

REHYDRATING THE LANDSCAPE AT BIG JACKS CREEK

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I've known Roger Ottery from "The Oaks" at Big Jacks Creek (near Willow Tree), for about 10 years as a member, then as Treasurer of Upper Mooki Landcare Inc. Its always good to have a chat and I learn something new every time!

Roger and Jill bought "The Oaks" about 20 years ago. Roger's background is in IT and Project Management within financial groups, which would explain his ability to observe, analyse and take cost effective action to resolve problems. Jill is Nurse Educator based in Sydney. Their focus at The Oaks were cattle, fattening, fodder, profitability. Both became concerned about the high cost of on farm inputs and lead to questions about Return On Investment.

Roger states that it is critical to understand principles, and that every property and every paddock are different, so what works in one place may not work in another. What is an option for one business is not necessarily an option for another.

Roger and Jill had become most concerned about their section of Big Jacks Creek which had become a degraded eroded channel.



Working with North West Local Land Services Roger fenced 1.6km of the creek. The cattle now only graze the riparian area two or three times a year for short periods and at high stock number densities. This allows for long recovery periods and for vegetation to regrow and groundcover maintained while still being utilised for production.



Nature took over (cost effective!) and the creek continued to heal, with fallen timber and vegetation washing down during high flow events and forming structures across the creek.



These natural leaky weirs create pools that hold water in the creek, allowing riparian vegetation to grow, raising the water level of the creek and slow down the flow. In turn, less erosion occurs and the water infiltrates into the ground.

In 2019 Roger and Jill joined Upper Mooki Landcare's catchment project 'Rehydrating the Landscape'. 3 activities were planned for "The Oaks".

1. Converting old contours to swales: Working with Northwest LLS Project Officer Tim Watts, the old contour banks were redesigned to enable water to be held across this paddock with and to then infiltrate slowly into the ground, creating small spectacular microsystems as shown below.





Previously 30 mm of rain would start runoff, but now it is more like double, with most rainfall events result in zero runoff.

2. Converting annual fodder area to permanent pasture. Annual plantings were replaced with a permanent multi species cool season pasture. Roger used cool season fescue, Phalaris, cox foot, red, white and zulu clover, lucerne, some beans. This has decreased inputs and has “sorted” the concerns about Return on Investments. Rehydration is constant, and erosion is negated, as there is no fallow with exposed soil, there is always vegetation growing, organic matter in the soil is increasing and water infiltration is high.
3. Additional fencing has occurred along Oakey Creek Creek and enables maximised planned grazing practices. Cattle management practices have changed to short intensive grazing periods, which stimulates plant growth and maximises organic input from manure and urine. Roger reported recently that dung beetle activity has increased markedly, in that he can hear beetle flying following the cattle on as they move to the next paddock, and that manure has been taken down into the soil within 2 – 3 days.

Having achieved his objectives for ground cover, improved water quality and improved cattle management through strategies outlined above, Roger’s aim is now to maximise the amount and effectiveness of each drop of water that falls on “The Oaks”.

These projects were supported by North West Local Land Services through funding from Catchment Action NSW.

If you would like to see more details of Rogers works, head to:

<https://www.youtube.com/watch?v=83G-N5QPbPs>

https://www.ils.nsw.gov.au/_data/assets/pdf_file/0006/1305474/Big-Jacks-Creek-Final-Version.pdf

<https://www.ils.nsw.gov.au/regions/north-west/key-projects/natural-resource-management-case-studies/big-jacks-creek>

<https://www.ils.nsw.gov.au/regions/north-west/key-projects/natural-resource-management-case-studies/upper-mooki-rehydration-project>