



# case study

## ▶▶▶ improving riparian condition and controlling erosion



**location:** 'Nandawar', south-east of Inglewood  
**project:** riparian fencing and erosion control  
**undertaken:** 2000 – current time

### the need for action

When Mark and Mary Hoey bought 'Nandawar' in 1999 they were aware that erosion was a problem. The soils in the area are shallow loams over hard setting clays and because they disperse easily in water are highly susceptible to erosion. Overgrazing in the past and cultivation along the edge of Nanny's Creek had added to the problem and there were several areas of sloping land as well as an undermined creek bank, in need of repair.

### implementation

The first step was to reduce the grazing pressure and increase groundcover. When the lease, which had twelve months remaining at the time of purchase, ran out the Hoey family chose to reduce stock numbers. The 3000 acre property now runs around 500 sheep and 70 head of cattle.

The second task was to fence off creek lines to preserve remnant vegetation and repair areas of severe erosion. This was made possible with advice from local Departmental and Catchment staff and financial assistance from Greening Australia and the Border Rivers Catchment Management Association.

The aim was to fence 4.5km along either side of Nanny's Creek, leaving around 50 metres between the creek and the fence line. Previously, stock had had unrestricted access to the creek causing soil compaction by trampling, erosion, loss of vegetation and muddying of the water. Mustering was time consuming and the fence, which crossed the creek in four locations, tended to wash out in large flood events.



*A rock groyne was placed in the creek to divert flows and minimise erosion.*



## improving riparian condition and controlling erosion

In 2000 Mark and Mary Hoey secured a Greening Australia grant of \$20,000 to protect remnant vegetation and form a green corridor. These funds helped to purchase some of the fencing materials and equipment for the new off-stream watering points. The rest of the equipment and labour to construct the fence and put in the trough formed their 'in-kind' contribution to the project.

As well as fencing the area, a rock groyne was constructed. A groyne is essentially a line of rocks placed at an angle to the bank to divert the flow of water. In this case it was designed to divert the main flow away from a badly eroded section of the creek bank and prevent future flows from eating away at the base of the bank. Staff from the Landcare and Catchment Centre in Goondiwindi and the Department of Natural Resources and Mines assisted in the design of the groyne and other earthworks.

A second area of erosion on 'Nandawar' was also targeted. This was an area away from the creek where the overland flow of water had resulted in slumping and sink holes. Once again, this was due to the highly dispersive nature of the soils. In order to address this problem, two shallow dams were constructed with diversion banks on either side to catch the water and prevent further erosion. The cost of this work was supplemented by a grant of \$6,000 which was made available through the Border Rivers Catchment Management Association's devolved grant scheme.

### results

The changes to the landscape have been gradual but Mark Hoey says he's noticed a big difference in the eroded areas and the creek zone. The grass has come back, the Lomandra grass (an indicator of healthy riparian zones) is growing well and eroded areas once big enough to lose a dozer in are now just 'a bit of a wash out'. While the focus has been on improving the landscape, there have also been some production spin offs.

By fencing along the creeks rather than across them, mustering time has been reduced and management improved. The plan is to eventually exclude all sheep from the creek area and just run a few cattle in there to keep the grass down. Cutting back stock numbers has also had production benefits with improvements in animal condition and the quality of wool produced.

Overall, Mark says fencing off the creek line and addressing erosion has been a win-win situation, which has improved the environment and the value of the property.

QMDC would like to thank Mark and Mary Hoey, for supplying the information for this case study.



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For further information, contact QMDC on (07) 4637 6201 or visit [www.qmdc.org.au](http://www.qmdc.org.au)

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