Biodiversity Advisory Group

AGENDA

Notice of Meeting:
A meeting of the Biodiversity Advisory Group will be held on:

Date:	**Tuesday 4 August 2020**
Time:	**1.00pm**
Venue:	**Council Chamber, 137 Havelock Street Ashburton**

Membership

Ashburton District Council:	Cr Lynette Lovett (Chair) Cr Diane Rawlinson Paul Wilson (Acting Open Spaces Manager) Bert Hofmans (Open Spaces Planner)
Environment Canterbury:	Donna Field (also Whitcombe Landcare Group rep) Janine Holland
Federated Farmers:	Mike Salvesen
Fish & Game:	Jayde Couper and Mark Webb
Fonterra:	Mat Cullen
Foothills Landcare Group:	Gen de Spar
Forest & Bird, ACCT: Forest & Bird Society:	Val Clemens and Edith Smith Mary Ralston (also Awa Rata reserve rep)
QEII Trust:	Alice Shanks
Water Zone Committee:	Cargill Henderson (also Anzco rep)

Biodiversity Advisory Group

Timetable	
Time	**Item**
1.00pm	Meeting commences

ORDER OF BUSINESS

1 Apologies

2 Extraordinary Business

3 Declarations of Interest

4 Previous Minutes & Actions

- Receipt of minutes 5/03/20 3

5 Reports and Presentations

5.1 Carters Creek Community Project Group - Willie Lefernik and Cr. Angus McKay 7

5.2 The importance of eco-sourcing – Alice Shanks, QEII Trust 9

5.3 Ashton Beach Enhancement Project Update – Bert Hofmans, ADC

5.4 Conifers Lake Camp and Clearwater – Mary Ralston, Forest and Bird

5.5 Insurance Reserves – Bert Hofmans, ADC

5.6 The Impact of One Billion Trees Project on our Native Vegetation – Edith Smith, Forest and Bird

6 General Matters

Meeting schedule for remainder of the year

- 4 August
- 6 October
- 8 December

7 Agency Updates

8 Next Meeting

5. Biodiversity Advisory Group Minutes *(unconfirmed)*

Minutes of the Biodiversity Advisory Group meeting held on Thursday 5 March 2020, commencing at 1.05pm, in the Council Chamber, 137 Havelock Street, Ashburton.

Present

Councillors Lynette Lovett (Chair) and Diane Rawlinson. Barry Austin (Mt Somers Walkway Society and Lake Heron Trapping), Val Clemens and Edith Smith (Forest and Bird), Glenys Carr and Shannon Goldsmith (Carrfields), Jane Riach and Tania Paddock (Kanuka Trust), Donna Field (ECan and Whitcombe Landcare Group), Bill Thomas (Zone Water Committee), Bill Hood (Federated Farmers), Mary Ralston (Forest and Bird Society), Sarah Mosely (Manager - People and Capability), Alice Shanks (QEII Trust).

In attendance

Bert Hofmans (Open Spaces Planner) and Aisling O'Reilly (Governance Support - minutes).

1 Apologies

Mark Webb

2 Extraordinary Business

Nil.

3 Declarations of Interest

Nil.

4 Minutes and Actions

That the minutes of the Biodiversity Working Group meeting held on 19 August 2019, be received.

Clemens/Field Carried

5 Biodiversity Advisory Group Terms of Reference

Bert presented the draft terms of reference, updated for the new triennium.
It was requested that the following groups and people be added as members:

- Ashburton Water Zone Committee
- Barry Austin from Mt Somers Walkway Society and Lake Heron Trapping
- Mary Ralston from Awa Awa Rata Reserve
- Kanuka Trust be noted as a member without an individual's name.

To update the reviewed Terms of Reference to state that the Group will meet five times a year in March, May, August, September and December.

Recommendation to Community Services Committee

That Council adopts the Biodiversity Advisory Group terms of reference.

Rawlinson/Field Carried

6 Reports and Presentations

Glenys Carr

- Presented on the Biodiversity work being done on conservation area on Hood's Block.
- Bought neighbouring property which has allowed an access way to be put in.
- Installed ring fence with predator netting to continue with planting. Have been working with Forest and Bird in terms of what to plant.
- Can see rejuvenation of some plants since work has been done.
- Seeing lots of native lizards around the plants.
- End of last year a survey of insects and butterflies was carried out. The report came back very positive and to state that some rare butterflies and moths were found. Will discuss with Edith on what are the best plants to plant for these insects.
- The lower section of land is a wetland environment and will be looking at planting this area in the future.
- Played a video to give an overview of the area and what it looks like now.

Ashton Beach (Edith Smith)

- Updated on Enhancement Project. Matagouri is flourishing well. Biodiversity on terraced riser. Ideal for some plants and gorse to grow.
- Wants to note to Council the importance of prioritising the protection of the remnant biodiversity at this beach.
- Health and Safety issue with motorbikes riding up and down the beach.

ADC Biodiversity Officer (Val Clemens)

- A Biodiversity Officer is going to become imperative. There are aspects of Biodiversity that need someone with a specialised knowledge to look after these plants.
- Selwyn District has three Biodiversity Officers.
- Bert advised that preparation for next year's Long Term Plan is underway and that will provide opportunity to further consider this role.
- Sarah Mosley suggested that the Advisory Group ask for a business case that would be put to Council as part of the LTP considerations.

Recommendation to Community Services Committee

That the Biodiversity Advisory Group recommend that a business case for a Biodiversity Officer be prepared and considered in the Council's Long Term Plan 2021-2031.
Austin/Clemens Carried

Significant natural areas (Edith Smith)

- Referenced a note that came out from Taranaki: good idea for Council to have this approach and be open minded and inform the community on how this works.
- Suggested for Mary to write an article to outline the risk of not focusing on Biodiversity.
- Bert advised that he has forwarded the note to Ian Hyde so his team are aware.

Lows Cutting (Mary Ralston)

- Presented on area and its significance within Biodiversity.
- Forest and Bird are hoping to get funding (land currently privately owned) to purchase the land and turn it into a conservation estate.
- Have applied to Rakaia Enhancement Catchment Fund – half of what is needed to purchase the land. Conditions to this are that Forest and Bird need to raise money for future management of land.

- Submitted application for funding to Nature Heritage Fund for remainder of money to purchase.

6.4 Agency Updates

- **Zone Water Committee**
  Nothing to report.

Bert Hofmans, Open Spaces Planner.

Staff Activity Report

Lake Camp

- Planting day held 10 October 2020. Approximately 500 plants were planted.
- Three rounds of weed control work have been undertaken around the margins of Lake Camps. Lupins, broom, gorge, rosehip were targeted. Some willow trees on the south eastern side of the lake were also removed.
- Four rounds of pest control have also been undertaken. The last shoot returned less than 50 rabbits, whereas the first two rounds were over 100.
- Plants have been watered four times by the Lake Clearwater Rural Fire group.
- Have had two weeding days involving summer students. Combiguards were also replaced.
- New plantings have been mulched by Open Spaces Team using the slashings left over from the removal of trees on the western side of the huts.
- No longer a formal lakes working group.

Wakanui Beach

- Track maintenance work undertaken in December 2019.
- Weeding of plants was also undertaken in December 2019.
- Areas around plants have been sprayed by contractor.
- Had a meeting of the Wakanui Beach Restoration group earlier this month to plan out the years activities.

Other

- Council has prepared a submission on the Draft National Policy Statement on Indigenous Biodiversity. Submissions close 14 March 2020.
- Attended a consultation day on the ADC Ashton Beach project. This project is trying to resolve health and safety issues and provide some biodiversity benefits at the same time.
- Reviewed the Term of Reference for the Biodiversity Working Group.

Barry Austin Mount, Somers Walkway Society and Lake Heron Conservation Society

- Trapping at Lake Heron as normal (120 traps around Lake Heron) Approximately six weasels, ferrets, stoats and hedgehogs were caught.
- Mt Somers Walkway Society – Spraying to kill weed patches.
- Have applied to DOC Conservation Fund in order to do helicopter work where not possible to get to by foot.
- Dealt with some wasp issues on Mt Somers. One hundred traps around whole tracks.
- DOC had report in Ashburton Courier that hut attendance was up 173%. Most were from overseas

Jane Riach, Kanuka Trust

- Balancing Biodiversity field day on 20 March at Dorie Hall at 1:45pm. Then moving on to Kai Tegels and John Evans farm where they have been experimenting with beneficial bugs.

Donna Field, Whitcombe Landcare Group and ECan

- Carried out an experimental burn on the flats. Had to remove lizards from some areas. Now a large area of wetlands.
- ECan are looking after the birds on the Ashburton River. Currently getting pricing for signs at the river mouth.
- Attended bridge to beach four-wheel drive event. 120 vehicles were reported being at this event. Concerned about the birds and sediment going into water. Will look at seeing if event can be pushed to March to help the birds.
- Some work going on around forestry and compliance in harvesting and planting.
- Number of Immediate Steps funding programmes going on.

Edith Smith, Forest and Bird

- Report on nesting showed that there were 4000 birds on the river which arrived from Rangitata due to the flooding in November. 1,500-2,000 birds at nesting stage. 1,211 nests were counted. Photo count of gulls resulted in 1,940. 600 juveniles remaining.
- PhD student looking at vehicles and people impact on the river.
- December floods caused super saturation. Nests were washed away and birds had to begin nesting again.

Alice Shanks, QEII Trust

- New book published by Canterbury Botanical Society: "Conserving the plants of eastern South Island limestone".

7 Next Meeting

Meetings for the year:
Bring next meeting forward to Tuesday 19 May. Meetings after this will be Tuesday 4 August (additional), Tuesday 8 September and Tuesday 8 December

Meeting closed at: 3:08pm

Carters Creek Enhancement Project

An opportunity for locals to 'connect with and contribute to' the enhancement of this urban/rural waterway by improving water quality and regenerating biodiversity

Carters Creek is spring-fed and starts approximately 4km above State Highway One in Tinwald. It travels through multiple landowners properties before it reaches the town boundary and crosses State Highway One between Manchester Street and Wilkins Road.

Within the town boundary Carters Creek receives stormwater from a variety of different sources so plays an important role in flood management. The challenge with stormwater is that it collects rubbish, oil, chemicals, and anything else in its path, and goes directly into our streams and rivers, untreated. https://www.ecan.govt.nz/get-involved/news-and-events/zone-news/christchurch-west-melton/stormwater-superheroes-to-the-rescue-for-christchurch/

The creek continues down below Tinwald where it once again crosses through approximately 4km of privately owned land before eventually feeding into Lake Hood.

The health of the creek has been a concern for many years which has been captured in a number of reports. This includes rubbish, sediment, livestock, poor water quality and weedy vegetation.

In order to promote the Carters Creek Enhancement Project there is a possibility of starting at State Highway One and Malcombe Street with native plantings and other enhancement measures. This high profile 'shop front' will raise awareness of the project and encourage community involvement, emphasising we all have a role to play in caring for our waterways.

The enhancement project is in the early development stage as the team (looking for more representatives) undertake to engage with the various stakeholders. Below is a brief update for 2020:

Project team: Willie Leferink (Hinds and District Lions, landowner and Lake Hood Extension Trust), Lachie Ashton (Environment Canterbury), Angela Cushnie (community and Ashburton Water Zone Committee), Angus McKay (Ashburton District Council)

2020 list of actions to date:

January	Creek walk from Lake Hood to Tinwald to evaluate the condition of the creek from a stream health and biodiversity perspective
May	Presentation to Ashburton Water Zone Committee 'Water Quality and Stream Walk Report' with approval granted to proceed
7 July	Cr Angus McKay is appointed as Council's representative to the project team

Community Engagement / Stakeholder List

- Landowners
- Lake Hood Extension Trust
- Lake Hood Community Trust
- Ashburton Water Zone Committee
- Ashburton Biodiversity Advisory Group: various stakeholders ie Forest and Bird, Fish and Game etc
- Environment Canterbury
- Ashburton District Council: Angus McKay
- Hinds and District Lions
- Local community and service clubs etc
- Local schools

Funding Requirements

- Battering banks – Sediment control and bank stability
- Infrastructure – culvets etc
- Fencing
- Planting
- Maintenance of planting
- Water quality monitoring
- Stormwater maintenance

Biodiversity Advisory Group

4 August 2020

Presenter: Alice Shanks

Eco-sourcing seed for the Ashburton Plains revegetation waterways, shelterbelts, restoration sites and community plantings

1. ECAN have published new guidelines for native plant procurement and eco-souring (attached).

2. Eco-souring is a requirement for Environment -Canterbury funded projects and Ashburton Biodiversity grants.

3. Eco-sourcing seeds and eco-planting are both important. Eco-sourcing is a precautionary principle to maintain local strains of plants and national genetic diversity within a species. Collecting seeds from multiple wild plants, growing these on in a plant nursery, and planting back in their original native plant communities, will help restore those communities close to their original plant composition. For example, some moth caterpillars will only feed from local plant species, and do not recognise plants sourced from other populations. This means that the tree is essential a landscape item and not part of building up an ecological network of invertebrates and birds.

4. Eco-sourcing is not new. In 1976 the former Lands and Survey Department directed Forest and Bird groups to plant trees grown from seed within 3-5 kilometres of the planting site

5. Eco-sourcing benefit are:
    a. Protecting the genetic diversity within local populations.
    b. Maintain
    c. Protecting the character of local ecosystems from being swamped by imported varieties from other areas, for example local small-leaved kowhai hybridises with North Island kowhai species.
    d. Providing the best chance of planting success by using plants that have adapted to local conditions, for example, tolerant of drought.
    e. Reduces the expense of replanting trees that die, when less frost and wind-hardy plants are planted, for example, lacebark trees from the West Coast are not frost hardy enough for the Canterbury Plains winter.

6. Best practice seed collection requires no more than 20% of seed from one plant to be harvested, and 50 plants to be sampled, to gather the range of genetic variability. Cutting are discouraged because many NZ plant species have male and female flowers on separate plants and cutting may end up with limited genetic variability and one sex only. Cuttings may also not grow naturally, for example totara cuttings grown into bushes, not a tree with a single trunk.

7. On the Ashburton Plains there are very few sites to collect seed from, and a very limited number of each species at most sites.

8. More landowners are keen to grow locally-sourced plants. Nurseries are now seeking out seed sources. Opihi Nursery, Orari nursery, Waiora Nurseries, Department of Conservation nursery at Motukarara collect seed in Ashburton. A new community nursery is planned. DOC have a national policy to not issue permits for nurseries to collect from DOC land.

9. Marlborough also has very few sites with natural vegetation to collect seed from.

10. Marlborough District Council established a Native Plant Seed Collection project to provide nurseries with local seed (https://www.marlborough.govt.nz/environment/biodiversity/ecosourcing-native-plants-seed-collection-project)

11. The cost of time and fuel for every nursery driving to sites to collect seed is a disincentive for nurseries to collect widely. Seed ripens at different times and the quantity varies between years. A few species may require multiple visit to collect seed at optimal ripeness, such as kanuka which has a 6-week window for collection and sowing of seed. It is much more cost-effective if the seed collection is done efficiently by one collector and made available to all nurseries to grow on. It also means that one site or one plant is not over-collected. Some years have better seed production. A centralise store could maintain seed for the lean years. Landowners can build up a working relationship with one trained seed collector, rather than multiple enquiries and visitors.

12. A trained collector will be able to judge when the local seed source for a species is of planted origin (red harakeke, North Island hybrid kowhai and lacebark) or has been reduced to only a few plants or even a single individual. This can often mean the population has an extremely limited gene pool. In these situations, a collector would have the knowledge to know when to supplement the seed collected from a limited local population with seeds from further afield. This may be advantageous to future proof planting against environmental changes or diseases that would otherwise impact detrimentally on populations sourced from plants with a narrow gene pool (https://www.nzpcn.org.nz/conservation/restoration/eco-sourcing/)

13. QEII covenants can be a source of seed. The Trust protection agreement does not permit material to be removed from the covenant, including seed. However, with the permission from

the landowner, the Trust rep can give limited approval for seed to be collected where there is no alternative (such as on the Ashburton Plains). Best practise would need to be adhered to and the seed collector must be able to discern what is natural and what plants are planted (and thus not collected). The case for centralised seed collection is made in the attached paper from the Marlborough District Council.

14. Best practise would incorporate:

    a. An agreed standard amongst seed-collectors, nurseries, landscapers and revegetation contactors for a definition of eco-sourcing and eco-planting appropriate for the Ashburton Plains.
    b. The Ngāi Tahu view on shifting plant material within and beyond the Canterbury region.
    c. A framework for traceability of eco-sourced plants from collection of seed to planting.
    d. An eco-sourcing labelling protocol so landowners and project managers can confidently buy appropriate eco-sourced plants.
    e. A clear, illustrated brochure to hand to landowners in involved in restoration projects to show what to plant where (ecologically appropriate boundaries for different plant species). See attached guidelines for Waimakariri District.

15. The agency to employ a collector is up for discussion.

References:

https://www.ecan.govt.nz/your-region/your-environment/our-natural-environment/

https://www.nzpcn.org.nz/conservation/restoration/eco-sourcing/

https://www.doc.govt.nz/get-involved/run-a-project/restoration-advice/native-plant-restoration/ecosource-seeds/

https://www.naturespace.org.nz/resource-centre/ecosourcing-seeds-and-plants

https://www.marlborough.govt.nz/environment/biodiversity/ecosourcing-native-plants-seed-collection-project

Eco-sourcing Native Plants Seed Collection Project

Eco-sourcing means using plants grown from local seed. This is now accepted good practice for ecological plantings and has several advantages including:

- Protecting the genetic diversity within local populations
- Protecting the character of local ecosystems from being swamped by imported varieties from other areas
- Providing the best chance of planting success by using plants that have adapted to local conditions

Eco-sourcing is quite difficult in Marlborough, partly because some local species have all but disappeared, and also because it is costly and difficult for plant nurseries to collect seed from dispersed sources. Ideally, seed should be collected as close as possible to the original site and at least within the ecological district area. However, this is not always possible and two broad eco-sourcing zones for Marlborough have been agreed to by Council ecologists, Department of Conservation and QEII staff to provide a practical minimum guide to sourcing of seed.

Since 2006, Council has undertaken to collect some local seed with the cooperation of private landowners. Species and locations are shown on the map below.

The seed has been provided to local nurseries specialising in native plants. Ask for eco-sourced plants at local nurseries; demand will help to create supply.

Keen landowners can collect their own locally sourced seed for propagating by a local nursery, using sites on their own or neighbours' properties as a source. This, of course, involves having to think ahead, as it will involve a couple of years' delay before planting can occur, but should ensure ecologically worthwhile results and high plant survival.

Guidelines for native plant procurement and ecosourcing

Ecosourcing protects and enhances biodiversity values by using appropriate plants for an ecological area and the environmental conditions.

It requires propagation of native plants from a representative sample of the local wild population for plantings into appropriate habitats.

Environment Canterbury encourages the use of ecosourced native species for all planting projects, and ecosourcing is a requirement for Environment Canterbury-funded projects.

What is ecosourcing?

Ecosourced plants are those grown from seeds collected from naturally occurring vegetation in a locality close or appropriate to where you intend to plant them as part of a native planting project. Specifically:

- Plant species shall be known to be native to the local area, either present or past.
- The closer the seed source to the restoration project, the better (in most cases).
- Seed should be collected from a similar ecosystem to the one being restored.
- Planning for planting projects must allow for the timeframes involved in collection and propagation of ecosourced plant material.
- Collection of seeds or propagules should take place from areas of native vegetation which are clearly of natural origin and unlikely to be pollinated by garden origin plants.

What should you consider for your planting project?

- Decide which native plants can be used for a project.
- Involve Environment Canterbury biodiversity experts at an early stage to advise on appropriate species and where they should be sourced from or review alternatives.
- Establish realistic timeframes for seed collection and propagation.
- Factor in costs and timing for plant propagation (this may require staged payments) into funding arrangements.
- Liaise with iwi in relation to plant collection and intended use, including seeking acknowledgement of whakapapa and cultural practices associated with collection and use of plant material and issues relating to wāhi tapu.
- Ensure you have permission to collect.
- Include clear expectations of ecosourcing requirements in plant procurement – for example:
  - specify plant species and where they should be sourced from in request for proposal;
  - supplier should be able to verify and make available records for audit of plant sourcing; and
  - consider any specific expectations for plant maintenance and weed management.
- Work with your plant provider:
  - Apply the DOC and Waitakere guidelines (ref below) for ecosourcing and seed collection.
  - Adhere to project-specific recommendations for seed sourcing (NB this may differ from the DOC and Waitakere guidelines).
  - Maintain records of seed source location (coordinates), number of plants collected and date to verify plants are correctly sourced.
  - Ensure that the plant species collected is in fact the plant species you believe it to be – for example, it may be necessary to collect some vegetative material to get expert confirmation.

For more guidance on ecosourcing, please contact any of our biodiversity officers who will be able to help. Phone 0800 324 636 or email ecinfo@ecan.govt.nz.

For additional information or resources, see below:

- **Ecodistricts map**
- **Community organisation support - https://ecan.govt.nz/get-involved/support/**
- **Biodiversity funding - https://ecan.govt.nz/your-region/your-environment/our-natural-environment/biodiversity-funding/**
- **Chris Ferkins, Ecosourcing - Code of Practice and Ethics (2002, published by Waitakere City Council)**
- **Te Ara Kakariki/Greenway Canterbury Trust - https://www.kakariki.org.nz/resources/ecosourcing/**
- **DOC - https://www.doc.govt.nz/get-involved/run-a-project/restoration-advice/native-plant-restoration/ecosource-seeds**

E19/7610

Marlborough District Council Strategy
for
Ecosourcing Native Plants for South Marlborough

Introduction

This report includes:

- A description of the new ecosource zones and guidelines for ecosourcing native plants in South Marlborough.
- Plant species lists that display the zone and ecological district(s) for most South Marlborough native plant species.
- A strategy for Marlborough District Council to improve the availability of eco sourced plants for revegetation projects on both public and private land in South Marlborough.

Ecosourcing Zones for South Marlborough

There are only two ecosourcing zones in South Marlborough as the remaining areas of native vegetation in South Marlborough are very scattered and small.
These are the Inland South Marlborough zone and the Lowland South Marlborough zone.

The Marlborough District Council, Department of Conservation and QE II National Trust support these zones.

These two zones include the following ecological districts:

<u>Inland South Marlborough</u>
Waihopai
Medway

<u>Lowland/Coastal South Marlborough</u>
Hillersden
Grassmere
Flaxbourne
Wither Hills
Blenheim
Kekerengu

These zones make broad ecological sense in terms of ecological regions and Land Environments of New Zealand. They largely follow the Ecological District and Region framework which makes them compatible with the Marlborough District Council's Significant Natural Area survey and the Department of Conservation's Protected Natural Areas Programme survey.
A map showing these zones is attached to this report.

Ecosourcing Guidelines for South Marlborough

Ecosourcing is particularly relevant in South Marlborough because for many species, particularly those that would have been present in lowland and coastal areas prior to human arrival, the remaining examples in the wild are now rare and under threat or, in some cases, locally extinct.

Plants within the same species can adapt to local conditions to become genetically seperate (and sometimes physically distinctive) and are called 'provenances'. These local plants are therefore well adapted and are best used for propagation as they provide the best chance of survival and good growth.

Propagating from unknown plant material risks interbreeding and thus genetic contamination of local flora. This is likely to have already occurred for several commonly propagated native species planted in South Marlborough.

Therefore, the ecosourcing zones identified provide a broad base for the collection of native plant material for propagation. However, where feasible, seed should be collected from within a catchment or ecological district as close as possible to the specific site of a planting project and having regard to the range of habitats.

Generally, propagation from seed is preferable to cuttings to maintain wide genetic diversity. Cuttings are best used as a last resort option.

Where possible, local seed sources that can be secured, will be identified so as to provide insurance against further local extinctions. Examples of common native tree species now rare in the wild in South Marlborough include kahikatea, matai and lowland totara.

Plant Lists

The Department of Conservation has provided revegetation native plant species lists for South Marlborough's ecological districts. These have been reformatted to display the zone and ecological district(s) for most South Marlborough plant species.

A copy of these lists are attached to this report.

MDC Strategy for Ecosourcing in South Marlborough

1. Protection
    - To support and encourage private landowners to protect of remaining areas of native vegetation in South Marlborough, particularily rare and endangered plants, so as to preserve seed sources.
    - Protection will be achieved through DOC covenants, QE II National Trust covenants and Council's Landowner Assistance Programme. These support landowners to protect Significant Natural Areas (SNAs) on private land.

2. Revegetation projects
    - Many SNAs and public reserves would benefit through new planting and/or underplanting to speed site recovery and increase bio diversity.
    - Revegetation projects that are supported by Marlborough District Council will be with ecosourced plants.

3. Landscape Use
    - Eco sourced plants have significant potential for use in landscape planting as they are ideally suited to local climate and growing conditions and therefore ensure good survival and growth provide they are sited correctly.
    - Drought and/or frost tolerance are particularly important features that ecosourced plants can be selected for.
    - Marlborough District Council will use Marlborough's endemic plants in landscape plantings to showcase the unique character and form of these native plants.
    - The South Marlborough Native Planting Guide has been developed to provide information on landscape use of native plants.

4. Seed Collection
    - The cost for the collection of seed is a major barrier to nurseries.
    - Collection of seed from public reserves requires a special permit.
    - A large number of private landowners have SNA and PNA sites that offer the potential for collecting seed or taking cuttings. Some of these landowners already co-operate with seed collection.
    - There will be further consultation with other private landowners to identify additional seed collection sites in South Marlborough.
    - Council staff may undertake seed collection for large scale revegetation projects or organise for this to be done under contract.
    - Seed and cutting collection work must be with care to ensure there is no long term damage to the parent plants.
    - In the longer term Council may encourage sites on private land with good access to be planted with suitable native species so as to provide seed and cutting material for propagation.

5. Plant Supply
    - Currently the main demand for ecosourced plants is by MDC or DOC for revegetation projects as well as by QE II and for private revegetation projects.
    - Council wants to encourage local nurseries to produce a diverse range of ecosourced plants suitable for revegetation and landscape use. This includes labelling to identify ecological district where seed or cuttings were collected.
    - Council will support local nurseries in identifying possible sites for seed collection or taking cuttings through contacting private landowners to arrange access.

Project Contacts

- Paul Millen, Millen Associates
  Phone 03 574 1001, Mobile 021 662 147, e mail p.millen@xtra.co.nz

- Jennie Crum, Millen Associates
  Phone 03 572 8237 Mobile 021 236 7783, e mail escondido@xtra.co.nz
- Nicky Eade, Marlborough District Council
  Phone 03 578 5249, e mail nea@marlborough.govt.nz

Seed collection project

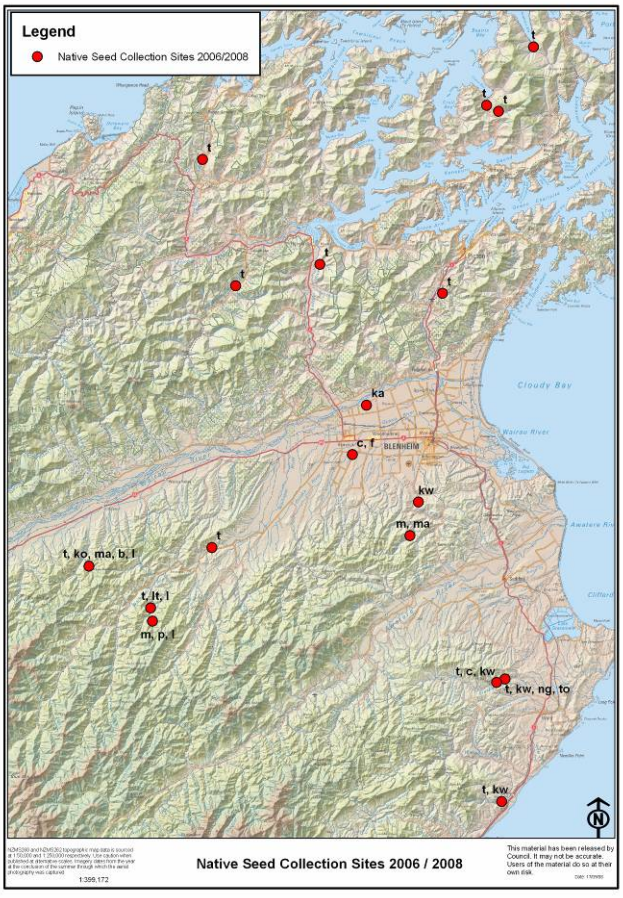
Through the Significant Natural Areas project it became apparent that boosting the supply of suitable locally sourced native plants would be necessary if there was to be an adequate volume of plant material available for restoration projects in lowland south Marlborough. Demand for plants is increasing, with many private restoration projects either protecting and restoring small remnant areas like wetlands, or starting from scratch to generate new areas from bare ground. The Tui to Town natural habitat restoration project is helping to stimulate this activity on the Wairau Plain area by providing information and for larger projects, funding assistance.

Seed collection net under totara tree in south Marlborough

The Significant Natural Areas project has provided an opportunity to identify remaining pockets of indigenous plants on private land that provide valuable seed sources to generate future material for restoration planting. A pilot seed collection project was initiated in 2006 focusing on totara seed collection. This pilot has since been extended in 2007/2008 (with the assistance of some additional funding by the central government Biodiversity Fund), to include a wider range of plants including kowhai, kanuka, flax, cabbage tree, mahoe, kohuhu, ngaio, broadleaf, lancewood and matai. Funding is available for the autumn 2009 seed collection period and ideally the programme will be ongoing to ensure that supply can meet demand.

A co-operative arrangement with local plant nurseries has been developed whereby Council collects and provides the seeds (courtesy of the access granted by private landowners to seed sources), and the nursery propagates, grows and sells the plants. This helps to ensure that appropriate locally sourced native plants are available in Marlborough nurseries to service the restoration of natural areas in the modified lowland environments.

Species	Year
Totara (t)	2006 - 2008
Matai (m)	2008
Kowhai (kw)	2007-2008
Kanuka (ka)	2007 - 2008
Cabbage tree (c)	2008
Flax (f)	2008
Pokaka (p)	2008
Ngaio (ng)	2008
Kohuhu (ko)	2008
Mahoe (ma)	2008
Broadleaf (b)	2008
Lancewood (l)	2006 - 2008



Planting in the Waimakariri Zone

Plant communities vary across the Waimakariri Zone. These communities reflect site variables such as soil type, depth and parent material, altitude, rainfall, temperature extremes, aspect and topography.

Wetland communities are found on waterlogged or seasonally saturated soils, shrubland/woodlands tend to be found on the drier drought prone or frequently disturbed soils and forests on deeper soils or in areas where rainfall is higher. The riparian area describes the area of interaction between the terrestrial habitat and the aquatic habitat. The riparian zone is found alongside waterways and water bodies.

Shrublands are often a mosaic of different plant communities — this is reflected in the lists provided below.

This map is a guide to composition for planting in your area.

All plantings should follow the principles of eco-sourcing in the first instance – all plants should be grown from seed that has been collected in a sustainable manner from wild stock (not from planted plants). The appropriate source Eco-Districts are indicated on the attached map. The seed for your planting must be collected within the Eco-District within which the planting is occurring.

Further information:

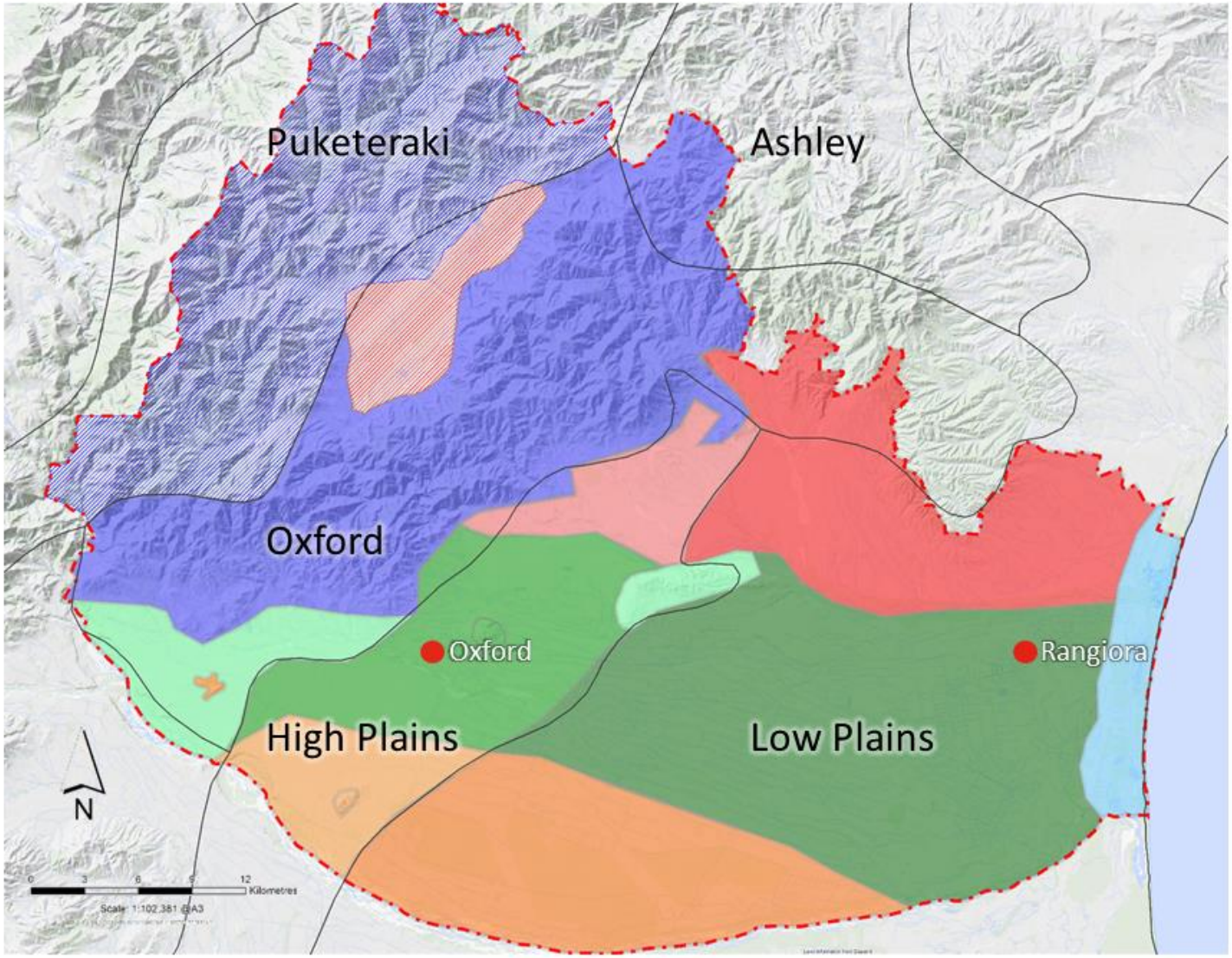
Ecosourcing Code of Practice and Ethics, Auckland Council — Chris Firkins, 2005

Native Forest Restoration: A Practical Guide for Landowners, QEII Trust — Tim Porteous, 1993

The Propagation of New Zealand Native Plants — Lawrie Metcalf, 1995

Wetland Restoration. A Handbook for New Zealand Freshwater Systems — Monica Peters and Beverley Clarkson, 2012

Planting Zones for the Waimakariri District



Legend

- Waimakariri Zone
- Rangiora
- Starvation Hill
- View Hill
- Foot Hills
- Sefton - Loburn
- Birch Hill
- Eyrewell
- Burnt Hill
- Coastal
- Lees Valley West Hills
- Lees Valley
- Ecological Districts

Rangiora

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Aristotelia serrata **makomako**	*Astelia fragrans* **kakaha**		✓	*Astelia grandis* **kakaha**		✓
Carpodetus serratus **putaputawētā**	*Austroderia richardii* **toetoe**	✓		*Austroderia richardii* **toetoe**		✓
Coprosma linariifolia **karamū**	*Carex dipsacea* **teasel sedge**	✓		*Carex coriacea* **rautahi**		✓
Coprosma lucida **karamū**	*Carex geminata* **rautahi**	✓		*Carex geminata* **rautahi**	✓	
Coprosma robusta **karamū**	*Carex maorica*	✓		*Carex maorica*	✓	
Cordyline australis **tī kōuka; cabbage tree**	*Carex secta* **pūrei**	✓		*Carex secta* **pūrei**	✓	
Dacrycarpus dacrydioides **kahikatea**	*Carex virgata* **pūrei**	✓		*Carex virgata* **pūrei**	✓	
Elaeocarpus hookerianus **pōkākā**	*Coprosma propinqua* **mikimiki**		✓	*Dacrycarpus dacrydioides* **kahikatea**		✓
Griselinia littoralis **kāpuka**	*Coprosma robusta* **karamū**		✓	*Eleocharis acuta* **spike sedge**	✓	
Hoheria angustifolia **houhi**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Juncus edgariae* **wīwī**	✓	
Lophomyrtus obcordata **rōhutu**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Juncus pallidus* **wīwī**	✓	
Melicope simplex **poataniwha**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Juncus sarophorus* **wīwī**	✓	

Rangiora

Forest
Myrsine australis **māpou**
Pennantia corymbosa **kaikōmako**
Pittosporum eugenioides **tarata**
Pittosporum tenuifolium **kōhūhū**
Plagianthus regius **mānatu**
Podocarpus totara **tōtara**
Prumnopitys taxifolia **mataī**
Pseudopanax arboreus **whauwhaupaku; five-finger**
Pseudopanax crassifolius **horoeka; lancewood**
Sophora microphylla **kowhai**
Streblus heterophyllus **tūrepo**

Riparian	wetter	drier
Phormium tenax **harakeke; flax**		✓
Melicope simplex **poataniwha**		✓
Schoenus pauciflorus **bog rush**	✓	
Veronica salicifolia **koromiko**		✓

Wetland	wetter	drier
Phormium tenax **harakeke; flax**		✓
Typha orientalis **raupō**	✓	

Starvation Hill

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Aristotelia serrata **makomako**	*Astelia fragrans* **kakaha**		✓	*Austroderia richardii* **toetoe**		✓
Carpodetus serratus **putaputawētā**	*Austroderia richardii* **toetoe**		✓	*Carex coriacea* **rautahi**		✓
Coprosma linariifolia **karamū**	*Carex dipsacea* **teasel sedge**	✓		*Carex geminata* **rautahi**	✓	
Coprosma lucida **karamū**	*Carex geminata* **rautahi**	✓		*Carex secta* **pūrei**	✓	
Coprosma robusta **karamū**	*Carex maorica*	✓		*Carex virgata* **pūrei**	✓	
Cordyline australis **tī kōuka; cabbage tree**	*Carex secta* **pūrei**	✓		*Dacrycarpus dacrydioides* **kahikatea**		✓
Dacrycarpus dacrydioides **kahikatea**	*Carex virgata* **pūrei**	✓		*Eleocharis acuta* **spike sedge**	✓	
Elaeocarpus hookerianus **pōkākā**	*Coprosma propinqua* **mikimiki**		✓	*Juncus edgariae* **wīwī**	✓	
Griselinia littoralis **kāpuka**	*Coprosma robusta* **karamū**		✓	*Machaerina rubiginosa* **baumea**	✓	
Hoheria angustifolia **houhi**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Phormium tenax* **harakeke; flax**		✓
Lophomyrtus obcordata **rohutū**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Schoenus pauciflorus* **bog rush**	✓	
Melicope simplex **poataniwha**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Typha orientalis* **raupō**	✓	

Starvation Hill

Forest
Myrsine australis **māpou**
Pennantia corymbosa **kaikōmako**
Pittosporum eugenioides **tarata**
Pittosporum tenuifolium **kōhūhū**
Plagianthus regius **mānatu**
Podocarpus totara **tōtara**
Prumnopitys taxifolia **mataī**
Pseudopanax arboreus **whauwhaupaku**
Pseudopanax crassifolius **horoeka**
Sophora microphylla **kowhai**

Riparian	wetter	drier
Schoenus pauciflorus **bog rush**	✓	
Veronica salicifolia **koromiko**		✓

Wetland	wetter	drier

Starvation Hill

Shrubland mosaic	**Shrubland**	**Grassland**	**Woodland**
Carmichaelia australis **mākaka**	4%	3%	3%
Coprosma intertexta **mikimiki**	4%	2%	2%
Coprosma propinqua **mikimiki**	20%	0%	3%
Corokia cotoneaster **korokio**	6%	0%	5%
Discaria toumatou **tūmatakuru; matagouri**	30%	2%	2%
Poa cita **wī; silver tussock**	4%	45%	0%
Festuca novae zelandiae **hard tussock**	3%	40%	0%
Kunzea serotina **kānuka**	9%	0%	81%
Melicytus alpinus **porcupine shrub**	5%	8%	4%
Ozothamnus leptophylla **tauhinu**	15%	0%	0%

View Hill

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Coprosma linariifolia **karamū**	*Austroderia richardii* **toetoe**		✓	*Austroderia richardii* **toetoe**		✓
Coprosma lucida **karamū**	*Carex geminata* **rautahi**	✓		*Carex coriacea* **rautahi**		✓
Coprosma obconica	*Carex maorica*	✓		*Carex geminata* **rautahi**	✓	
Coprosma pedicillata	*Carex secta* **pūrei**	✓		*Carex secta* **pūrei**	✓	
Coprosma robusta **karamū**	*Coprosma dumosa* **mikimiki**		✓	*Chionochloa rubra* subsp. *rubra* var. *rubra* **wī kura; red tussock**		✓
Cordyline australis **tī kōuka; cabbage tree**	*Coprosma propinqua* **mikimiki**		✓	*Chionochloa rubra* subsp. *cuprea* **wī kura; red tussock**		✓
Dacrydium dacrydioides **kahikatea**	*Coprosma rigida* **mikimiki**		✓	*Coprosma dumosa* **mikimiki**		✓
Fuscospora solandri **tawai; black beech**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Coprosma rigida* **mikimiki**		✓
Griselinia littoralis **kāpuka**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Dacrycarpus dacrydioides* **kahikatea**		✓
Hoheria angustifolia **houhi**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Olearia bullata*		✓
Lophomyrtus obcordata **rohutū**	*Olearia bullata*		✓	*Phormium tenax* **harakeke; flax**		✓
Pennantia corymbosa **kaikōmako**	*Phormium tenax* **harakeke; flax**		✓	*Schoenus pauciflorus* **bog rush**	✓	

View Hill

Forest
Pittosporum tenuifolium **kōhūhū**
Podocarpus totara **tōtara**
Prumnopitys taxifolia **mataī**
Pseudopanax ferox **fierce lancewood**
Raukaua anomalus
Sophora microphylla **kowhai**

Riparian	wetter	drier
Schoenus pauciflorus **bog rush**	✓	
Veronica salicifolia **koromiko**		✓

Wetland	wetter	drier
Typha orientalis **raupō**	✓	

Foot Hills

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Aristotelia serrata **makomako**	*Austroderia richardii* **toetoe**	✓		*Austroderia richardii* **toetoe**		✓
Carpodetus serratus **putaputawētā**	*Carex secta* **pūrei**	✓		*Carex secta* **pūrei**	✓	
Coprosma linariifolia **karamū**	*Coprosma dumosa* **mikimiki**		✓	*Carex tenuiculmis*	✓	
Coprosma lucida **karamū**	*Coprosma propinqua* **mikimiki**		✓	*Chionochloa rubra* subsp. *rubra* var. *rubra* **wī kura; red tussock**		✓
Coprosma robusta **karamū**	*Coprosma rigida* **mikimiki**		✓	*Chionochloa rubra* subsp. *cuprea* **wī kura; red tussock**		✓
Cordyline australis **tī kōuka; cabbage tree**	*Coprosma rugosa* **mikimiki**		✓	*Coprosma dumosa* **mikimiki**		✓
Dacrydium cupressinum **rimu**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Coprosma propinqua* **mikimiki**		✓
Dacrydium dacrydioides **kahikatea**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Coprosma rigida* **mikimiki**		✓
Elaeocarpus hookerianus **pōkākā**	*Olearia bullata*		✓	*Olearia bullata*		✓
Fuscospora cliffortioides **tawai; mountain beech**	*Phormium tenax* **harakeke; flax**		✓	*Phormium tenax* **harakeke; flax**		✓
Fuchsia excorticata **kōtukutuku**	*Schoenus pauciflorus* **bog rush**	✓		*Schoenus pauciflorus* **bog rush**	✓	
Griselinia littoralis **kāpuka; broadleaf**	*Veronica salicifolia* **koromiko**		✓			

Foot Hills

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Hoheria lyallii **houhi**	*Veronica traversii*		✓			
Lophomyrtus obcordata **rōhutu**						
Olearia arborescens **pekapeka**						
Olearia avicenniifolia **akeake**						
Olearia paniculata **akiraho**						
Pittosporum tenuifolium **kōhūhū**						
Podocarpus laetus **Hall's tōtara**						
Prumnopitys ferruginea **miro**						
Prumnopitys taxifolia **mataī**						
Pseudopanax arboreus **whauwhaupaku; five-finger**						
Pseudopanax crassifolius **horoeka; lancewood**						
Raukaua anomalus						

Sefton - Loburn

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Aristotelia serrata **makomako**	*Astelia fragrans* **kakaha**		✓	*Apodasmia similis** **oioi**	✓	
Coprosma linariifolia **karamū**	*Austroderia richardii* **toetoe**	✓		*Austroderia richardii* **toetoe**		✓
Cordyline australis **tī kōuka; cabbage tree**	*Carex geminata* **rautahi**	✓		*Carex coriacea* **rautahi**		✓
Dacrycarpus dacrydioides **kahikatea**	*Carex maorica*	✓		*Carex geminata* **rautahi**	✓	
Griselinia littoralis **kāpuka; broadleaf**	*Carex secta* **pūrei**	✓		*Carex secta* **pūrei**	✓	
Hoheria angustifolia **houhi**	*Carex virgata* **pūrei**	✓		*Carex virgata* **pūrei**	✓	
Lophomyrtus obcordata **rohutū**	*Coprosma crassifolia* **mikimiki**		✓	*Dacrycarpus dacrydioides* **kahikatea**		✓
Myrsine australis **māpou**	*Coprosma propinqua* **mikimiki**		✓	*Eleocharis acuta* **spike sedge**	✓	
Pittosporum eugenioides **tarata; lemonwood**	*Coprosma robusta* **karamū**		✓	*Juncus edgariae* **wīwī**	✓	
Pittosporum tenuifolium **kōhūhū**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Juncus pallidus* **wīwī**	✓	
Plagianthus regius **mānatu**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Juncus sarophorus* **wīwī**	✓	
Podocarpus totara **tōtara**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Lepidosperma australe* **four square**	✓	

Sefton - Loburn

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Prumnopitys taxifolia **mataī**	*Phormium tenax* **harakeke; flax**		✓	*Machaerina rubiginosa* **baumea**	✓	
Pseudopanax arboreus **whauwhaupaku; five-finger**	*Melicope simplex* **poataniwha**		✓	*Phormium tenax* **harakeke; flax**		✓
Pseudopanax crassifolius **horoeka; lancewood**	*Pittosporum tenuifolium* **kōhūhū**		✓	*Plagianthus divaricatus** **mānatu**		✓
Sophora microphylla **kowhai**	*Schoenus pauciflorus* **bog rush**	✓		*Schoenoplectus tabernaemontani** **kāpūngāwhā**	✓	
Streblus heterophyllus **tūrepo**	*Sophora microphylla* **kowhai**		✓	*Schoenus pauciflorus* **bog rush**	✓	
	Veronica salicifolia **koromiko**		✓	*Typha orientalis* **raupō**	✓	

* These species should be planted at the coastal end of this zone.

Birch Hill

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Coprosma linariifolia **karamū**	*Astelia fragrans* **kakaha**		✓	*Austroderia richardii* **toetoe**		✓
Coprosma lucida **karamū**	*Austroderia richardii* **toetoe**	✓		*Carex coriacea* **rautahi**		✓
Cordyline australis **tī kōuka; cabbage tree**	*Carex geminata* **rautahi**	✓		*Carex geminata* **rautahi**	✓	
Dacrycarpus dacrydioides **kahikatea**	*Carex maorica*	✓		*Carex secta* **pūrei**	✓	
Elaeocarpus hookerianus **pōkākā**	*Carex secta* **pūrei**	✓		*Carex virgata* **pūrei**	✓	
Fuscospora solandri **tawai; black beech**	*Carex virgata* **pūrei**	✓		*Dacrycarpus dacrydioides* **kahikatea**		✓
Griselinia littoralis **kāpuka**	*Coprosma crassifolia* **mikimiki**		✓	*Eleocharis acuta* **spike sedge**	✓	
Hoheria angustifolia **houhi**	*Coprosma propinqua* **mikimiki**		✓	*Juncus edgariae* **wīwī**	✓	
Lophomyrtus obcordata **rōhutu**	*Coprosma robusta* **karamū**		✓	*Machaerina rubiginosa* **baumea**	✓	
Melicope simplex **poataniwha**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Phormium tenax* **harakeke; flax**		✓
Myrsine australis **māpou**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Schoenus pauciflorus* **bog rush**	✓	
Pittosporum eugenioides **tarata; lemonwood**	*Elaeocarpus hookerianus* **pōkākā**		✓	*Typha orientalis* **raupō**	✓	

Birch Hill

Forest
Pittosporum tenuifolium **kōhūhū**
Plagianthus regius **mānatu**
Podocarpus totara **tōtara**
Prumnopitys taxifolia **mataī**
Pseudopanax arboreus **whauwhaupaku**
Pseudopanax crassifolius **horoeka; lancewood**
Sophora microphylla **kowhai**

Riparian	wetter	drier
Phormium tenax **harakeke; flax**		✓
Pittosporum tenuifolium **kōhūhū**		✓
Schoenus pauciflorus **bog rush**	✓	
Veronica salicifolia **koromiko**		✓

Wetland	wetter	drier

Eyrewell

Shrubland mosaic	Shrubland	Grassland	Woodland
Aciphylla subflabellata **taramea**	2%	5%	0%
Carmichaelia australis **mākaka**	4%	2%	1%
Coprosma crassifolia **mikimiki**	5%	0%	1%
Coprosma intertexta **mikimiki**	9%	2%	2%
Coprosma propinqua **mikimiki**	5%	0%	1%
Coprosma rhamnoides	0%	0%	3%
Corokia cotoneaster **korokio**	5%	1%	7%
Discaria toumatou **tūmatakuru; matagouri**	35%	8%	3%
Poa cita **wī; silver tussock**	3%	48%	0%
Festuca novae zelandiae **hard tussock**	3%	26%	0%
Kunzea serotina **kānuka**	4%	1%	78%
Melicytus alpinus **porcupine shrub**	10%	5%	4%

Eyrewell

Shrubland mosaic	**Shrubland**	**Grassland**	**Woodland**
Ozothamnus leptophyllus **tauhinu**	15%	2%	0%

Burnt Hill

Shrubland mosaic	**Shrubland**	**Grassland**	**Woodland**
Aciphylla subflabellata **taramea**	4%	5%	0%
Carmichaelia australis **mākaka**	6%	2%	0%
Coprosma crassifolia **mikimiki**	3%	0%	0%
Coprosma intertexta **mikimiki**	5%	0%	0%
Coprosma propinqua **mikimiki**	4%	0%	0%
Coprosma rhamnoides	0%	0%	3%
Corokia cotoneaster **korokio**	4%	1%	6%
Discaria toumatou **tūmatakuru; matagouri**	40%	10%	3%
Poa cita **wī; silver tussock**	4%	48%	0%
Festuca novae zelandiae **hard tussock**	3%	26%	0%
Kunzea serotina **kānuka**	4%	1%	85%
Melicytus alpinus **porcupine shrub**	8%	5%	3%

Burnt Hill

Shrubland mosaic	**Shrubland**	**Grassland**	**Woodland**
*Olearia lineata**	4%	0%	0%
Ozothamnus leptophyllus **tauhinu**	8%	2%	0%
Sophora microphylla **kowhai**	2%	0%	0%
*Sophora prostrata** **prostrate kowhai**	1%	0%	0%

* These species are best suited to hilly country.

Coastal

Forest	Riparian	wetter	drier	Wetland	wetter	drier
Coprosma robusta **karamū**	*Apodasmia similis* **oioi**	✓		*Apodasmia similis* **oioi**	✓	
Cordyline australis **tī kōuka; cabbage tree**	*Astelia fragrans* **kakaha**		✓	*Austroderia richardii* **toetoe**		✓
Dacrycarpus dacrydioides **kahikatea**	*Austroderia richardii* **toetoe**	✓		*Bolboschoenus caldwellii*	✓	
*Dodonaea viscosa** **akeake**	*Bolboschoenus caldwellii*	✓		*Carex coriacea* **rautahi**		✓
Hoheria angustifolia **houhi**	*Carex geminata* **rautahi**	✓		*Carex geminata* **rautahi**	✓	
*Myoporum laetum** **ngaio**	*Carex maorica*	✓		*Carex maorica*	✓	
Pittosporum eugenioides **tarata**	*Carex secta* **pūrei**	✓		*Carex secta* **pūrei**	✓	
Pittosporum tenuifolium **kōhūhū**	*Carex virgata* **pūrei**	✓		*Carex virgata* **pūrei**	✓	
Plagianthus regius **mānatu**	*Coprosma propinqua* **mikimiki**		✓	*Dacrycarpus dacrydioides* **kahikatea**		✓
Podocarpus totara **tōtara**	*Cordyline australis* **tī kōuka; cabbage tree**		✓	*Eleocharis acuta* **spike sedge**	✓	
Prumnopitys taxifolia **mataī**	*Dacrycarpus dacrydioides* **kahikatea**		✓	*Juncus edgariae* **wīwī**	✓	
Sophora microphylla **kowhai**	*Eleocharis acuta* **spike sedge**	✓		*Juncus krausii* subsp. *australiensis* **wīwī**	✓	

Coastal

Forest	Riparian	wetter	drier
	Elaeocarpus hookerianus **pōkākā**		✓
	Juncus pallidus **wīwī**	✓	
	Juncus edgariae **wīwī**	✓	
	Juncus sarophorus **wīwī**	✓	
	Machaerina rubiginosa **baumea**	✓	
	Phormium tenax **harakeke; flax**		✓
	Plagianthus divaricatus **mānatu**		✓
	Schoenus pauciflorus **bog rush**	✓	
	Schoenoplectus tabernaemontani **kāpūngāwhā**	✓	
	Sophora microphylla **kowhai**		✓
	Veronica salicifolia **koromiko**		✓

Wetland	wetter	drier
Juncus pallidus **wīwī**	✓	
Juncus sarophorus **wīwī**	✓	
Lepidosperma australe **four square**	✓	
Machaerina rubiginosa **baumea**	✓	
Phormium tenax **harakeke; flax**		✓
Plagianthus divaricatus **mānatu**		✓
Schoenoplectus tabernaemontani **kāpūngāwhā**	✓	
Schoenus pauciflorus **bog rush**	✓	
Typha orientalis **raupō**	✓	

* Frost tender — plant in spring or provide shelter.

Biodiversity Advisory Group
Terms of Reference

Purpose and Scope

The purpose of the advisory group is to:

- Coordinate the implementation of the Ashburton District Biodiversity Action Plan.
- Maintain partnerships between local and regional organisations with an interest in the management of indigenous biodiversity.
- Provide a forum for discussion and community-wide promotion of biodiversity.

Membership

Representatives on the working group were invited based on their organisation's participation in developing the Canterbury Regional Biodiversity Strategy, and/or their ability to contribute to the implementation of the Ashburton District Biodiversity Action Plan.

Membership of the Advisory Group is:

Mayor, Neil Brown (ex officio)	ADC
Cr Lynette Lovett (Chair)	ADC
Cr Diane Rawlinson	ADC
Bill Thomas	Ashburton Water Zone Committee
Gen de Spa	Foothills Landcare Group
Alice Shanks	QE II
Mary Ralston/Edith Smith/Val Clemens	Forest and Bird
Edith Smith/Val Clemens	Ashburton Community Conservation Trust (ACCT)
Mike Salvesen	Federated Farmers
Mark Webb/Jayde Couper	Fish and Game
Donna Field	Whitcombe Landcare Group
Donna Field/Janine Holland	ECan
Ian Fraser/Brad Edwards	DOC
Michael Edmundson	Synlait
Mat Cullen	Fonterra
[No person specified]	Kanuka Trust
Barry Austin	Mt Somers Walkway Society & Lake Heron Conservation Society
Mary Ralston	Awa Awa Rata Reserve
David Askin	Open Spaces Manager, ADC
Bert Hofmans	Open Spaces Planner, ADC

Speaking rights will be granted to one member of each of the advisory group member organisations at each meeting.

Membership of the group may be amended to include representatives from other organisations. This will be at the discretion of the Ashburton District Council.

To form a quorum, the attendance of representatives from at least 6 of the advisory group member organisations, in addition to at least two ADC local representatives, is required.

Representatives from other organisations may be invited to attend advisory group meetings as the need arises.

Meeting Frequency

Meet five times a year.

Delegations

The representatives on the working group are expected to:

- Meet to coordinate the implementation of the Ashburton District Biodiversity Action Plan.
- Form project groups where appropriate to work towards specific actions in the Biodiversity Action Plan.
- Share information, both on organisational initiatives and collaborative initiatives, to support better decisions and knowledge of biodiversity.
- Communicate and consult with one another in a flexible and open way.
- Maintain confidentiality where appropriate.
- Represent their organisations' policies.
- Respect other organisations' governance and policy approaches and priorities in the district / region, and seek a consensus approach to work with these.

Reporting

The Ashburton District Biodiversity Advisory Group will report to the Community Services Committee.

Costs & Expenses

It is acknowledged that being a member of the advisory group will involve a commitment of members' time and energy, and will involve travel to Ashburton District Council to attend meetings. These costs will be met by the organisation(s) or group(s) that members represent. Costs of meetings and associated catering will be met by Ashburton District Council.

Meetings will generally be held in the Council meeting rooms, and may be held in other venues throughout the district as appropriate.

Adopted

9 April 2020