

SEDIMENT DETENTION BASIN | Ecosystem Repair Project

LANDHOLDER: SHANE COWLEY, BAKERS CREEK

WHAT'S HAPPENING AT THIS SITE? Reef Catchments is working with sugarcane grower, Shane Cowley, to install a sediment detention basin and second flush chamber directly upstream from his wetland, which flows into Bakers Creek.

WHO'S INVOLVED? This project has been initiated and funded by the landholder. It is coordinated on-ground by Reef Catchments, through co-funding from the Australian Government System Repair project.



Australian Government



PROJECT: SEDIMENT DETENTION BASIN: SHANE COWLEY, BAKERS CREEK

PROJECT GOALS: Extend the native wetland vegetation corridor across a cane paddock, with water treatment benefits (reduced sediment, nutrient and pesticides).

CURRENT ACTIVITY: With assistance from the Australian Government's Systems Repair program, Shane was able to build a 1 ML first flush detention basin that catches most of the sediment in the runoff water entering his farm. A second flush chamber was also created, consisting of a long deep marsh (sedges) zone for filtering nutrients and fine sediment from the water. The second flush chamber features a 3 ML waterhole at its end to supply irrigation water. The water flows over a rock weir at the end of the waterhole into Shane's wetland, ensuring cleaner re-oxygenated water entering the wetland.

STATUS: The project has been successful, and is set to deliver both environmental and production benefits. "This extra water means that I can irrigate those nearby cane blocks several more times each year and significantly increase their production, as well as improving the water quality for my wetland and the Great Barrier Reef Lagoon," Shane says.

MOVING FORWARD: The project was recently completed, with the wetland also revegetated with native plants to restore habitat and connectivity. In addition, a rock ramp fishway was incorporated at the exit of the wetland, enabling both scour protection and fish connectivity with downstream habitats. Shane is a keen fisherman and hopes the fishway will help attract barramundi into the wetland. Shane may apply for further assistance through the Systems Repair program funding.

BELOW: Reef Catchments NRM region



SEDIMENT DETENTION BASIN AND WETLAND RESTORATION | Update

Systems Repair funding increases irrigation capacity and helps improve water quality entering local waterways.

Bakers Creek sugarcane grower, Shane Cowley, has been able to increase the on-farm water supply available for cane farm irrigation by installing a sediment detention basin and second flush chamber directly upstream from his wetland, which flows into Bakers Creek.

With assistance from the Australian Government's Systems Repair program, Shane was able to build a 1 ML first flush detention basin that catches most of the sediment in the runoff water entering his farm.

A second flush chamber was also created, consisting of a long deep marsh (sedges) zone for filtering nutrients and fine sediment from the water. The second flush chamber features a 3 ML waterhole at its end to supply irrigation water.

The water flows over a rock weir at the end of the waterhole into Shane's wetland, ensuring cleaner re-oxygenated water entering the wetland.

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their production, as well as improving the water quality for my wetland and the Great Barrier Reef Lagoon," Shane said.

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Systems Repair project funding available to farmers is an additional source of funding, separate from the Reef Programme water quality grants (formerly Reef Rescue).

Reef Catchments worked together with Shane on this project to provide help with the system design and funding for up to 50% of the costs. The project was recently completed with the additional structures now filling from recent rainfall events. The wetland has also been revegetated with native plants to restore habitat and connectivity.

This additional source of funding for water reuse structures is only available in priority Sub Catchments of the Pioneer River Main Channel, Sandy and Bakers Creek due to funding restrictions.

To find out if you are eligible and for more information on other activities throughout Mackay and the Whitsundays, contact Peter Muller from Reef Catchments on 0437 640 186.



FISHWAY UNDER CONSTRUCTION



STAGE ONE WETLAND



REVEGETATION