

# Green bank projects on the Tweed floodplain

**Agricultural drains are essential for floodplain farming, to efficiently remove floodwaters and protect crop production. However, drains that are not well managed can have significant negative economic and environmental impacts.**

Council works with primary producers to plant native trees and groundcovers along agricultural drains and creek banks, to reduce bank slumping and erosion and minimise the need for weed control and drain cleaning. This reduces the maintenance burden on farmers, minimising chemical use, exposure of acid sulfate soils and the runoff of sediments and nutrients into local waterways. This revegetation provides habitat for local flora and fauna and improves the quality of water leaving the farm.

## Recommendations for producers

- Aim for 100 per cent ground cover on drain banks by minimising frequency of mechanical and herbicide treatments and only target high priority weeds.
- Plant and encourage dense, deep-rooted native ground cover species such as lomandra and vetiver on southern banks.
- Plant native trees on northern banks to provide additional bank stability, shade out aquatic weeds and provide habitat for fish without conflicting with farming activities.
- Establish shallow field drains in laser-levelled fields rather than deep V-shaped drains and maintain by occasional slashing of grass.
- To manage aquatic or riparian weeds, use waterways-approved herbicides such as Roundup Biactive® in accordance with label requirements.
- Ensure floodgates allow adequate tidal flushing to control aquatic weeds, provide safe passage for fish and buffer acid sulfate soils.

## Background

Historically, government required or provided incentives for farmers to clear land and construct drains on the floodplain. During this time, there was limited understanding about how clearing riparian areas and draining wetlands could impact on water quality, biodiversity and crop production. Once native vegetation was removed from riparian areas, the sites were invaded by exotic weeds which trap sediment in stream channels, reducing the effectiveness of drainage and increasing the need for ongoing maintenance.

Recent changes in drain management practices across agricultural industries have brought significant environmental and economic benefits. Since 2006, more than 30 cane farmers have worked with Tweed Shire Council (with assistance from other government agencies) to revegetate over 32km of agricultural drains on the Tweed floodplain. But there is still a lot of work to be done.



Before (left) and after (right) green bank planting with lomandras.



## Green bank projects

Council's Waterways Program and the Sustainable Agriculture Program have assisted farmers to address problematic drains.

Green bank projects typically consist of the following steps:

1. Landholders identify drains with problems such as slumping, silt/debris build-up or weed growth.
2. Landholders submit a River Health Grant application seeking Council assistance.
3. Council staff inspect the site with the landholders to assess eligibility. Higher priority is given to projects that include a significant landholder commitment and sites where multiple benefits can be achieved, such as water quality, wildlife habitat and productivity gains.
4. A site action plan is prepared in consultation with landholders and experienced contractors.
5. Council drafts a landholder agreement that outlines the commitments of Council and the landholder. Council then seeks quotes from contractors.
6. Council purchases plants and contractors undertake works such as planting and site maintenance for a minimum of one year.
7. Landholders become the custodians of the planting and undertake follow-up weed maintenance as directed by bush regeneration contractors.



Bush regeneration contractors planting ground covers and trees on bank prone to slumping.

## Results

Farmers have seen significant decreases in maintenance burdens associated with drain sedimentation, weed control as well as environmental benefits and aesthetical improvements.



Green bank planting with mixture of trees and ground covers.

**For further information or to participate in future projects, contact Council's Program Leader – Sustainable Agriculture on (02) 6670 2400.**

**Special thanks to North Coast Local Land Services and the former Catchment Management Authority for their support; and all the farmers for their involvement in the project.**

