Riparian reforestation to increase water infiltration and reduce run-off

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Many reasons for restoring riparian vegetation

- Regulation of stream flow
- Stream bank stabilisation
- Critical habitat for biodiversity
Many reasons why riparian vegetation is important

Connectivity along creek lines from one area of forest to another is vital for the movement of animals

- ‘Edge Effect’ of sunlight and weed ingress, habitat disturbance, and predation by non-rainforest species extends into the forest for many metres
- Fallen woody debris provides habitat
- Many birds nesting and feeding on insects, fruits and nectar
- Many insects on leaves and bark
- Insects, leaves and woody debris provide a steady year-round input of food and shelter into the creek
- Mature trees overhanging the creek provide shade to lower water temperature and large roots to stabilise banks
- Many rainforest species keep well away from the forest edge and will not cross open ground
- Exclusion of sunlight prevents ingress of weed species
- Fallen branches form shelter for fish
- Many small animals including fish and platypus inhabit the well shaded creek
- Canopied low light rainforest environment provides good habitat for wildlife including birds, reptiles, marsupials and frogs.
- Hollows in trees provide habitat for birds and bats

Why We Need Adequate Riparian Rainforest Buffers Along Obi Obi Creek

http://www.obiobiparklands.com/riparian.php
Questions about how vegetation influences the hydraulic properties of soil
Does riparian vegetation reduce water and nutrient flow?
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3 to 20 year old plantations and remnant rainforest
Discovery 1: Soil density very quickly declines with time since reforestation.
Discovery 2: Water infiltration rates are much higher in reforested and forest sites than pasture.
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Pastures

water infiltrates slowly

Trees

Water infiltrates fast
Would less runoff occur in pasture-rich catchments after reforestation?
Vegetation for flood prevention?
Early Response of Soil Properties and Function to Riparian Rainforest Restoration

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