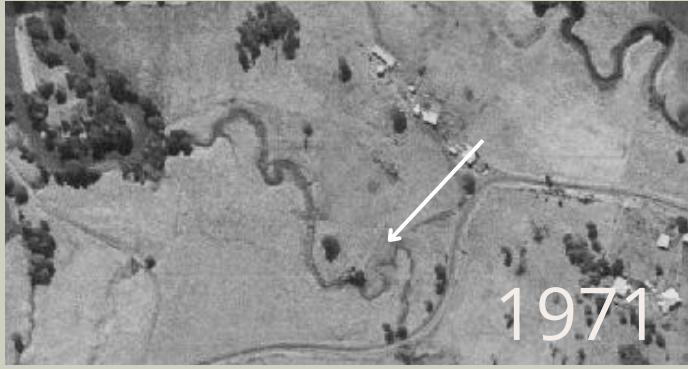


WATERSHED INITIATIVE - LANDSCAPE FUNCTION

BOAT HARBOUR



The Watershed Initiative project helps landholders in the Northern Rivers manage their land for improved catchment health.

It focuses on methods to reduce erosion and enhance water quality by improving infiltration and filtration, as well as reducing runoff velocity.

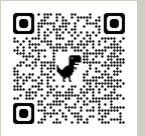


Pre works, August 2024

Landscapes that absorb and retain more soil moisture have less runoff from rainfall events, which reduces soil erosion and improves water quality.

This work is guided by these principles:

- Slow and spread the flow of water
- Grow more plants
- Increase the diversity of habitat
- Create wetlands for filtration
- Manage livestock movement
- Enhance the small water cycle



Post works, November 2024

This can be achieved by capturing and spreading the flow of runoff after storm events using:

- Contours, wetlands and ponds
- Erosion control structures in flow lines
- Fencing to manage livestock access, and
- Revegetation in key areas.



February 2026

This site demonstrates different ways to manage gully erosion and regenerate landscape function, complementing riparian restoration work in the Boatharbour area.

It is also a useful learning resource for other landholders, community groups and students.



The important role of plants to filter sediment and reduce erosion

RESTORING LANDSCAPE FUNCTION

The main works:

1. Create a series of ponds and leaky weirs using a mixture of earth and rock and plantings.
2. Once fenced off, plant a mix of sedges, rushes and shrubs. Focus on plants for groundcover, filtration, habitat and erosion protection.
3. Raise height of ponded areas with the cattle crossing.
4. Secure head cuts with rock, timber, leaky weirs and plants.
5. Secure severely eroded gully with mixed rock size and planting.



Placement of rock from site, planting and stock exclusion fencing.

RESTORING LANDSCAPE FUNCTION

Leaky weirs and ponds to remediate head cuts, filter runoff, and habitat improvement, placement of rock from site, planting and stock exclusion fencing.



Calculating potential streamflow

Streamflow rates can be calculated to determine what type of work is suitable for the flow velocity on the site following heavy rainfall events. At this site the discharge is calculated at 3.8 m³/sec @ 2%AEP (1 in 50 -year rainfall event).

This is quite high for a small catchment area of 70 hectares.

Road & residential runoff upstream may contribute to higher flows of shorter duration.

An adjacent stream with a larger catchment area of over 500 hectares has a streamflow discharge of 18 m³/sec @ 2%AEP, so works there require greater design considerations to handle the larger volume and velocity of flow.

