



Rehydration supports floodplain restoration:

| production and biodiversity working together on Boodgheree Station, Thargomindah Queensland

Positive experiences with landscape restoration have given landholders Rachael and Cameron Greig confidence in their future at Boodgheree Station in Southwest Queensland.

A valuable property in the landscape

Straddled across the Paroo and Bulloo catchments, Boodgheree Station is a diverse mix of floodplains, wetlands and range country. Historically it supported sheep and cattle production on native pastures, Coolibah flats and Mulga woodlands. In 2023 Cameron and Rachael Greig purchased the 39,000ha property as part of the Weemabah Pty Ltd aggregation, managed with Rachael's father George Mack. While most of the property had been conservatively managed, some parts of the landscape were damaged with dead trees, bare ground and significant erosion. Not only was the productive capacity of these areas severely compromised, but so too was the quality of runoff into the Currawinya Lakes, an internationally recognised and protected Ramsar wetland located to the east of the property. Rachel, Cameron and George knew that to have confidence in the property's potential, it needed to be transformed.



Bare ground, dead trees and erosion features were commonplace when Cameron and Rachael purchased Boodgheree Station in 2023.
Photo: Southern Queensland Landscapes



Erosion feature 'eating' back into healthy grassland 2023. Photo: Southern Queensland Landscapes

Identifying the extent and cause of the issue

Like many holdings in the rangelands, a history of heavy grazing pressure had degraded parts of Boodgheree's productive pastures and wetlands, creating large areas of bare ground. Accelerated runoff from higher in the catchment scoured the productive Mitchell grass flats, turning the small chain of ponds into a single deepening erosion feature that increased drainage, restricted infiltration and lowered the water table. The damage continued to eat away at the landscape following old roads and animal pads and without vegetation to hold the soil together, the cycle of degradation continued. Eventually, the damage resulted in extensive tree death and a serious decline in production potential.

An aerial photograph taken during the drought of 1961, shows a relatively intact floodplain on Bodgheree (bottom half of the image) with good vegetative cover and little evidence of bare soil or erosion. In the top left corner of the image, the first signs of surface scalding and erosion are evident in higher reaches of the floodplain.



Boodgheree aerial photo 1961 showing an intact floodplain with good ground cover and minimal erosion. © Commonwealth of Australia (Geoscience Australia) 2025.



Boodgheree Satellite image in 2020 showing severe erosion and bare scalds along the full extent of the floodplain. EOSDATA accessed 2025

By the end of the extended drought in 2020, a satellite image shows large areas of scalded, bare ground and a clearly visible erosion feature draining the Bodgheree floodplain for almost its entire length.



Newly constructed spreader bank in June 2023 designed to slow water and rehydrate the landscape.
Photo: Southern Queensland Landscapes

Drawing on previous experience

Fortunately, George was familiar with efforts to repair landscapes on other properties and he was able to expand on the knowledge and experience gained from similar work to seek advice for this property. For Rachael and Cameron, having already witnessed other landscape restoration works in action, meant they also had confidence in the approach and their future on Boodghere.

Together with Landscape Restoration Consultant, Glenn Landsberg, from Southern Queensland Landscapes, they examined historical aerial photos, satellite imagery and looked critically at the landscape. They could identify that changes to hydrology and vegetation were caused by a combination of extreme weather events, historical grazing pressure from cattle, sheep, wild unmanaged goats and from roads and fences constructed along and through the floodplain that redirected natural water flows.

Using a laser level to determine landscape rise and fall, and coordinating with the machine operator, Glenn marked out a series of strategic works to begin the process of restoring the landscape. The first step to addressing erosion was to 'put the plug back in' and start rehydrating the landscape. Using a combination of earth, rock, and timber bank constructions, perpendicular to the water flow, high velocity runoff was slowed, allowing the water to bank up and spread across the floodplain. In some situations water was directed into safe areas of vegetation, slowing it down, dropping sediment and healing erosion features before continuing down the flat. Every effort was made to avoid disturbing the fragile soil surface to minimise losses to wind and water.



Low profile spreader banks are effective at hydrating large areas of the floodplain. Photo: Southern Queensland Landscapes



Boodgheree Floodplain April 2025. Spreader banks can be seen diverting water from the erosion feature back onto the flats before rejoining the drainage line further along the floodplain. Vegetation is quick to establish in the right conditions. Photo: Cameron Grieg

Good management not good luck

George, Rachael and Cameron acknowledge that the timing of the 2025 flooding event in Western Queensland could not have been better for testing the effectiveness of the restoration work on Boodgheree. But they also agree that without their commitment to landscape renewal, the flood event could have been catastrophic. The timely implementation of carefully designed interventions meant water was slowed, limiting further erosion and areas that had been bare for so long, rehydrated and started to revegetate. Ponds retained water for longer, raising soil moisture levels, allowing trees to refresh and pastures to reestablish. The edges of erosion features, softened by captured water, supported the succession of stabilising vegetation.



Boodgheree Floodplain April 2025, floodplain and wetland recovery in action. Photo: Cameron Grieg



Captured flood water softens the edges of erosion features, deposits silt and supports the regeneration of stabilising vegetation.
Photo: Southern Queensland Landscapes

Confidence in the future

The restoration work on Boodgheree is already showing positive results with an increase in productive grazing land where only two years prior, there was bare ground. But Rachael and Cameron understand that their future management strategies could make or break the system. Implementing conservative grazing management while the country heals itself, will be critical. This includes rotational grazing, spelling and intensive herd impact in glazed soils, which creates protected microclimates for germinating plants. The strategic placement of new roads and fences will also ensure that infrastructure does not hinder water movement or add to the erosion risk. The aim is to build a more resilient and sustainable landscape that is always 'rain ready.'

George's foresight to engage in landscape restoration creates an important legacy as management now transitions to the next generation. Cameron and Rachel are building their skills and knowledge and are keen to continue the restoration efforts on all the Weemabah Pty Ltd properties. The results will provide climate resilience to the Southwest Queensland rangelands, enhancing agricultural sustainability and supporting the diversity of species that depend on the interconnected wetlands and habitats that include the Boodgheree wetlands, Currawinya Lakes Ramsar site and all its contributory waters.



Water held up in the landscape refreshes Coolibah and germinates pasture species.
Photo: Southern Queensland Landscapes

For further information, please contact SQ Landscapes at projects@sqlandscapes.org.au

This project is funded by the Australian Government's Natural Heritage Trust and delivered by Southern Queensland Landscapes, a member of the Commonwealth Regional Delivery Partners panel.

