

Bank stabilisation works

Wilson River protection and re-snagging

The site

The Wilson River is a major tributary of the Hastings River on the north coast NSW. The lower Wilson River was subjected to large-scale commercial gravel extraction during the early to mid 20th century which has caused progressive river bed lowering and bank erosion, known as a head cut. As this head cut moves upstream, the river bed level is lowered, causing the banks to erode and riparian vegetation to collapse. A series of floods in 2008-2009 caused severe erosion of the river banks at Pear Tree Hole, near the locality of Rollands Plains. An estimated 46,000 m³ of sediment was lost from this 300 m reach into the downstream environment, smothering pools and instream habitat.

The project

Port Macquarie Hastings Council in conjunction with the Northern Rivers CMA recognised that without adequate bank protection and regeneration works the banks at Pear Tree Hole would continue to erode.

Following recommendations provided in a report on the Wilson River the project partners undertook a remediation project at the site. A suite of initiatives was implemented to reduce erosion and protect the banks, including the construction of 7 large woody debris deflector groynes. Engineered and reinforced with cabling, these groynes were dug into the gravel bed to ensure their longevity. Riparian fencing to control cattle access and extensive revegetation were conducted at the site to provide long-term protection, stability and habitat benefits.

The outcomes

This extensive river bank remediation project has:

- reduced further bank erosion
- provided instream habitat for native fish
- removed the impacts from grazing livestock
- planted over 4300 endemic riparian plants

The flow of water in and around the engineered structures will, over time, promote the reinstatement of natural pool and riffle sequences and habitat diversity to the reach.

Proponent: Port Macquarie-Hastings Council

Land use: private, grazing

Habitat grant: \$30,000

In-kind support: \$112,949



Native hardwood deflector groynes were pinned in place to promote longevity. Photo PMHC



Reshaped banks were planted with endemic riparian species to ensure long-term stability. Photo PMHC