

Clybuca Wetlands Remediation Project – May 2020 update

Project Description:

The low-lying areas of Mayes Swamp and Doughboy Swamp on the Collombatti-Clybuca floodplain were historically natural back-swamp wetlands. Drainage works constructed over the 20th century has promoted rapid and deep drainage of the lower floodplain. Improved drainage has been generally good for agriculturalists. Over-drainage has resulted in exposure of acid sulfate soils which can discharge highly acidic waters. This effluent can have a

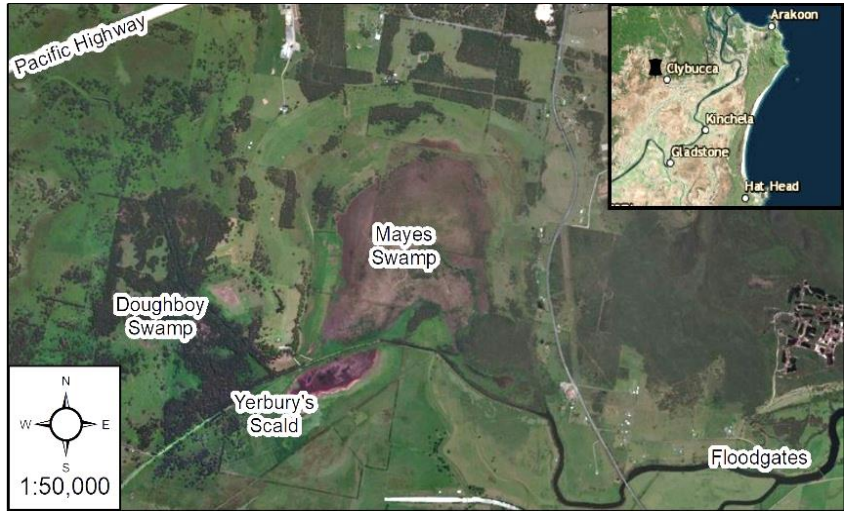


Fig: Location.

profound impact on wetland areas and can seriously impact the Macleay River estuary, with fish kills relatively common. Poor water quality is known to have contributed to previous fish kills in Andersons Inlet, Clybuca Creek and the Macleay Arm.



Photo: Drainage channel and acid soil scald at Yerbury Scald (T. Tucker WRL)

In recent years, Transport for NSW (TfNSW, formerly Roads and Maritime Services) purchased a large area of low-lying land on the Collombatti-Clybuca floodplain for biodiversity offsets as part of the Pacific Highway upgrade. This land includes the Mayes Swamp and Doughboy Swamp areas. These areas have been identified as key remediation sites to improve wetland habitat water quality.

What has been done?

The North Coast Local Lands Services (NCLLS) has commissioned a report from UNSW Sydney Water Research Laboratory (WRL) using funds from the Recreational Fishing Trust's Flagship Fish Habitat Action Grant program (DPI Fisheries) to investigate wetland management options. WRL has taken a high-resolution survey of the floodplain and drainage network and produced a wetland model. Investigations have targeted improving drainage infrastructure to lessen the effect of acid runoff and improve wetland habitats.

The WRL report has been used to facilitate government and community consultations to identify feasible management options. The NCLLS is intent on minimising any impact on neighboring properties.

Clybucca Wetlands Remediation Management Option 2

The WRL report (2020) details a range of wetland management strategies: from no drainage modification (focus on pest management), to freshwater-only remediation, to freshwater and saltwater remediation. The NCLLS, in consultation with the landowner (TfNSW), the community, and government agencies is now planning to implement Option 2 of the report. Option 2 is a freshwater-only remediation strategy that is contained within land owned by TfNSW.

Option 2 aims to improve water quality and rehabilitate wetland habitats with the construction of three low elevation weirs and modification of drain levee banks to allow for freshwater connectivity across low-lying wetland areas. See Figure 1 below.

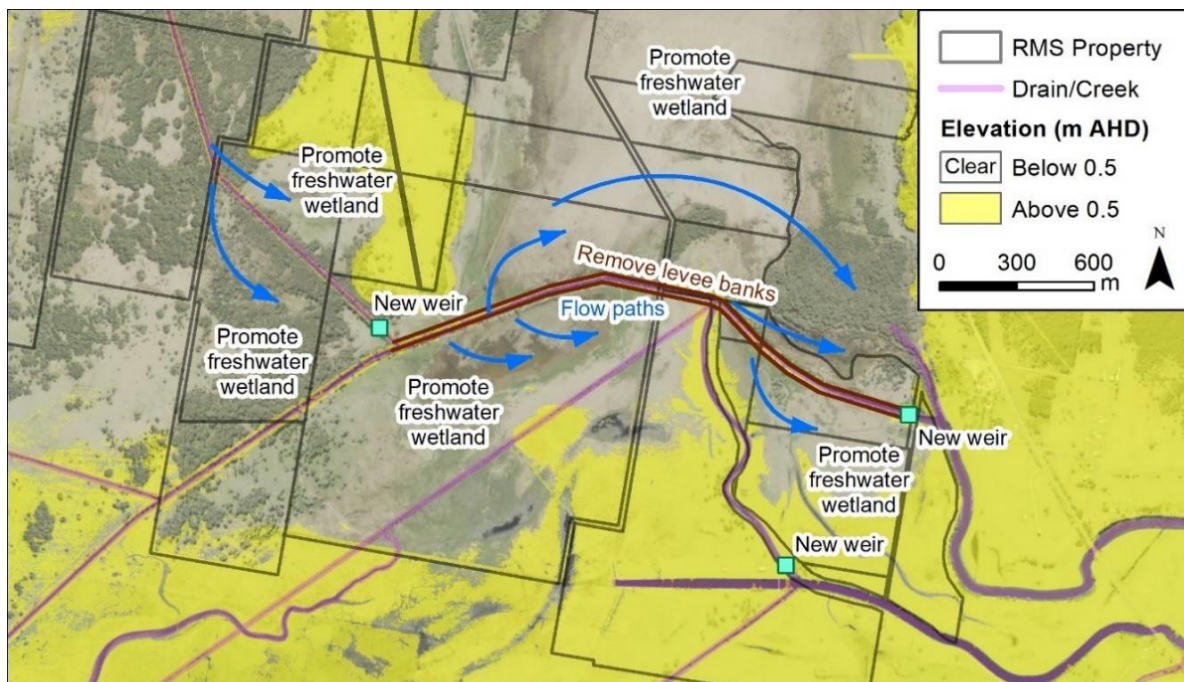


Figure 1 Diagram outlining modifications to the drainage network and conceptual flow paths for Management Option 2

Option 2 has been chosen because of the following:

- it improves the quality of water running off areas that produce the greatest acid and blackwater discharges in the Clybucca system
- large areas of historical wetland can be rehabilitated
- it is a relatively easy, quick and cheap to implement
- rehabilitation is confined to government-owned land (TfNSW)
- impacts and risks to other floodplain landholders are low

Funds for implementing Option 2 are currently being sought (as at May 2020).

For further information please contact Simon Abbott at North Coast Local Lands Services.

Phone: (02) 6563 6700

Email: simon.abbott@lls.nsw.gov.au

Website: <https://northcoast.lls.nsw.gov.au/>