



Stream bank vegetation is valuable

Vegetation on stream banks is valuable for many more reasons than you may first think.

Why is stream bank vegetation valuable?

The root systems of trees, shrubs, and grasses bind and hold the banks together much in the same way that reinforcement improves the strength of concrete.

After heavy rain, when creeks and rivers are flowing fast, vegetation helps absorb the force of the flow and reduce the water's capacity to erode the banks.

Trees and shrubs on the banks and within the stream provide shade and shelter for aquatic and terrestrial fauna. Fish and other aquatic organisms need moderate temperatures to live and breed successfully.

Grasses and other groundcover plants help filter sediments, nutrients and pollutants from run-off before they enter the stream. By acting as a buffer in this way, vegetation helps maintain good quality water in our streams and reduce problems with algal blooms and their toxins.

Bank vegetation provides food for fish and other aquatic life in the form of leaf litter, plant debris and insects falling from the trees.

Submerged logs and the overhanging roots of trees and shrubs provide places for fish and other water organisms to rest, live, breed and hide. Keen fishermen know that the best places to fish are around the old logs in the water.

When it comes to property values, there is increasing recognition of the important functions of stream bank vegetation and of its aesthetic appeal.



Vegetation on stream banks holds the banks together, helps maintain clean water, and provides shade, food and shelter for stream life



Can trees cause problems in streams?

While the benefits of having vegetation on stream banks are considerable, trees can in some situations cause localized problems for land managers or the community. Generally, these problems are of a minor nature and can be controlled with a small amount of effort or maintenance.

Problem trees

Large gum trees and river oaks have been known to topple over during periods of heavy rain, strong wind or high flow, taking part of the river bank with them. Sometimes they are undermined as a result of natural erosion processes. Problem trees can be trimmed and the stump and roots left in the ground to continue their important function of holding the banks together. Remember that some riverbank trees naturally overhang the watercourse and are not a threat to bank stability.



Problem trees can be lopped. Leave roots in the ground and align the trunk against the bank toe to help stability. Trim the crown to reduce debris build-up during floods

Channel regrowth

Sometimes, when there has been a prolonged period of low flow or where sand or gravel bars have built up, vegetation can establish within the channel of the watercourse. In some cases, selective clearing of this regrowth is desirable for river management purposes. Clearing too much vegetation can trigger bed lowering and bank erosion. Advice and permits can be sought from your local office of the Department of Natural Resources and Water.

Weeds

Weeds will sometimes grow on stream banks, particularly where there has been disturbance. If they are a problem they should be controlled at the same time as the adjacent paddocks. Control the weeds selectively to maintain the valuable functions of the

native plants. If a large area of stream bank is infested with weeds, consider controlling the weeds in stages.

Woody debris

Large woody debris such as branches and logs serve an important ecological function in river systems. In general they are best left where they are for beneficial insects to live on and fish to breed in. However, occasionally large logs in the watercourse are considered a safety hazard in areas with high recreational use, or may be contributing to localized bank erosion. Advice and permits to remove dangerous debris from a watercourse can be obtained from your local Department of Natural Resources and Water office.

What if there are no trees on the bank?

If the vegetation on your stream bank is sparse or in poor condition (see R34 Assessing your stream bank vegetation in the RiverFact series), you may wish to restore vegetation to regain some of the benefits that good quality vegetation provides.

You can restore vegetation on your stream bank by:

- planting local native seedlings.
- promoting natural regeneration by controlling stock access and weeds.
- controlling weeds and spreading seed from local native stream plants.

Advice and approvals

For more information on stream bank vegetation, or for permits to destroy or remove native vegetation or woody debris from a stream, contact your local office of the Department of Natural Resources and Water.

See also in this series

- R31** Stream bank planting guidelines and hints
- R33** Managing stock in and around waterways
- R34** How healthy is your watercourse? Assessing stream bank vegetation.

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For further information phone 13 13 04