

PROTECTING LOWLAND RAINFOREST ON THE MACLEAY FLOODPLAIN – CASE STUDY FOR LANDHOLDERS INTERESTED IN SUPPORTING CONSERVATION ON THEIR PROPERTY



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BACKGROUND: Macleay Landcare obtained funding through federal funding - Caring For Our Country in 2011-13 to support private conservation and enhancement of Lowland Rainforest on the Macleay Floodplain. Lowland Rainforest is a vegetation community that was extensively cleared by our pioneers to take advantage of rich soils for dairy and beef farming. The Lowland Rainforest exists on higher ground on the floodplain and currently is only represented by 1-3% of its original extent. The vegetation is listed as an Ecologically Endangered Community under the NSW Threatened Species Conservation Act, and also more recently (in 2010) was announced as Critically Endangered nationally under the EPBC Act. Mainly due to the severity of loss of vegetation through extensive clearing, and loss of natural regeneration or recruitment, where grazing pressures are limiting the ability for new seedlings to establish, and existing old stands of trees are senescent. This project aimed to support landholders to establish grazing exclusion zones around existing remnants.

Through this project, as it was the first conservation effort on a large scale in the area, a few lessons were learnt in conservation that will be valuable for other landholders wishing to continue conservation and enhancement efforts.

IDENTIFYING REMNANTS: While there are only a few stands of existing Lowland Rainforest left on the floodplain, these are easily recognisable along Plimmers Lane, with another patch or two (currently with areas fenced) on South West Rocks Rd, Jerseyville. Other remnant trees, mainly figs, are also representatives of where the forest once stood—on the Pacific Highway especially between Bellimboppini and Clybucca, and along Summer Island Road and areas around Gladstone and Smithtown, with marginal remnants along the back of Old Station Rd and Austral Eden, and Belmore Rd. Remnants often are composed of figs, lilly pillies, bangalow palms, rough elm and intermixed with weed Camphor Laurels. There are over 120 recorded individual species on the Macleay Floodplain that comprise Lowland Rainforest.



FENCING REMNANTS: While there are only a few stands of existing Lowland Rainforest, many of these have had landholders take the initiative to fence these (with funding support from CMA/CFOC funds through Landcare) and by excluding cattle from accessing the remnants 99% of the year, these remnants have seen some natural recruitment of seedlings within about 3-5 years of fencing. As rainforest attracts a range of fauna—due to its closed protected canopy, fruit bearing trees and cooler shelter, many remnants are important habitat for a range of fauna. This one (left) in Jerseyville hosts a range of birds, as well as goanna, echidna and kangaroo, and also is a draw card for feral foxes. Not all conservation has concrete positive outcomes, as the reduced grazing has allowed for establishment of weed plants such as coral tree, camphor laurel, vines and other bird and animal spread weeds.

LESSONS LEARNED: Ongoing management of fenced vegetation is a realistic side to conservation

of remnants by fencing them. But the long term outcomes outweigh the short term weed and pest management, once fenced areas are established with new rainforest plants. While landholders are reluctant to fence remnants, seen as a loss of grazing space, the reality is that improved grazing practices on smaller landscapes have much better outcomes for the farmer. Loss of 1-2Ha of rainforest to fencing will have a minimal impact to a well grazed farm—where grazing management and reduced impact of pasture plants, and retaining some shade trees within these pastures for cattle camps, can work hand in hand with conservation outcomes. An area fenced for 5-10 years can easily be re accessed by cattle, so long as seedlings have established to the height that cows no longer can trample them. Fencing off small areas, rather than all extent of rainforest remnants can still provide conservation outcomes. Enhancement through planting is an excellent way to support this, providing species are suitable to the Macleay Floodplain Lowland Rainforest vegetation.



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REPLANTING NEW REMNANTS: Many landholders with some stands of rainforest trees were reluctant to fence these shade trees off from cattle, but compromised by fencing off areas adjacent and planting with suitable rainforest species. This is a good outcome for conservation – where rainforest plants are planted in suitable locations (slightly higher on the floodplain) and can enhance existing trees and further allowing for new rainforest patches to establish.

Other landholders simply planted down fence lines with tree rows of 2-3. Fence lines with 1 row simply are not able to recreate important rainforest attributes, but instead allow for some “stepping stones” for native fauna to at least feed off berries and fruit.

LESSONS LEARNT Some examples of revegetation around remnants and fence lines are pictured. Tree guards were important against wind and frost damage in the seedlings initial establishment. Many plantings were 2-3 m apart, and in rows to assist with slashing/weed control.



Plantings that suffered dry weather/severe floods often required replacement plantings. This is a realistic issue for Floodplain replanting. It is much easier to cut down a tree on the floodplain, than it is to regrow it. As seedlings planted in open pastures have to compete with introduced pasture grasses, increased frost and wind damage, and floods – where previous cleared remnants would have had more protection and resilience. Landholders also found that the fencing of remnants was a task in itself. More permanent fencing was more expensive and labour intensive to install, and electric fencing, while a good short term option and cheaper, also needs to be monitored to ensure it is working properly, and that flood damage does not disable electric features. Pasture weeds are also a longer term issue. Some landholders planted in rows to allow for ease of slashing, and some used the slashed grass or weed mats to reduce the ability of grasses to grow around the plantings. All these things combined are important to allow seedlings to establish. And 2-3 years (depending on seasonal conditions) is about the length of time from planting to establishment to a stage where ongoing regular maintenance isn't as important.

OTHER REVEGETATION: Figs are a key species for Lowland Rainforest. This project also introduced the concept of planting strangler figs Deciduous Fig, Strangler Fig, Port Jackson, Small Leafed and Moreton Bay figs, planted into weedy Camphor Laurels. The aim was to allow figs to replace weeds over time, with minimal maintenance or management by the landholder. Several landholders stem injected their camphors, waited 2 weeks, then planted their figs in small sacs in a fork of the weed tree. This is an effective way to reduce weeds and enhance lost remnants.



OVERALL LESSONS LEARNT: Individual landholders spent between \$1000–3000 of project funding per property to support re-establishment of 0.2-1ha of Lowland Rainforest – fenced off and weeded. Landholders fenced off over 11HA of existing remnants costing around \$20-30,000. Overall 28 properties participated in on ground works, with additional 30 replacing camphors with figs, or planting lone figs in bare paddocks. Over 40Ha of Lowland Rainforest will be conserved, enhanced and protected through this project. You can do it too! A little bit of effort goes a long way, and if even half of the project succeeds in establishing new areas of Lowland Rainforest on the Macleay Floodplain – this will have increased the extent 10 times. A legacy to the long term conservation and preservation of this important vegetation