



## Waihora Ellesmere Catchment Riparian Restoration Programme

In 2008 WET, with the support of partners, was successful in securing funding from the Sustainable Farming Fund (MAF) for a 3 year programme of riparian restoration in the Te Waihora/Lake Ellesmere catchment. The Waihora Ellesmere Catchment Riparian Restoration Programme came to an end on June 30<sup>th</sup> 2011.

### The project objectives:

- To establish riparian vegetation in the Te Waihora/Lake Ellesmere catchment, leading to improved water quality in the tributaries and ultimately in the Lake. The vegetation will filter nutrients from surface 'on farm' flows, and play a major role in increasing biodiversity in an area where 0.01 % of original biodiversity remains, providing habitat and shading for aquatic life, and stabilising stream banks. One desired outcome would be to return water in the tributaries back to contact recreational levels.
- To increase the awareness and knowledge levels of landowners and managers about the effect of riparian vegetation on water quality in the catchment and on management practices to reduce the impact of farming operations on the environment.
- To encourage farmers and land managers to engage with the project, with riparian restoration plans individualised to the nature of each property. Outcomes envisaged included farmers finding improvements in lower stock losses, improved shelter from the riparian restoration on their properties, and gains (relative to 2005) in relation to the Emissions Trading Scheme. It was hoped that farmers on each waterway would get together annually to share success and to provide peer pressure to those who were degrading water quality.
- To contribute significantly to the achievement of the vision for Te Waihora/Lake Ellesmere and its tributaries, contained in the Waihora Ellesmere Trust Community Strategy.

During the first year of the project a significant allocation of funding from the Sustainable Management Fund (Ministry for the Environment) for planting was secured. However, after one year of that funding, the Sustainable Management Fund was disestablished. The project's main focus then moved towards raising awareness and engaging with landowners, land managers and fund holders.

### What was achieved?

- In conjunction with Environment Canterbury (ECan), Selwyn District Council (SDC) and Ngai Tahu 19 catchments were assessed using criteria including water quality, cultural value, research value, availability of funding and likelihood of successful outcomes. Eight priority catchments were identified. This prioritisation underpinned the development and implementation of the riparian planting programme, with field days being held in priority catchments, and local networks enabling sites to be secured for planting in all but one priority catchment.
- An information pack was prepared which included a series of riparian restoration advice sheets. These were widely distributed to farmers and managers in 2009 and are available to be downloaded from the WET website.

WET also developed a new website with enhanced capability, developed display materials and filmed a series of short videos, which include information on restoration (currently unavailable due to the earthquake).

In 2010/11 leaflets were produced and disseminated outlining the planting programme and highlighting the lessons learned.

- The programme was showcased at numerous events, including the 2009 Living Lake Symposium, Canterbury Biodiversity Field days, A&P Shows, catchment field days, a Lake and Land Appreciation tour, the South Island Agricultural Field Days 2011, a number site visits, in community displays, and in our regular newsletter.
- Restoration planning services were provided to land owners and managers, leading to over 20 sites being planted and plans being provided as supporting material for a number of funding applications.

Programme information, including information about the planning service, has been presented to representatives of all the active drainage committees in the catchment, which has provided opportunities for follow up.

- In total over 50,000 native plants were installed on a range of public and private riparian sites in a number of priority catchments. WET worked in partnership with farmers, district and regional authorities, Ngai Tahu, North Canterbury Fish & Game, DOC, community groups and local businesses. Many of the sites are in highly visible and accessible locations and will serve as excellent demonstration sites over coming years, showcasing what can be achieved in this catchment. They may also be used as research sites to quantify the benefits of native riparian planting.

WET used different contactors employing a variety of approaches and data was gathered and analysed as we went. A preferred approach has been developed, using the Combiguard Restoration System, which has been shown to be very efficient and cost effective.

Maintenance will continue for at least two years after planting to ensure successful establishment.

- Information gathered has been used to support funding applications for funds to maintain the planted areas and for planting additional sites.

WET, together with partners ECan, SDC, Ngai Tahu and Lincoln University, have secured funding for a new project focusing on Sustainable Drain Management in Selwyn-Waihora. This will build on the riparian restoration project, and utilise the experience gained and data collected. The new project involved 6 separate funding applications, 4 of which were successful and 2 of which were declined.

- The WET website was significantly upgraded in 2009 and has been regularly updated with information on the riparian restoration programme. At least 4 newsletters each year have been sent to members and subscribers. We are also developing and uploading a series of case studies of some of the key demo sites, developed as part of this project, to celebrate what has been achieved.

Later in 2011 Lincoln University will supply profiles of the priority catchments which can be uploaded to the website.

## **Main Findings**

With appropriate support and assistance, many farmers and other landowners are willing to undertake riparian restoration. This type of planting will have some on-farm benefits such as stabilising drain banks and reducing the need for drain maintenance, and increased shelter. Over time it will deliver many other benefits to the wider community such as improved water quality and stream health, enhanced recreational opportunities, increased amenity and cultural benefits.

Through a collaborative and flexible approach we have been able to develop a number of demonstration sites in visible and accessible locations and we have been able to gain a greater understanding of good

practice with respect to restoration. Using the Combiguard Restoration System, with removal of competing weeds prior to planting, and restoration grade seedlings installed with a fertiliser tablet, a double layer wool mulch and a protective plastic sleeve, we can achieve well over 90% success rate in establishing native plants on riparian sites in the catchment. This system, implemented for WET by Brailsfords Ltd, also allows for efficient and effective weed control and maintenance, leading to self supporting plant communities in 2 – 3 years.

We have observed a greater ongoing commitment from landowners who have made a financial contribution to the planting undertaken on their properties. For future planting projects on private land WET will seek a financial commitment from the landowner.

Farmers and other private landowners also want to see a commitment from local and central government agencies to undertaking similar work on public land.

Good planning is vital to ensure clear objectives are established for each site, funding is used wisely and cost effectively, and sound arrangements are in place for maintenance of any planting.

### **Funding summary**

The total project income over 3 years was \$538,748 (including a final payment from SFF of around \$7000 not yet received) and the total expenditure was \$532,726. Funding has been received in advance from DOC and ECan for maintenance as part of this project and \$6000 of this has been carried forward to 2011/12. This compares with the projected total expenditure of \$521,000 anticipated in the original project application.

Major funders were MAF (Sustainable Farming Fund), MfE (Sustainable Management Fund), DOC (Community Conservation Fund), WWF (Habitat Protection Fund) and ECan. Other funders included Canterbury Community Trust, North Canterbury Fish & Game, SDC and landowners.

Significant in-kind contributions to this project came from WET Trustees and staff, ECan, SDC, Ngai Tahu, Lincoln University, volunteers, farmers, community groups and others. Taking these contributions into account, the total project value was between \$750,000 and \$800,000. This compares with the expected total project value of \$656,500.

### **Conclusion**

Successful delivery of a project of this scale has enhanced the development of strong ongoing relationships with our many project partners, including ECan, SDC, Ngai Tahu, DOC, North Canterbury Fish & Game, local community groups and businesses. A number of student research projects have benefited from access to project data and this has also strengthened WET's relationship with Lincoln University.

The opportunity to undertake planting on several sites around the catchment has provided a significant amount of data to allow us to clearly identify what works best in this catchment, and to share that information with partners and others.

This project has provided the momentum for us to seek funding for a new project which will build on the experience gained.

The collaborative and flexible approach which has underpinned this project has been very successful, allowing us to undertake a significant amount of riparian restoration in the Te Waihora/Lake Ellesmere catchment. While the achievements of the Riparian Restoration Programme have been significant, with over 500km of classified drains in the lower catchment, this is only the first step. Thanks to our many partners and supporters for making this project possible.