

STREAMSIDE

PLANTING


GUIDE


What to plant and how to
maintain native plants
along freshwater
streams in Christchurch






1. Get to know your stream, and start planning

 Look at your stream over different seasons, and see what opportunities there are for improving it. See if there is space to remove any retaining walls and regrade the banks.


 Characterise the stretch of river bank by referring to the stream waterway profiles and notes in this brochure. Use the 'indigenous ecosystem booklets' (found at Council Service Centres and Tuam Street office) for your area as a further guide.

 Organise resources including labour for site preparation, planting, and importantly on-going maintenance - don't bite off more than you can chew!


10 STEPS TO PLANTING AND




2. Seek advice on resource consents and design

 Get in touch with the Council's Water Services staff (tel: 371-1384) for further advice and check if you require resource consents for work.

 Any development within a defined "setback" will require a Christchurch City Council resource consent (ask for more information on setbacks from Water Services Unit or local Council Service Centres.)

 Any disturbance to the bed of a river will require a Canterbury Regional Council resource consent (enquire at their office, tel: 365-3828)

 For design assistance consult the yellow pages for the list of NZILA landscape architects, or enquire at the Council's Water Services Unit for advice.




3. Prepare a planting plan


- Identify for your stream area the different vegetation zones illustrated in the stream diagrams overleaf. Consider slope, distance from stream, how damp the area is, and how your stream flows throughout the year.
- Compile a list of plant species for each zone identified along the streambank.
- Space plants according to the zone they belong in, and the size they grow to. You will need approximately one plant per square metre. Rushes, small sedges and ferns can be planted up to three per square metre.
- Near the water's edge place tussock, reeds and shrubs, with small trees located above these.
- On higher terraces and banks, plant tree and shrub species in groups.

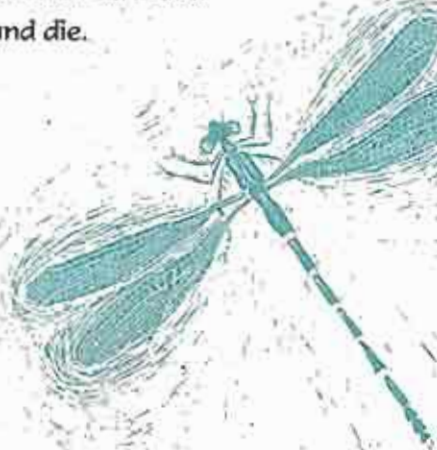




4. Order plants well in advance


 Order plants well in advance of planting. Select a nursery specialising in native plants and that can guarantee they were sourced locally in Canterbury.

 If you hold plants before planting, make sure they are watered every day otherwise they may become stressed and die.





5. Planting times

 Plant appropriate species right down to the water's edge/margin during the summer. Other species should be planted during autumn (hardy plants) or spring (frost-tender plants).

 Some ground cover plants, slow growing, and/or frost sensitive species should be planted after some initial cover has established and dense grass has been managed (i.e. 1-2 years after first plantings). Examples include most ferns and tree ferns.






6. Prepare the site

-  Prepare the site well in advance of planting. Remove invasive weeds, including convolvulus, ivy, periwinkle, pampas grass, grey willow, alder and yellow flag iris.
-  Clear all vegetation for about 1 metre diameter around each planting position.
-  Rip ground or fork it to about half a metre depth if it is heavily compacted. Apply soil conditioner if topsoil is degraded.




7. Setting out


 Set out plants in their correct zones, remembering to space plants according to how large they will grow (see stream profile diagrams). Ensure the plants have been well soaked and that they do not sit in the sun for a long time,








8. Planting

 Prune off entangled roots, set the plant into a bed of soft, worked soil at the bottom of the hole, and repack crumbled soil around the root mass tightly to prevent air gaps.

 On dry, steep sites dig the plant into a deep hole so that there is a hollow left in the ground around the stem to catch the rain.


 On wet sites, plant in a shallower hole so that the top of the root mass and associated soil is at ground level or even slightly mounded above it in permanently saturated conditions.


 Ensure plants within the waterway are well planted, and compacted around their base.


 Give the plants and the surrounding dry ground a good watering after planting. Where possible, stake plants so they are easily identified.




9. Fertiliser and mulch

 For poor soils apply slow-release fertiliser to each plant and spread short-term fertiliser (e.g. super-phosphate) onto the ground after planting and before mulching.





 It is best to fertilise in the second year after planting, as plant roots are not well developed enough to utilise fertiliser prior to this.

 On dry sites mulch with bark chips (up to 10 cm depth), newspaper, woollen mats, or other degradable materials such as carpet underlay (which is not rubberised).

 Do not use mulch on wet sites or anywhere near the water flow, as mulch is likely to be washed away, and may cause stream blockages.



10. Establishment and on-going maintenance

-  Regularly check on the plants' health for several years after establishment.
-  Remember that plants on dry banks will survive and thrive if watered regularly in summer. Replant areas where plants may have died.
-  Weeding around plants is essential to avoid competition and stress. This should be carried out on a monthly basis or more frequently as required.
-  Nearer the water, careful weed control is needed on an on-going basis until the area is self-maintaining, or until the plantings have overtopped the grass.
-  Monitor the growth of your streamside - enjoy how your site will thrive, develop, attract wildlife, and become self maintaining.

Christchurch's Waterway Enhancement Programme

This Streamside Planting Guide has been developed as part of Christchurch's Waterway Enhancement Programme.

The Programme is a partnership between the Christchurch City Council and local communities - with the aim of enhancing the health of our waterways and restoring their natural processes.

People throughout Christchurch are working together to:

-  protect natural areas
-  restore native habitat
-  enhance ecosystems for birds, fish, lizards and insects
-  create green linkages or corridors
-  restore waterways for people's enjoyment and sense of history.

The streamside planting guide will help you know what to plant where, and how to plant and maintain your streamside. You will be contributing to a natural, more sustainable Christchurch!

This brochure has been developed by Colin Meurk, Landcare Research Lucas Associates and Christchurch City Council Staff.

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