

# Right plant right place – designing a successful wetland planting plan

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A photograph of a wetland landscape with tall, golden-brown grasses and a small, dark pond in the center. The text is overlaid on a semi-transparent dark grid background.

# Workshop Outline

## 1. Planning:

- a. What kind of wetland do you have?
- b. Soils?
- c. What is there already?
- d. What are threats?

## 2. Reference site

## 3. What are your goals?

## 4. Wetland zones

## 5. Wetland mapping

## 6. Choosing plants

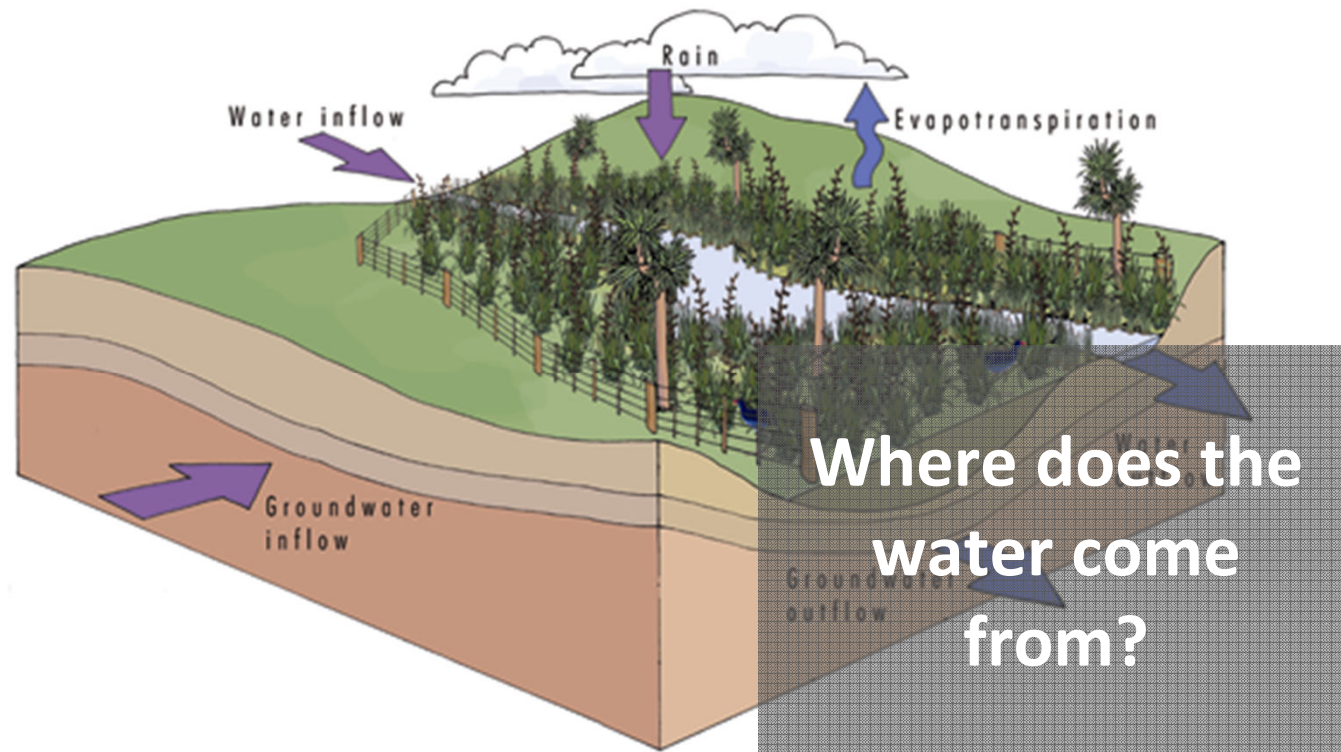
## 7. Calculating plant numbers

## 8. Where to get plants from and eco-sourcing

## 9. Wetland planting techniques, tips and timings

## 10. Sources of information and help

1.(a) What kind of wetland do you have ?







# 1. Soils

1.(b) What kind of wetland do you have ?  
What kind of SOIL does it have?

Two kinds:

Peat

Mineral

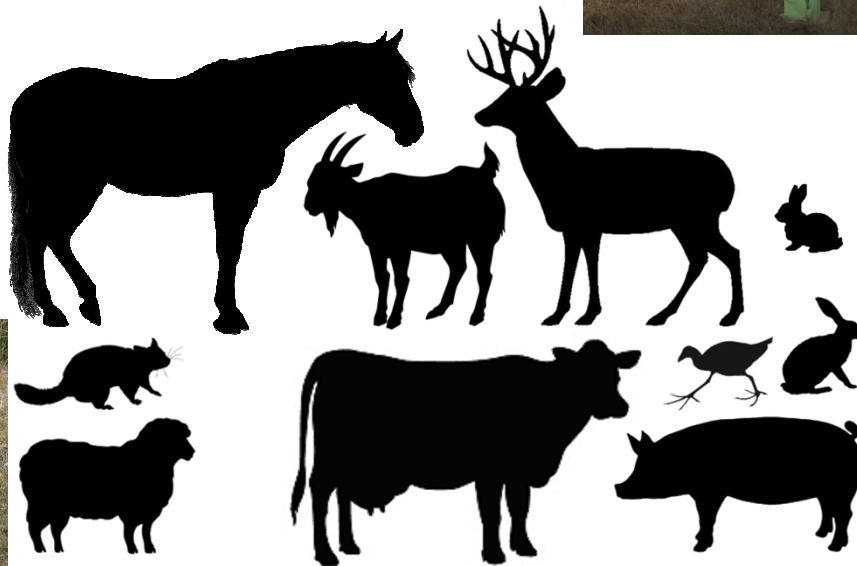
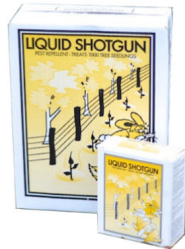




## 1(c) Planning: What is already there

- Existing biodiversity – DON'T INADVERTENTLY GET RID OF IT!!!
- It is easy to overlook and sometimes remnant biodiversity doesn't look as expected.
- Forest and Bird is only a small part of the equation.
- Uncultivated soils/surfaces/sites often retain important biodiversity.

## 1(d) Threats and solutions





## 2. Reference site



## 2. Finding a reference wetland

Spiranthes Rich. x +

https://www.gbif.org/species/2805315

Apps Labour Report Zone PowerApps - ECan in Property Search Conservation status Biodiversity Projects Biodiversity Map Gall Apply for funding Christchurch City We

Get data Share Tools Inside GBIF Login

**Classification**

Select a species

Kingdom Plantae

Phylum Tracheophyta

Class Liliopsida


Order Asparagales

Family Orchidaceae

Genus *Spiranthes* Rich.

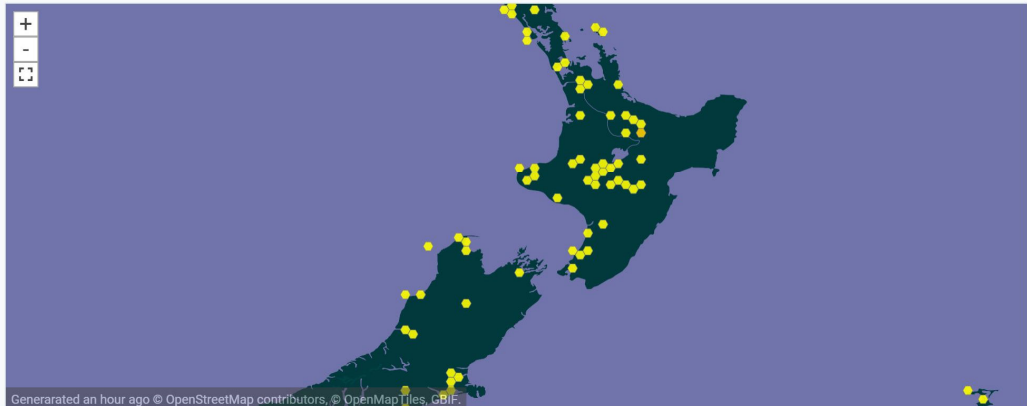
- = *Aristotelelea* Lour.
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- = *Gyrostachis* Blume
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- = *Helictonia* Ehrh.
- = *Ibidium* R.A.Salisbury ex J.K.Small, 1913
- = *Ibidium* Salisb.
- = *Ibidium* Salisb. ex House
- = *Monustes* Raf.
- = *Orchistraum* Seg.
- = *Triorchis* Agosti

6,397 OCCURRENCES WITH IMAGES



SEE GALLERY

33,758 GEOREFERENCED RECORDS



Generated an hour ago © OpenStreetMap contributors, © OpenMap Tiles, GBIF.

Any year 1635 - 2018 EXPLORE AREA

APPEARS IN 33 CHECKLIST DATASETS: APPEARS IN 429 OCCURRENCE DATASETS:

Windows taskbar: 11:17 AM 27/09/2018





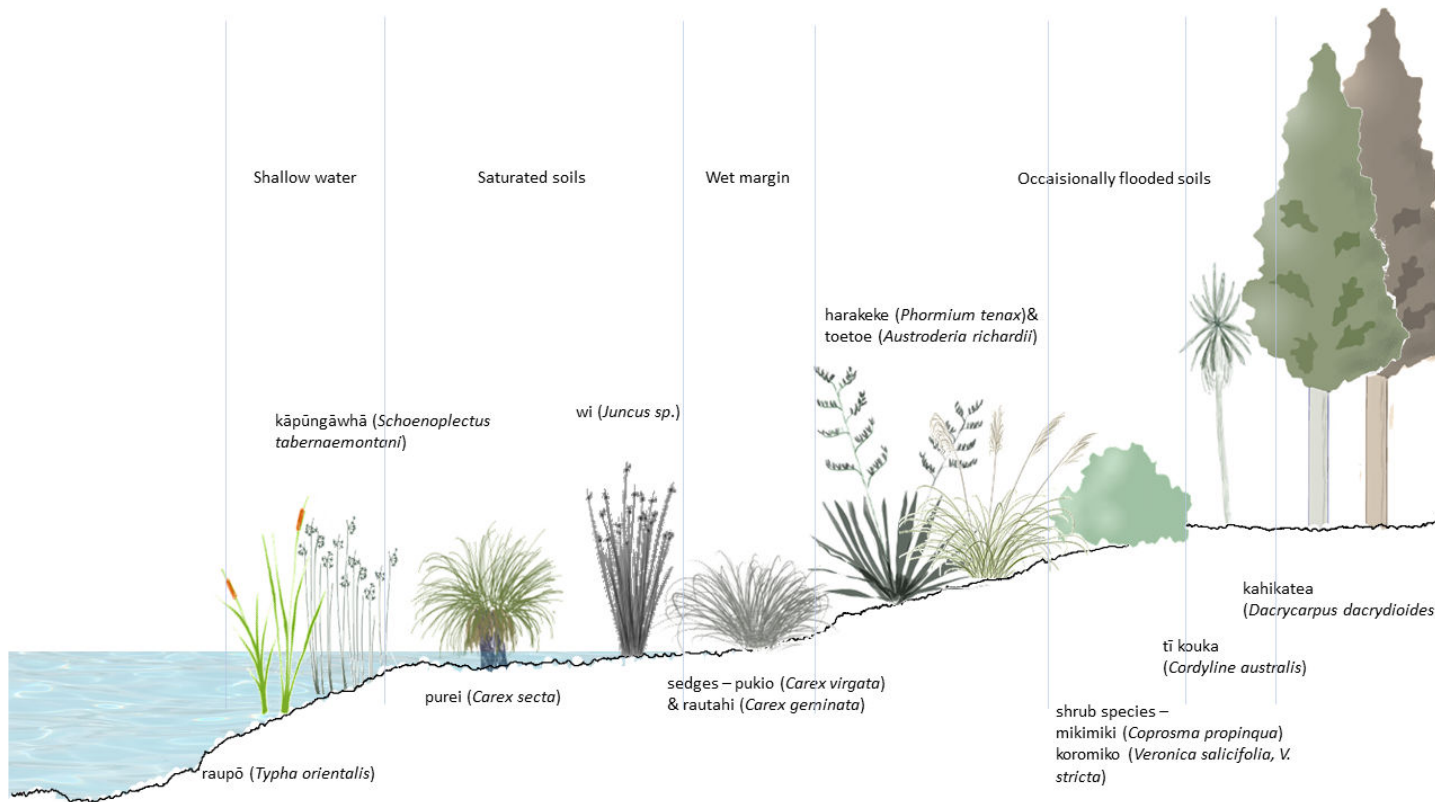
### 3. What are your goals?

Restoring a degraded wetland?

Habitat for birds or fish - including game birds?

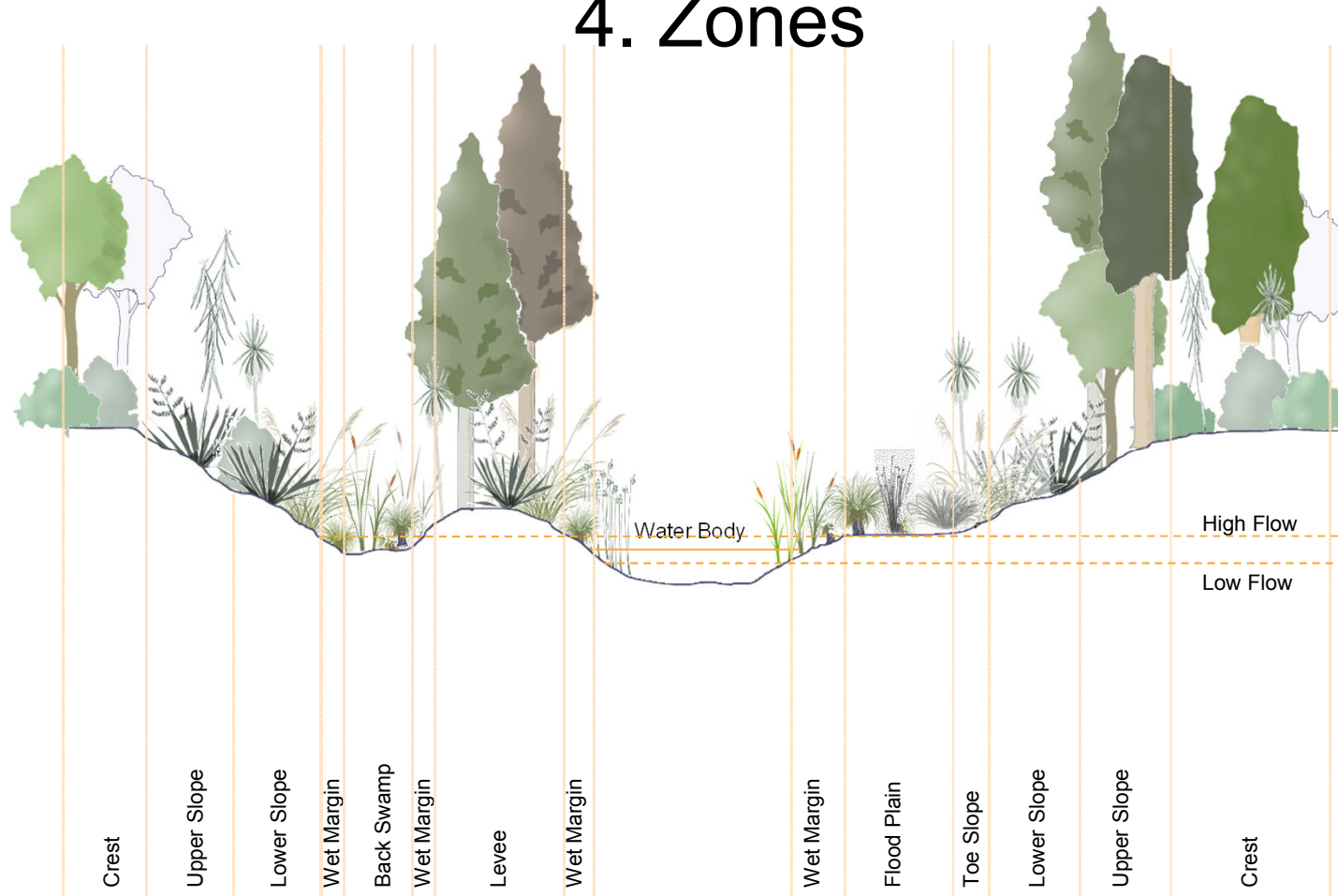
Improving water quality?

## 4. Zones



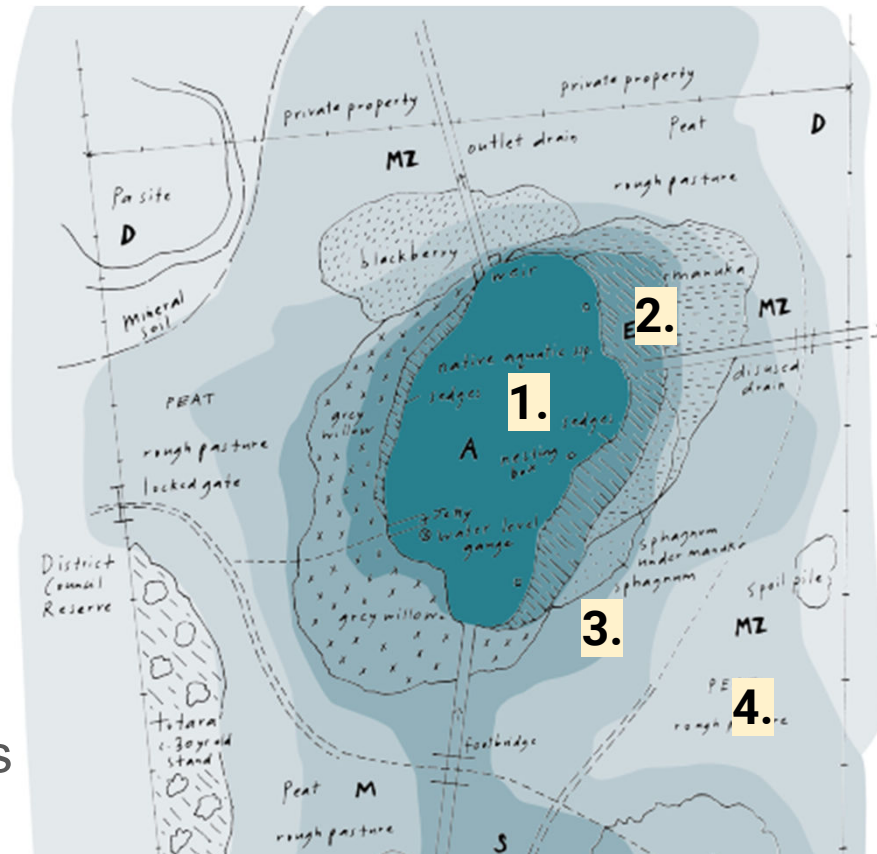


## 4. Zones



## 5. Wetland mapping

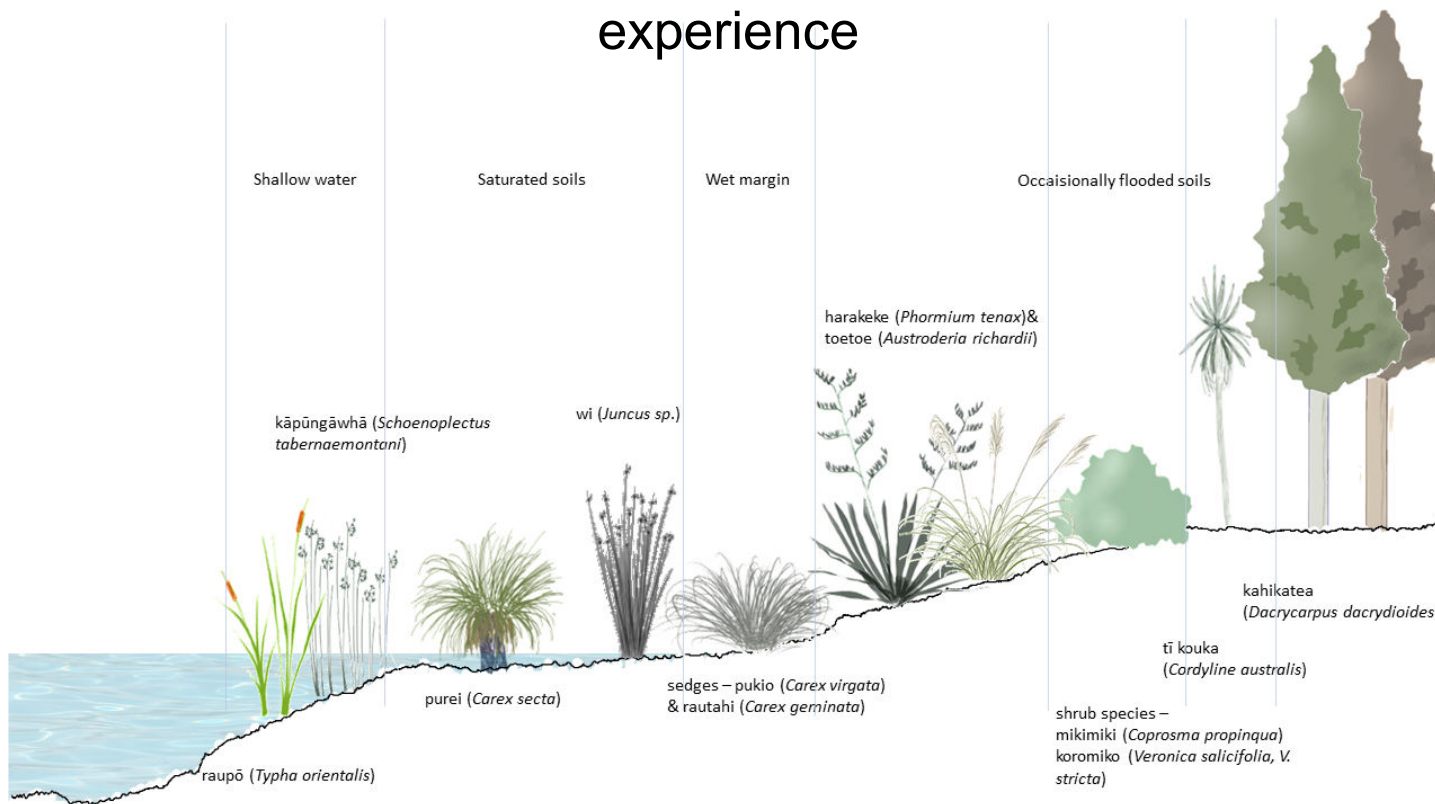
Source: Wetland  
Restoration: A  
Handbook for NZ  
Freshwater Systems





## 6. Choosing plants

Chose plants based on zones, wetland type and local experience



## 7. Calculating plant Nos

$$N = S^2 \times 0.866 \times A$$

N No. of plants to be planted

S Spacing (in metres)

A Area to be planted (m<sup>2</sup>)



The background of the slide is a photograph of a nursery. It shows numerous black plastic pots filled with tall, thin, green and yellowish grasses. The pots are arranged in rows, and the grasses are growing densely. The lighting is natural, suggesting an outdoor setting.

## 8. Where to get plants from?

- Nurseries that use ecosourcing principles
- Collection of seed from wild plants in wild areas away from gardens and pass on to nursery if no nurseries in area.
- Do not dig up seedling from your garden or other wetlands.



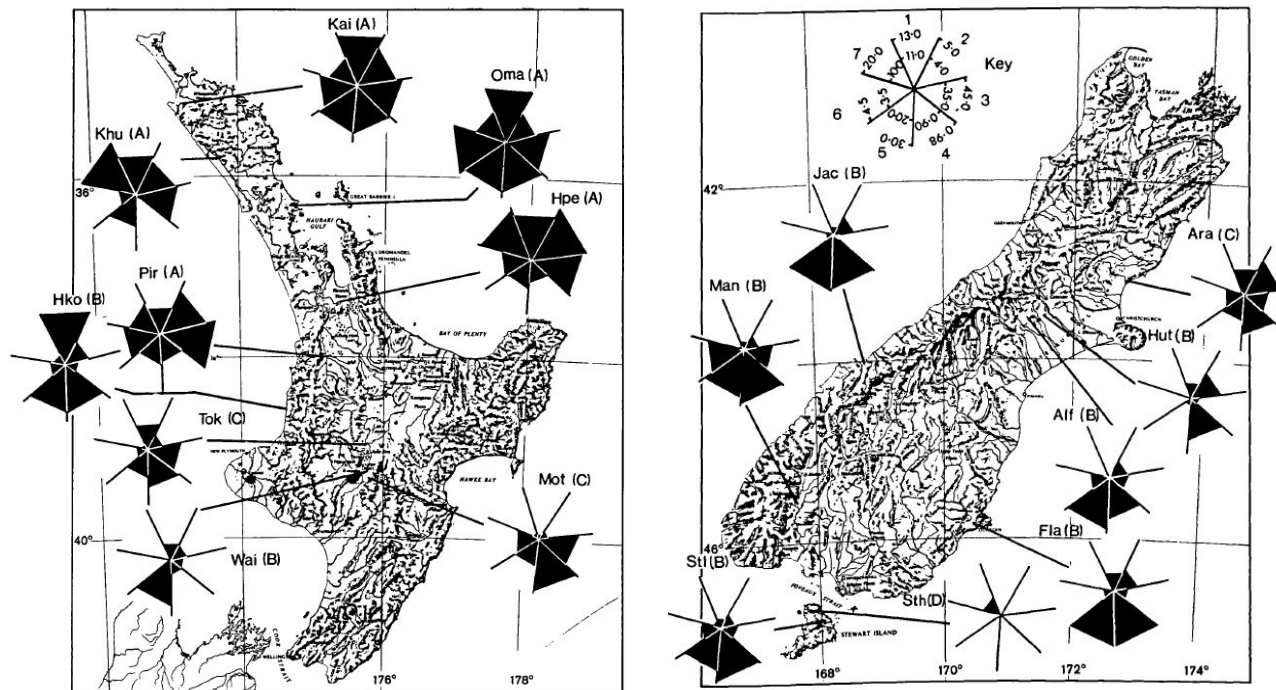
A topographic map of a coastal region, likely in New Zealand, showing a red boundary that outlines a specific area. The map includes labels for 'Craigieburn', 'Waikari', 'Port Hills', and 'Low Plains'. A dark grey rectangular box is overlaid on the map, containing the title and a list of bullet points.

## 8. Ecosourcing

- Planting plants that are (or once were) found growing in similar conditions in the local area
- Collection of seed from wild plants in wild areas away from gardens
- Plants grown from seed – not from cuttings or division
- Plants that represent a wide genetic cross section.



## 8. Morphological diversity of mānuka



Yin Ronghua, A. F. Mark & J. B. Wilson (1984) Aspects of the ecology of the indigenous shrub *Leptospermum scoparium* (Myrtaceae) in New Zealand, *New Zealand Journal of Botany*, 22:4, 483-507

## 8. Ecosourcing tips

Ask:

Are these plants grown from seed?

Are they from wild (not planted) populations?

Was the seed collected from multiple parent plants?

What Ecodistrict was the seed sourced from?

If the nursery or supplier cannot satisfactorily answer any of these questions then find another nursery or supplier.





## 9. Planting techniques, timings & tips

Tip 1: “Don’t bite off more than you can chew” – only plant what you can maintain. Stage planting.

Tip 2: Order plants 18 months to 3 years in advance

Tip 3: In warm areas plant emergent wetland plants any time of year - if not plant in summer when water levels have dropped.

Tip 4: For kahikatea plant them a little higher than the soil.



## 10. Sources of information and help

Books

Regional or local councils

Nurseries

Local environmental groups & landowners

Mana whenua (local iwi or rūnanga)

Fish and game

Visit local wetlands

And... NWT Symposia