, bringing the total number of plants supplied under these schemes since 1996 to well over one and a quarter million (refer Table 3 and Figure 4).

### 2.6.3. Poplar nursery development and production programme

This financial year, Council has purchased a property to establish a nursery on State Highway 3a, near Manutahi Road, Lepperton. Work got underway to



*Riparian plants all laid out ready for pick up at the new nursery.*

develop the access, creating the area for dispatching riparian plants, removing a block of eucalypts and generally tidying the property up.

Establishing this base will facilitate the Council's Sustainable Land Management Programme through the production of quality three-metre poplar and willow material in a two to three year rotation and will enable the production of poplar species suitable for Taranaki conditions. It will also be used to produce shrub willow material for riverbank stabilization.

During 2007/08 the first two blocks of poplars/willows were planted (covering 1.6ha with 11 000 plants).

Council also has plans to establish a wetland/riparian planting demonstration site on the existing gully on the property.



*Seven month old poplars at the new nursery*

### 2.6.4. Taranaki Tree Trust

The Council continues to administer and service the Taranaki Tree Trust – a charitable trust dedicated to the protection and enhancement of the region's ecosystems and landscapes. It also donated \$30,000 to the Tree Trust from the Environmental Enhancement Grant.

The Trust met five times during the year to consider potential projects. The annual report of the Trust was approved at the Annual General Meeting held on 24 October 2007.

The Taranaki Tree Trust continues to receive contributions and attract sponsorship. It is therefore in a position to financially support a number of projects. The highlight of 2007/2008 was the completion of the Herekawe stream walkway project, a project involving the facilitation of a number of corporate sponsors and other agencies. The Trust participated in a world wetland day public field trip to a recently restored wetland. Another highlight was facilitating the Hutiwai Stream whitebait restoration project funded by the Honda Tree Fund.

The Trust has confirmed its strategic direction in line with the recently published national priorities for the protection of biodiversity on private land, and will continue to focus on financially supporting landowners to protect and restore remnant wetland and forest areas, particularly on land environments where there is little original indigenous vegetation left.



*Herekawe Stream partners at the opening of the walkway, August 2008.*

### 2.6.5. Wetlands

Wetlands, such as lagoons, estuaries, bogs, swamps, shallow lakes and farm dams, have a vital role in maintaining the health of the region's natural environment.

The Council promotes wetland protection through education, advice and information and financial incentives. In particular, the Council focuses on protecting those wetlands identified as regionally significant. 77 wetlands or groups of wetlands are identified as regionally significant covering a land area of 2811.8 hectares. This figure has slightly changed recently, due to updating of some maps with new GIS mapping techniques.



*Coastal sand dune wetlands such as at Waipipi dunes are particularly significant.*

Where possible, the Council advocates for the protection of regionally significant wetlands with a particular focus on fencing, supplementary planting and covenanting the wetlands for their long term protection.

Grants are made to land occupiers to cover the costs of enhancement and protection. There are two protection mechanisms available – a Covenant (with either QEII National Trust or the Department of Conservation) or a Management agreement (Memorandum of Encumbrance) with Council. 13 wetlands have 21 QEII covenants

on part or whole of the wetland. 25 wetlands have DoC Covenants on part or whole of the wetland. 8 wetlands have 8 Memorandum of Encumbrances on part or whole of the wetland.

In 2007-2008, Council spent some \$92,985.24 on works to protect regionally significant wetlands. Protection works include weed control, restoration planting and fencing.

The 77 significant wetlands are classified into regionally significant wetlands (48), wetlands over 5 hectares (18) and wetlands with rare or uncommon indigenous species (11).

The legal protection status of the 77 significant wetlands as at 30 June 2008 is set out in Table 4.

**Table 4:** Legal protection status of the 77 significant wetlands identified in the Regional Freshwater Plan.

	Regionally significant wetlands	Wetlands over 5ha	Wetlands with rare or uncommon species
Protected through the Freshwater Plan, and legally protected through being on public conservation land, through covenants or memorandums.	34	3	3
Protected through the Freshwater Plan, and partially legally protected through covenants etc.	5	0	1
Protected through the Freshwater Plan, but no other form of legal protection.	8	15	7
Protected through the Freshwater Plan, but destroyed.	1 <sup>2</sup>	0	0
<b>Total</b>	<b>48</b>	<b>18</b>	<b>11</b>



*New fencing at Lake Waiau will safeguard the wetland's values.*

the 18 wetlands over 5 hectares: Te wera, Wiremu Road, Lake Taumaha, Spence Road Ponds.

During the 2007/2008 year Council staff worked with landowners on securing protection or undertaking maintenance or enhancement on 12 of the 48 regionally significant wetlands: Uruti, Umutekai, Toro, Te Wera, QEII covenant 5/6/067, Lake Rotokare, Lake Waiau, Dorset Road, Umutekai bush, Mudfish sites, Nowell's Lakes and Lake Kaikura.

Council staff worked on protection works on 4 of

<sup>2</sup> Wetland was largely destroyed in 2000. All parties involved in the unauthorised incident were prosecuted under section 15 of the Resource Management Act 1991.

Council staff worked on 2 of the 11 wetlands with rare or uncommon indigenous species: Toko wetland and Huiakama Lagoon.

Council staff undertake a significant wetland monitoring programme which includes site visits for all significant wetlands, liaison with land owners, the monitoring and recording of information relating to the protection, maintenance and enhancement of the wetlands, including following up on protection works initiated. All accessible regionally significant wetlands have been monitored within the last 2 years.

### 2.6.6. Wetland extent monitoring

The Council commenced a research investigation into changes in the extent and condition of wetlands originally identified through a study of aerial photos flown in 1995. This earlier report had generated a list of 717 wetlands. Each of these locations was then re-examined through the 2007 aerial photos. The report is yet to be finalised. Early indications are that a number of wetlands, particularly smaller ones on the ring plain, have been drained or modified over the last 13 years.



*Example of a wetland modified between 2001 (on the left) and 2007 (on the right)*

Newly created wetlands will not be picked up through this survey as it is based on wetland GPS locations from the 1995 study. However, wetlands are also being re-created, and the wetland visited for World Wetlands Day is a case in point.

This site, located on a Toko dairy farm, is a wetland gully that has been fenced to exclude stock and enhanced with thousands of new plants and the creation of areas of open water habitat that has attracted a number of wetland birds to it. Predator control at the site is ensuring that birds attracted to the improved habitat are protected from predators.



*Recently created wetland at Toko*

### 3. Conclusion

In summary, the Council substantially met its objectives and performance measures for land management activities as set out in the Council's for 2007/2008 in its *Annual Plan, 2007/08*.

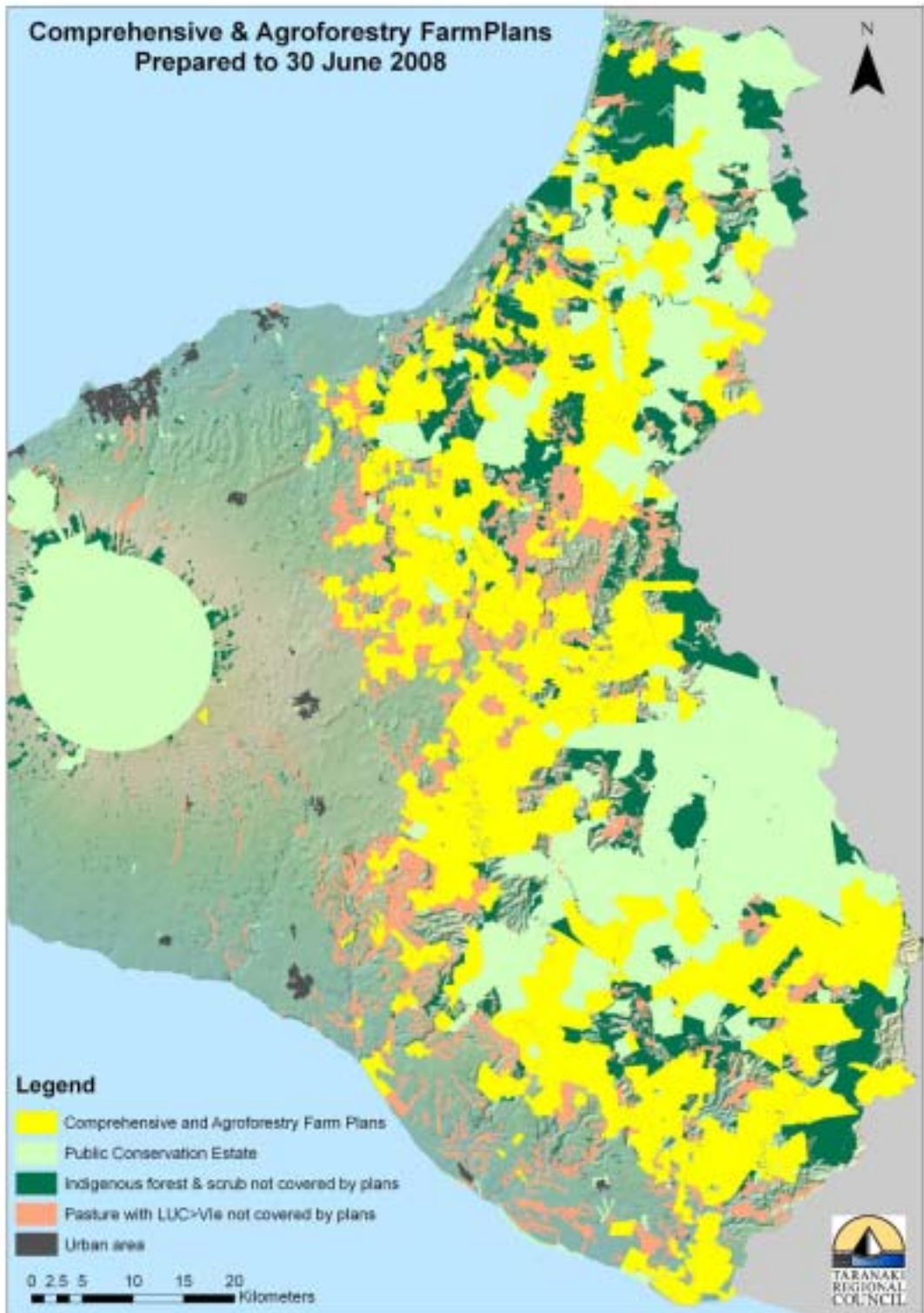
The implementation of the Sustainable Land Management Programme continues to be the Council's operational focus. Through this Programme, significant parts of Taranaki's erosion prone areas are being sustainably managed and soil erosion minimised or avoided. Likewise, the fencing and planting of riparian margins through intensively farmed land on the ring plain is making a significant contribution to avoiding, remedying or mitigating the effects of land use practices on water quality.

#### Programmes and performance measures

1. Prepared 21 comprehensive farm plans and one agroforestry plan (covering an additional 15 355 hectares) and 7 conservation plans.
2. Prepared 301 riparian management plans covering 1 584 kilometres of stream bank.
3. Monitoring confirms that land occupiers are implementing the recommendations set out in riparian management plans but at a slow pace. As at 30 June 2008, plan holders had fenced 504 km of stream bank and planted 426 kilometres of stream bank to implement their riparian plans.
4. Liaised with and provided supplementary advice to property plan holders on 2487 occasions.
5. Responded, within ten working days, to 554 requests for general advice and assistance on sustainable land management, soil conservation and riparian management practices.
6. Provided 256 438 plants for soil conservation and riparian enhancement purposes, at cost, to 670 landholders.
7. The Council continued to provide servicing and support to the Taranaki Tree Trust and other organisations involved in promoting sustainable land management.

This report will be forwarded to interested stakeholders for land management.

## Appendix I: Coverage of agroforestry and comprehensive farm plans





## Appendix II: Coverage of riparian plans

