

Rewanui

building land-use resilience with trees



Rewanui is a typical hill-country sheep and beef farm in eastern Wairarapa. The 344-hectare farm belongs to the Montfort Trimble Foundation (MTF), a Masterton-based trust dedicated to growing trees for the benefit of local people.

When the MTF bought Rewanui in 2004, we asked “what is our best long-term land use?” Our vision extends over the next 100 years. We agreed that our more productive land would likely stay in pasture, but that trees might be an option for some of the poorer grazing land. Restoring our native bush was identified as another priority.

From 2008-2011 Rewanui hosted a MAF Sustainable Farming Project. This enabled us to lay the foundations for long-term research into the role of trees in building resilience on east-country livestock farms. The MTF continues to develop Rewanui as a trial and demonstration property. We are:

- (i) trialing a range of tree species, including natives, to show how various types of planting can be integrated into hill-country farming
- (ii) improving and expanding our native bush, and controlling pests to encourage native wildlife.

In this brochure, we summarise some of the work done so far, and include basic information on methods and costs as a guide to others interested in increasing the area of trees on their property.



New forests and the Emissions Trading Scheme

One of our objectives has been to look at how we can take advantage of the opportunities created by the New Zealand Emissions Trading Scheme (ETS). At Rewanui we have registered all our young plantations for the ETS. We believe that the ETS offers worthwhile incentives to farmers establishing new plantations or retiring land, because it enables them to generate income early in the trees' life. Also, farmers with a store of carbon credits accumulated as their trees grow will have an extra tradable asset to call upon to help maintain farm incomes.

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Retiring land and planting native trees

Rewanui already has an area of spectacular native bush; also various areas of scrub, gorse, and low-quality grazing land. We are protecting our existing bush by fencing livestock out; also extending our native forest area by retiring land that is hard to keep in grass. We have planted trials of native trees in some retired areas.

Our objectives

- to permanently increase quality and quantity of native forest for wildlife, amenity and timber benefits
- to save money by retiring low productivity land that is difficult and costly to keep in grass.



Recovering understory in our native bush



Self-seeded rewarewa and kanuka in retired area



Red beech in a trial plot

Establishing new native forest

- 1. Manage grazing in retired areas:** we now believe that periodic light grazing with sheep may be the best way to encourage natural regeneration in retired areas. Grazing keeps swards open, and creates gaps for seeds to regenerate and grow. Cattle could also perhaps be grazed in retired areas, but they must be very carefully managed as they can quickly destroy young seedlings.
- 2. Monitor and control pests:** monitoring showed us that deer are the main browsing pest; rats, cats and mustelids the main threats to invertebrates and birds. We targeted our pest control on these problem species, using a combination of shooting, trapping and poisoning. Pigs, goats, possums, rabbits and hares all damage young trees and threaten native wildlife, but for now these pests are either absent or only minor problems at Rewanui.
- 3. Select species and plan planting:** our existing native bush gives us some clues about what trees would grow here naturally: rewa rewa, totara, kahikatea and rata amongst others. As part of our Sustainable Farming Fund (SFF) project we have planted trials of 15 species including some that are not native to this area. We want to see how a range of native species performs on different site-types (open, part shade, and under existing canopies) over the long-term.
- 4. Plant trees and control competing vegetation:** on open areas we planted trees at approximately 3-metre spacing; otherwise we planted where we could find gaps. We spot-sprayed planting sites before planting, and release-sprayed to control weeds around trees at least annually until trees were well above the height of competing vegetation. All trees were marked with a fiberglass pole to ensure they could be found, release-sprayed, and measured in the early years.

Early lessons 2008–2011

- Fencing farm livestock out of our mature native bush had a rapid positive impact on the amount of natural regeneration under the bush canopy.
- Fencing livestock out of retired areas discouraged natural regeneration. Periodic light grazing, especially by sheep, is likely a better technique.
- Survival and growth of planted trees has been variable but generally encouraging. Top early performers include totara, maire and red beech; poorest performers at Rewanui to date are tawa and kauri. We ensured we had good-quality planting stock and controlled competing vegetation regularly.
- Matching species to site is proving all-important. Some species (eg, totara) have grown well on all site types; others (eg, rimu) have proved to be more site-specific. There is still a lot to learn about site/species interactions.
- Weed control around planted trees must be maintained over several years to ensure good early survival and growth.

Indicative main costs 2008–2011

| Cost item | How much? | Other considerations |
|------------------------------|---|--|
| Pest control | Our pest control programme cost over \$4000 a year (\$330/month), Contractors visited monthly to service the 84 bait and trapping stations. Now, to reduce costs we do intensive baiting in September to knock the rat population so that birds are able to breed successfully. | DIY obviously the cheapest option; regular input needed. Consider using a contractor to get high numbers of damaging pests down initially, then DIY. The once a year 'rat attack' has worked very well and is easy for land owners to implement around bush edges. |
| Native trees | Approx \$2–5/tree. On bare land, up to 1100 trees per hectare planted; many fewer on reverting sites where we planted into gaps. | It is worth paying more for good quality trees. Budget for some replacements in the first year following planting. |
| Planting | 40–60 cents per tree (contractor rates) | |
| Chemical weed control | 25–40 cents per application per tree (contractor rates, including chemical) | Budget for several repeat applications over first 3–5 years. |



Examples of native species we aim to encourage: (left) common gecko (right) silvereye

Carbon and new native forest

New native forests, whether planted or naturally regenerated, can be registered for the ETS, or the Permanent Forest Sink Initiative (PFSI), an associated scheme. In both cases, carbon accumulated in the trees can be converted to credits and then becomes a tradable asset. The PFSI involves a long-term plan, a 50-year covenant, and a 99-year commitment to only harvest a small proportion of the trees at any one time. The upside is that you can undertake this selective harvesting without incurring carbon liabilities. At Rewanui, the PFSI option suits retired areas very well, because we are never likely to want to clearfell our native areas, but may eventually harvest some selected native timber.

| Forest type | Total tonnes carbon/ha | Carbon tradable under PFSI conditions |
|-------------------------------|--|--|
| Native species ('Indigenous') | Reaches a steady state at 323 tonnes/ha at age 50. (Southern North Island data)* | All 323 tonnes/hectare carbon can be sold at any time as long as the harvesting conditions of the PFSI are adhered to. |

*Rewanui is in MAF's Southern North Island region. Carbon data varies from region to region.

Establishing plantations

We have a range of radiata pine plantations of different ages at Rewanui, plus limited areas of redwoods (*Sequoia sempervirens*) and Ovens cypress (*Cupressocyparis ovensii*). Redwoods and cypress have been planted as alternatives to radiata pine, and are expected to yield much higher-value timber but over longer rotations. We anticipate that the pine will have a rotation of 30–35 years; the cypress and redwoods 35–45 years.



Stuart Orme describes one of our pine plantings



Redwood (foreground) and pine plantations

We have also planted trials of other potential alternatives to pine, including eucalypts, Douglas fir, Japanese cedar, another cypress (*Cupressus lusitanica*) and western red cedar. These have been measured annually to date – see our website for trial data.

Establishing successful plantations

- 1. Fence out livestock:** grazing livestock and young plantations don't mix: fence sheep out for several years, cattle and horses for longer and altogether for some species, eg, cypress.
- 2. Decide on area to be planted, species, and growing regime:** our plantation species will be grown for high quality clearwood, so will be pruned and thinned. We planted radiata pine and cypress at 1 100 stems per hectare, redwoods at 800 stems per hectare. Seek professional advice if in doubt – these are important long-term decisions.
- 3. Decide on genetic/breeding characteristics of planting stock:** a range of improved radiata pine seedling and clonal stock is available with varying growth, form, health, and timber properties. Our pine seedlings were selected for good timber properties; we also planted trials of clonal pine stock. We are trialing five different redwood clones, and have some clonal cypresses.
- 4. Control competing vegetation:** all trees need release-spraying at least once following planting.

Early lessons 2008–2011

- In all three main plantation species, genetically improved clonal stock has grown faster than seedlings. We are certain that it is worthwhile selecting planting stock very carefully and not skimping – the trees will be with you for a long time.
- Radiata pine has grown fastest of all species; cypress and the best performing redwood clones have also grown very vigorously.
- Japanese larch and western red cedar appear least suited to conditions at Rewanui, and are not thriving.
- 'Slow starters' (eg, redwoods) need release-spraying more than once if weed growth is vigorous.

Indicative main costs 2008–2011

| Cost item | How much? | Other considerations |
|--|--|--|
| Fencing – good enough to keep stock out for several years. | \$8–14/linear metre for good permanent fencing. A hot wire may be an option for existing fences. | Livestock will almost inevitably get into your young trees from adjacent paddocks. Check young plantations regularly, and remove unwanted animals immediately. |
| Trees | Radiata pine 30–50 cents/tree Cypress \$1–4 /tree Redwoods \$1–3/tree | Costs highly dependent on stock and numbers ordered. Quality stock costs more, but is worth the investment. |
| Planting | 40–60 cents per tree (contractor rates) | |
| Chemical weed control | 25–40 cents per application per tree (contractor rates, including chemical) | Redwoods may need more than one spray as they can be slow to get started; one application usually enough for other species |
| Pruning (Will be done at around ages 5, 7, 9 in pine in this regime) | Around \$2/lift (85 cents/linear metre) 350–450 trees per hectare are normally pruned | If you plan to prune, budget for two or three lifts in the first 10 years, depending on your regime. Cypress and redwoods will vary. |
| Thinning (At around age 9 in pine in this regime) | \$450–600/ha We plan a 'one-hit' thin of pine at high pruning. Target final pine crop spacing – 350 stems per hectare. | Some pine regimes require two thinning operations. Cypress and redwoods will vary. |



Ovens cypress



Redwoods



'Lusitanica'

Carbon and plantations

The MAF look-up tables for radiata pine and 'exotic softwoods' (includes cypress and redwoods) indicate that, in the Southern North Island, carbon accumulated per hectare by our coniferous plantations will be as follows:

| Forest type | Tonnes carbon/ha at age 10 (safe carbon in first rotation*) | Total tonnes carbon/ha in typical rotation |
|--|---|--|
| Radiata pine | 210 | 852 (@ 30 years) |
| Cypress and redwood ('exotic softwoods') | 95 | 751 (@ 40 years) |

*see pages 9–10 for an explanation of safe carbon.

Riparian plantings

We have fenced off a riparian strip and planted it with native species, and will eventually do the same along other watercourses on the property. We believe that protecting and managing our natural water resources at Rewanui is going to become very important in future for a whole host of reasons.



The riparian strip at Rewanui



Recent plantings in hare protectors, with good weed control



Objectives of our riparian planting

- to keep livestock out of stream, protecting water quality
- to create wildlife habitat and an attractive landscape feature
- to provide shelter for livestock in adjacent paddocks as trees grow taller.

Establishing riparian strips

1. Fence out livestock

2. Plan planting:

- identify areas to be planted on the ground (see carbon section below)
- decide on species mix. Both native and/or exotic species can be used; we have opted for native species to maximise wildlife benefits
- decide on planting density (we planted at 3m x 3m or 1100/ha)
- spray planting spots about six weeks before planting.

3. Plant trees: we have added hare protectors, which also reduce young trees' exposure to wind.

4. Control competing vegetation: release spray at least annually until trees are well above the height of competing vegetation.

Indicative main costs 2008–11

Main costs are similar to those for establishing plantations (see page 5). Native trees cost \$2–5 each; hare protectors around \$1 each.

Carbon and riparian plantings

The main ETS criteria relevant to riparian strips (and shelterbelts) is that minimum average crown width at maturity must be 30 metres. Some creative design may be required – for example, linking plantings to larger areas of young plantations, incorporating a wider area within your riparian strip, and/or using trees with broad crowns if this does not compromise other objectives.

Our riparian strip runs down both banks of the stream and is over 30 metres wide from fence to fence in some places. It will be eligible for carbon credits in MAF's indigenous category, and could form part of the land we register under the Permanent Forest Sink Initiative (PFSI) as it is unlikely that we will ever clearfell it. In this case, we would be eligible for 323 tonnes carbon/hectare, with no liabilities.

Poplar and willow

Some land at Rewanui is prone to erosion and slumping, typical of much eastern hill land. We have planted poplar this year to try and control a slip along a track, and have areas of older plantings in gullies to reduce erosion. Poplars and willows have many potential benefits on farm land, for example:

- control soil erosion on steeper land retained for grazing
- provide shade and shelter for livestock
- provide timber (mainly poplars, certain varieties only)
- provide supplementary feed for livestock in dry summers (mainly willows)
- reduce erosion on stream banks (mainly willows).



Poplar for timber and erosion control

Indicative main costs 2011

| Cost item | How much? | Other considerations |
|---|--|--|
| Planting stock – usually poles, which can be 2 or 3 metres long | Approx \$4–5 for 2-metre poles Approx \$6–7 for 3-metre poles \$1–4 for smaller planting stock | If cattle graze the area, 3-metre poles and large shelters needed. With sheep, 2-metre poles and smaller shelters suffice. Much smaller cuttings or seedlings can be planted in areas where livestock are absent. |
| Shelters | \$3–4 for 1.2-metre shelter \$5–6 for 1.7-metre shelter | |
| Planting | Contract planting approx \$4–5/pole | In Greater Wellington erosion control areas, net cost per 3-metre planted pole is around \$13. Without subsidy cost would be almost \$20/pole. |
| Chemical weed control | 25-40 cents per application per tree (contractor rates, including chemical) | One application before or soon after planting recommended for poles. |
| Pruning | Around \$2/lift | Only with timber varieties. If you plan to prune, budget for two or three lifts in the first 10 years, |

Carbon and poplar and willows

To meet ETS forest criteria, planting needs to cover at least 1 hectare in area and have 30% crown cover at maturity. A recent evaluation by Greater Wellington Regional Council suggests that this crown cover can be achieved with around 45-75 stems per hectare, depending on poplar variety and site. The trees will be an average of around 15 metres apart, and at this spacing land will continue to grow a reasonable amount of grass. Poplars can also dry out wet areas, improving grazing conditions.

Some farmers may find they have existing post-1989 poplar and willow plantings which are eligible for ETS payments. Poplars and larger willows are in the 'exotic hardwoods' category in MAF's look-up tables.

| Forest type | Tonnes carbon/ha at age 10 (safe carbon in first rotation*) | Total tonnes carbon/ha in typical rotation of poplar grown for timber |
|---------------------------------|--|--|
| Poplars (‘exotic hardwoods’) | 251 | 618 (@ 25 years) |

* see pages 9–10 for an explanation of safe carbon. Southern North Island data.

Forestry and the Emissions Trading Scheme

A quick guide to post-1989 plantings

Any land planted with forest trees, or retired and allowed to revert to bush, since December 31st 1989 is contributing to New Zealand's carbon-reduction targets. If registered for the ETS, all carbon stored in trees in these plantings since January 1st 2008 can be converted to credits and sold for cash. Carbon accounting under the Kyoto Protocol began in 2008.

Any farmer with forests created since the end of 1989 can enter these trees into the ETS. The scheme is voluntary. Those considering new planting today will, in theory, be able to claim carbon credits for every tonne of carbon stored in newly planted or regenerated trees up until the time they are harvested.

Is any land eligible?

Any land is eligible as long as it meets the criteria of not having had forest on it before the end of 1989. It is important to understand MAF's definition of forest trees and forest land.

In simple terms:

- forest trees are species that can reach at least 5 metres in height in the place they are growing
- forest land is an area of at least 1 hectare
- a forest is land where mature trees' crowns cover (or will cover) at least 30% of the total area, and the average mature crown cover width is at least 30 metres.

Can I plant any type of trees and what difference does it make?

Most trees are allowed, but trees such as olives, nuts, and fruit trees are excluded. You can plant for any objective – for example, timber, shade and shelter, amenity, wildlife, or all of these, as long as the plantings meet MAF's 'forest' criteria described above.

Carbon is only one of the factors to take into account when planning new plantings. Different types of trees have different growth rates, likely rotation lengths, and timber and other values. Also they store carbon at different rates. The graph below shows the amount of carbon stored in different types of trees over a typical rotation.

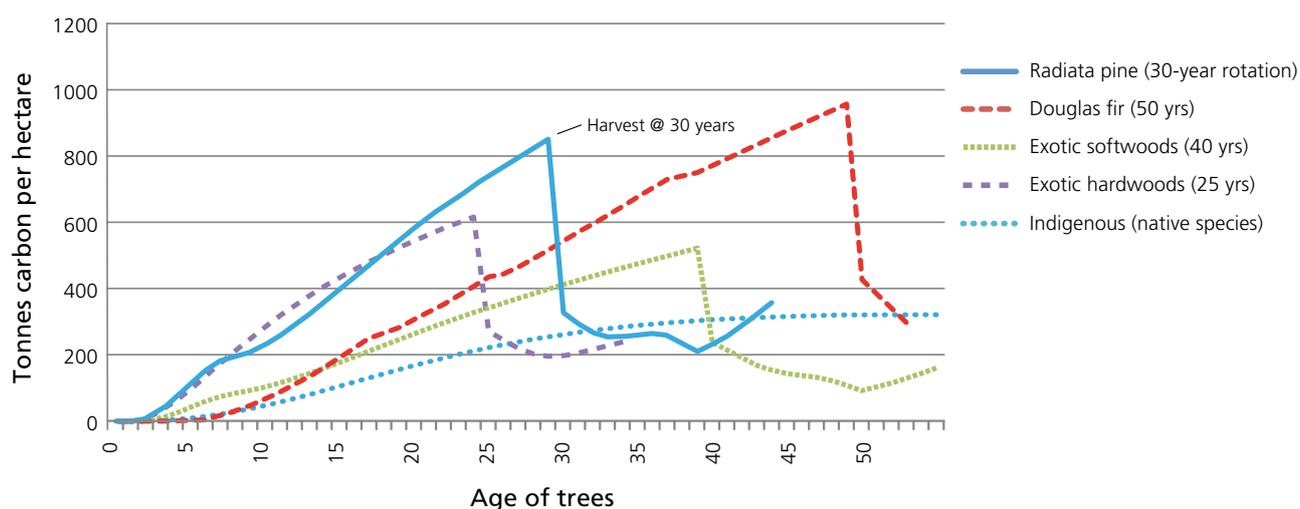


Fig 1: Carbon stored in different species over their likely rotations. Exotic softwoods include redwoods and cypresses. Exotic hardwoods include eucalypts, poplars and willows. At harvest most carbon is considered to be lost back to the atmosphere, but not the carbon stored in stumps, roots and branches, so the carbon balance lines do not fall back to zero. The indigenous species here are not harvested, but will continue indefinitely to store carbon at a steady rate.

How is the carbon measured?

Once the trees are in the ground and registered for the ETS, owners can use the 'look-up tables' provided by MAF to work out how much carbon their trees are storing each year, then submit claims to MAF. The amount of carbon added each calendar year by trees is what can be claimed at the end of that year.

| Forest age | Radiata pine | | Exotic softwoods (eg, redwoods and cypresses) | |
|--|------------------------------|---------------------------------|---|---------------------------------|
| | Carbon added tonnes/ha/ year | Carbon value/ha/yr @ \$15/tonne | Carbon added tonnes/ha/year | Carbon value/ha/yr @ \$15/tonne |
| 0 (establishment year) | 0 | | 0 | |
| 1 | 0.5 | 7.5 | 0.2 | 3 |
| 2 | 2.5 | 37.5 | 0.8 | 12 |
| 3 | 6 | 90 | 2 | 30 |
| 4 | 25 | 375 | 9 | 135 |
| 5 | 37 | 555 | 14 | 210 |
| 6 | 42 | 630 | 19 | 285 |
| 7 | 42 | 630 | 18 | 270 |
| 8 | 30 | 450 | 14 | 210 |
| 9 | 12 | 180 | 10 | 150 |
| 10 | 13 | 195 | 8 | 120 |
| Totals/hectare after 10 growing years | 210 | 3150 | 95 | 1425 |

Table 1: Annual carbon accumulated per hectare to age 10 by radiata pine and exotic softwoods (Southern North Island 'look-up' table data) and its value at an indicative carbon price of \$15/tonne.

Claims can be made every year, or for cumulative carbon gains after a number of years. One tonne of carbon is the equivalent of one 'credit' (also called NZ Units, or NZUs). A claim for one hectare of radiata pine after ten years in this scenario would result in the transfer of 210 credits to the owner's NZEUR account (see below).

How do I get cash from carbon, and how much?

Part of the ETS registration process is to open an account with the NZ Emissions Unit Register (NZEUR). The NZEUR operates as a carbon credit bank, where credits are stored until owners are ready to sell them. Once MAF have approved your claim for credits, they will transfer credits into your NZEUR account. If you want to convert credits to cash, you can transfer them electronically directly to a buyer, or use a broker to help get the best price.

The carbon price is determined by what the market will pay for it; 'the market' predominantly comprises companies such as power companies and industrial manufacturers who have to buy credits to offset their emissions. Prices for credits have fluctuated from between over \$20/tonne to below \$10/tonne since 2008.

There is no GST on carbon; income generated from carbon sales is treated like other farm income and is subject to income tax. Carbon can be traded at any time as long as you have a NZEUR account.

What about the liabilities? When will I incur them and how can I avoid them?

Owners are liable for the carbon 'lost' when their trees are harvested. So at harvest, you will be obliged to return a large proportion of the credits earned over a rotation to MAF.

Safe carbon

For new plantings the amount you are liable for is not the total amount of carbon stored by the trees during their rotation, because some carbon is left on site in stumps, roots and branches. This 'residual' carbon is assumed to gradually be lost over the ten years following harvest. This loss has to be accounted for in your annual carbon balance in the years after harvest, but as the second rotation trees start to grow, carbon balances become positive again. Residual carbon is sometimes known as 'safe' carbon, and equates to the first ten years' worth of carbon stored in all forest types. It only applies to the first rotation of post-1989 trees, and can be sold at any time without obligation.

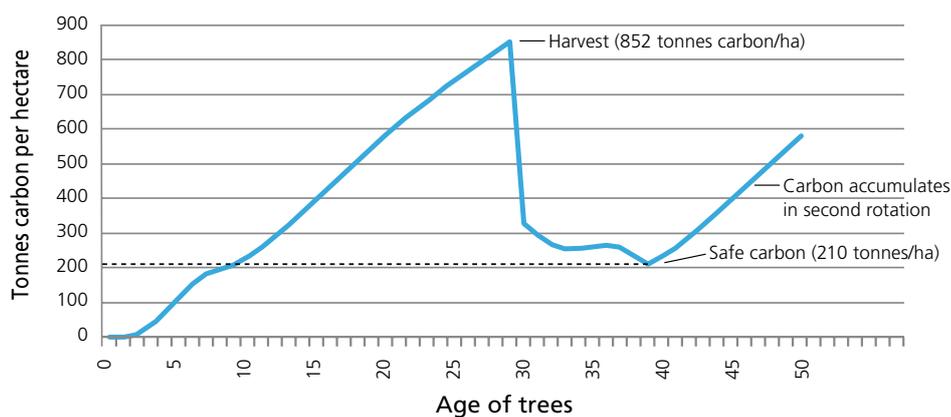


Fig 2: Carbon accumulation in first and second rotations of radiata pine (Southern North Island data). Trees are harvested at age 30 in this scenario, when they contain 852 tonnes of carbon/hectare. The carbon balance drops to 332 tonnes/hectare and the owner is liable for $(852 - 332) = 520$ tonnes/hectare at harvest. The balance continues to decline for the next ten years to 210 tonnes/hectare and the owner incurs further liabilities of $(332-210) = 122$ tonnes/hectare. It then starts to recover. The owner has returned $(520 + 122) = 642$ tonnes carbon to MAF, and has 210 tonnes/hectare safe carbon, which does not have to be paid back.

Different people have different attitudes to risk, and will play the carbon market accordingly. Those who are cautious will sell no more than their safe carbon, avoiding any liabilities at harvest. Those who are prepared to take more risk may sell above their safe amount, and plan to buy credits back when the price is low.

Problems could arise at harvest if owners have fewer carbon credits in the bank than the number they are liable for, and are forced to buy credits back at a time when the prevailing market price is high. If timber prices are low and carbon prices high at harvest, this could put the profitability of the whole forestry venture at risk. If timber prices are high and carbon prices relatively low at harvest, then income from the harvest could be used to buy credits owed and the venture be profitable.

The key to is to understand how the system works, and manage your carbon account judiciously according to how much risk you want to take. Farmers with a number of plantings of different ages will be in much the best position to manipulate carbon sales to help maintain overall farm income over the long term.

What other fish-hooks are there?

There are a few downsides of registering post-1989 plantings in the ETS. For example:

- it adds a new element of bureaucracy and reporting to your farm business
- trees planted 1990–2008 have less safe carbon because carbon accounting only begins in 2008. Trees planted 1990–2000 have very little, if any, safe carbon
- if your trees are lost through a catastrophic event such as fire or wind damage, you will be liable for carbon lost. You can insure your trees against such losses
- there is no 'safe' carbon in second or later rotations
- owners with over 100 hectares of post-1989 forest must accurately measure trees on the ground once every five years to meet MAF reporting requirements. This means extra costs.

How do I go register for the ETS?

MAF has provided an on-line mapping tool and other resources. You will need various legal documents (eg, land ownership information), and there is a \$562 fee for registering. You may need to seek professional help, especially if there is any uncertainty about whether your land is eligible as 'post-1989' land.

What about trees planted before the end of 1989?

These trees are known as 'pre-1990' forests, and a different set of ETS rules apply to them. These are not covered in this brochure.

How long will the Kyoto Protocol and ETS last?

Good question! No-one knows for certain – we are in the hands of national and international politicians on this one. The NZ ETS would be difficult to unwind in the short-term, even with political will. For now, the ETS exists, and landowners will benefit by understanding the opportunities.

Other trials and things of interest at Rewanui

There is lots going on at Rewanui, all of which is on display to visitors. There is a network of marked trails and footpaths around the property, and information boards at various points. The property is open all year.

1. Ground-durable eucalypt trial

In autumn 2011, the NZ Dryland Forests Initiative established a 2-hectare trial and demonstration site of ground-durable eucalypts. Ground-durable species have the potential to replace CCA-treated timber posts in vineyards, other horticultural enterprises, and on organic farms. This trial is part of a network across eastern New Zealand to identify 'best bet' species, and develop breeding populations.



2. Kanuka regeneration trial

We are also hosting a small trial run by Scion (the NZ Forest Research Institute) looking at ways of encouraging kanuka to regenerate.



3. Wetland creation

We have created a large pond and wetland, which is now attracting a range of birds and other species.



4. Weta houses

Visitors to Rewanui can enjoy peeking into our weta houses, which are located throughout our native bush and regenerating areas. Weta visit the houses during the day, and forage at night.



5. Continued pest monitoring and control

We continue to trap and poison pests throughout our native bush. Anyone interested in seeing some of the equipment will find it at stations close to footpaths around the property.



Make the most of Rewanui

"If you are new to forestry, or just looking for some fresh ideas, Rewanui is an exciting place. The Montfort Trimble Foundation is trying new things, and providing information over the long term to share with others.

It is refreshing to see alternative species to pine growing on typical farmland; the trials of native species are especially interesting. The monitoring data from the trial plots are all freely available, along with plenty of other information.

So already there is a lot to learn from the work at Rewanui, and the results may surprise you. There will be much more to come in the future too. It is a visionary project, it's on our doorstep, and my advice is that you make the most of it."

Andrew Pottinger – Wairarapa sheep and beef farmer, and trustee of the Montfort Trimble Foundation



Andrew Pottinger

More information

About the work at Rewanui and our Sustainable Farming Fund Project

1. Montfort Trimble Foundation website

<http://trimblefoundation.org.nz/>

2. Information Notes

<http://trimblefoundation.org.nz/resources>

1. Rewanui – an introduction
2. Monitoring our tree species trials
3. Exotic tree species trials
4. Native tree species trials
5. Pest monitoring at Rewanui
6. Pest control at Rewanui
7. Monitoring birds at Rewanui
8. Monitoring invertebrates at Rewanui
9. Monitoring vegetation at Rewanui
10. Monitoring lizards at Rewanui
11. Carbon farming at Rewanui

3. Software for monitoring individual trees, plus data collected so far

<http://trimblefoundation.org.nz/tree-trial-data>

Establishing and managing trees on farms

The NZ Farm Forestry Association
www.nzffa.org.nz

Tanes Tree Trust (native tree specialists)
www.tanes-trees.org.nz

The Emissions Trading Scheme and Permanent Forest Sink Initiative

MAF www.maf.govt.nz/forestry

MAF field staff in offices around the country

MAF climate change helpline 0800 CLIMATE

Acknowledgements

MAF's Sustainable Farming Fund supported trials and monitoring at Rewanui from 2008–2011.

Stuart Orme (Woodnet Ltd) managed the SFF project and Woodnet Ltd manages the forests at Rewanui (www.woodnet.co.nz)

Ian Campbell (Chair, Montfort Trimble Foundation) oversees operations and monitors the tree trials.

Nyree Fea was responsible for wildlife monitoring 2008–2011.

Local organisations and people who have contributed include: BakerAg and Associates, Federated Farmers (Wairarapa Branch), Friends of Rewanui, Future Steps (Dr Morgan Williams), Greater Wellington Regional Council, NZ Farm Forestry Association (Wairarapa Branch), Scion, Tanes Tree Trust, and local schools.

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