

Design and Cost of Fencing

Excluding stock from waterways is the best 'first step' you can take to improve waterways in the Southland region. What kind of fence you use will depend on its purpose, the type of stock being grazed and how much money you can afford to spend on fencing.

Where to put your fence

The two main options when fencing riparian areas are:

1. Follow the bends of the waterway.
2. Run the fence along straight lines.

There are advantages and drawbacks to each approach. A straighter fenceline needs less materials and time, but it may mean you lose some grazing land.

Note that you may need to set your fence back further where banks are unstable or prone to flooding. Fenced banks are less likely to collapse.

Types of fences

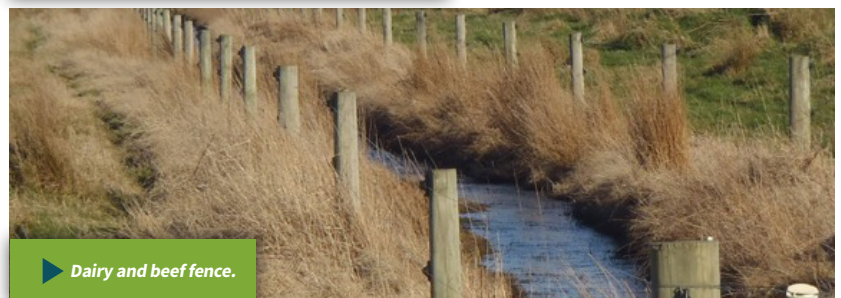
Make sure the riparian fencing option you choose is stock-proof. It can be difficult to remove stock from riparian zones once they've breached a fence.



▶ Dairy cow fence – the most common option in Southland is a two or three wire electric fence with permanent posts.



▶ Sheep and cattle fence – use timber posts (3 – 4 metre spacing) with netting and a 'hot' wire.



▶ Dairy and beef fence.



▶ Deer fence – use permanent deer fencing.

Designing your fencing layout

Get more 'bang for your buck' by designing your fencing to have more than one purpose. Although the main goal of fencing is to keep stock out of waterways, you could also use this as an opportunity to improve the farm's subdivision.

Some key questions to think about could include:

- Can the new fence subdivide an existing paddock into two, creating a better rotation?
- Can the riparian fence become one side of a new race that enables stock movement directly between paddocks, instead of through half a dozen?
- Is the retired margin wide enough to trap soil and effluent from the race before it gets into waterways?

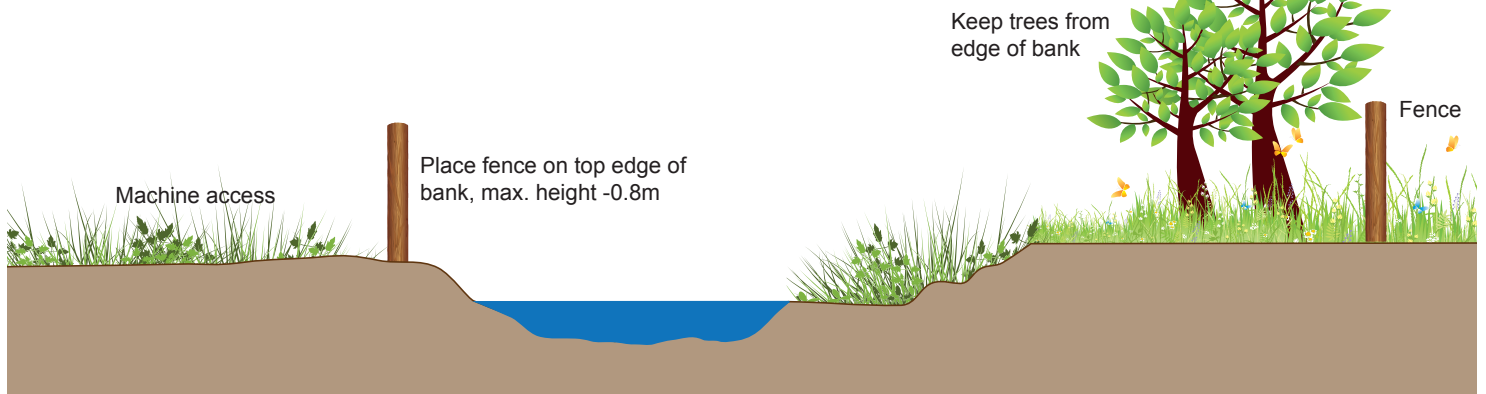
Stock breaches

Even if you've put up permanent, stock-proof fences along your riparian zones, stock breaches may occur from time to time. When designing your fence it may be a good idea to think about how you could easily remove wayward stock. For example you could install a gate or have removable wooden rails at one point.

Planting

If you choose to plant trees, plant them on the north banks of drains to provide shade. Shade will reduce the growth of weeds and lower the water temperature, making it a more suitable habitat for fish and other freshwater creatures. For a list of suitable tree species see Riparian Plants for Southland.

Grow plants that only grow to low heights on the south bank, to allow for access for cleaning. The native grass *Carex secta* is ideal.



Example of good riparian area design.

Flooding

Flooding can be a major challenge for maintaining riparian fences. Where there is potential for flooding, it's best to put your fence further away from the waterway. This is especially important on the outside bends of rivers and streams where there is greatest potential for erosion.

Reduce flood damage and the cost of repairs to fences by:

- using a five wire electric fence along the most floodprone sections.
- constructing separate 'blow-out' section across flood channels.
- placing fence wires on the downstream side of posts so they 'pop' off the fence post during a flood rather than break.
- using un-barbed staples so wires can 'pop' more easily.
- avoiding the use of battens in

You can install a sediment trap to minimise drainage maintenance needs. A resource consent may be required, so contact Environment Southland for information and advice.

For advice on how to construct a sediment trap pond, read the *Stop your farm going down the drain factsheet*.

Further Assistance

Fencing costs vary depending on individual situations. To get help with fencing design and to obtain a cost estimate, contact one of our Land Sustainability Officers today to arrange a free visit. Call 0800 76 88 45 or email service@es.govt.nz