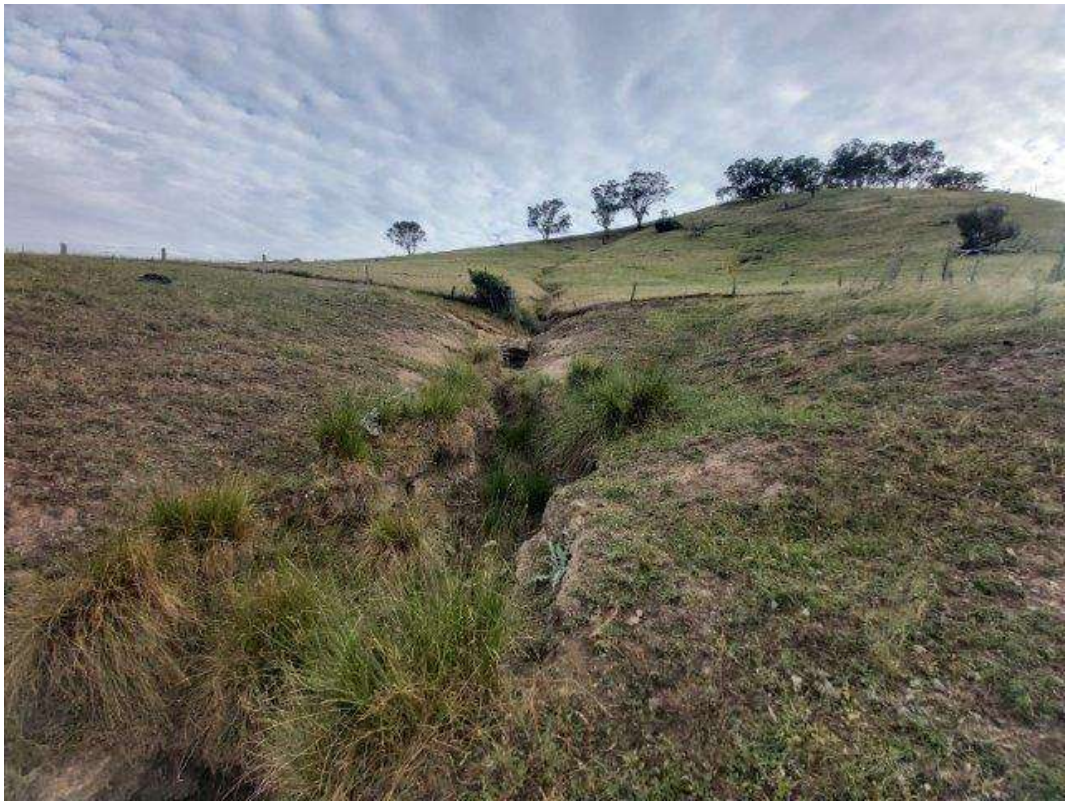
BEFORE AND AFTER IMAGES OF THE 15 ET1 SITES

Lyn Lea Park (ET1)

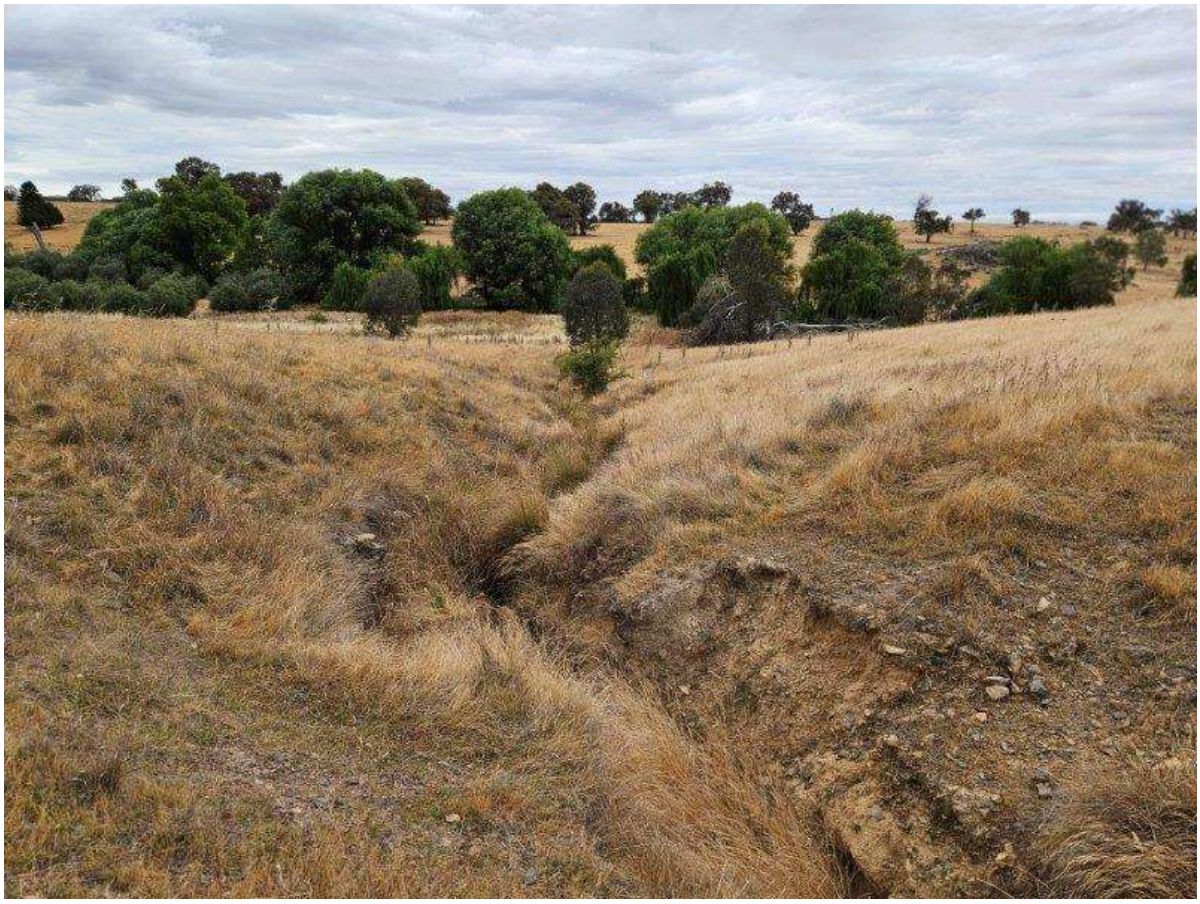
Two gullies were incorporated into the works on this property.

Gully 1 before - water coming down a steep slope from the property uphill has gouged out a gully on Lyn Lea Park

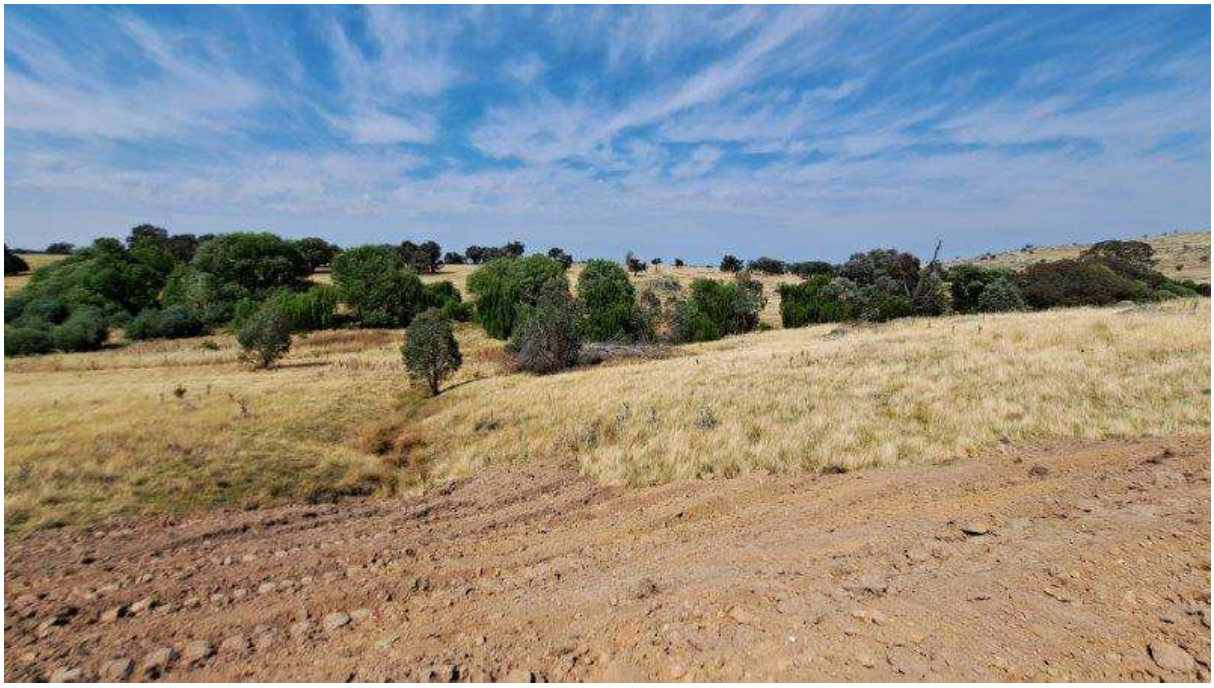


Gully 1 after – the gully sides have been battered and the whole surrounding landscape shaped to disperse the previously concentrated water flow

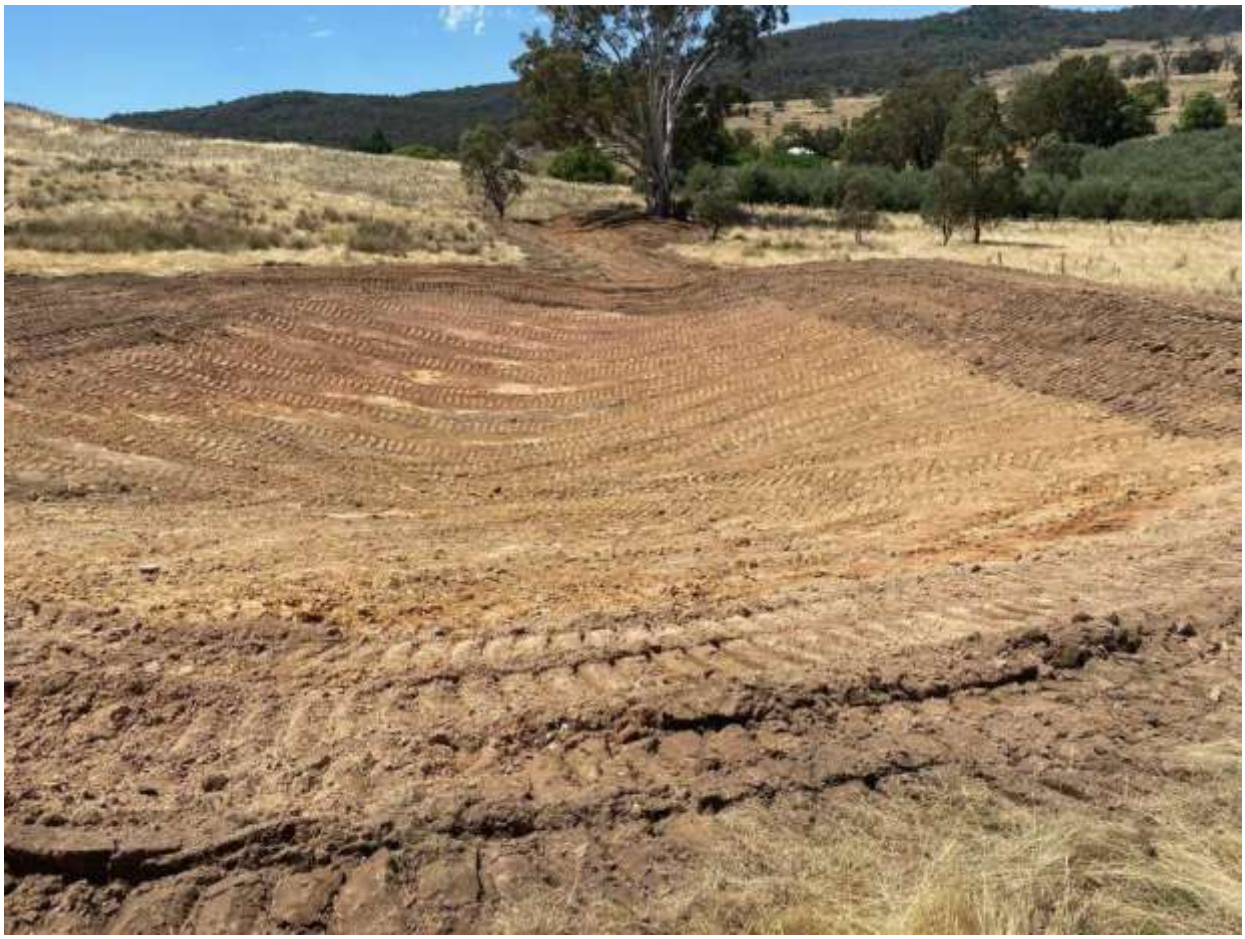
Gully 1 looking downhill, before



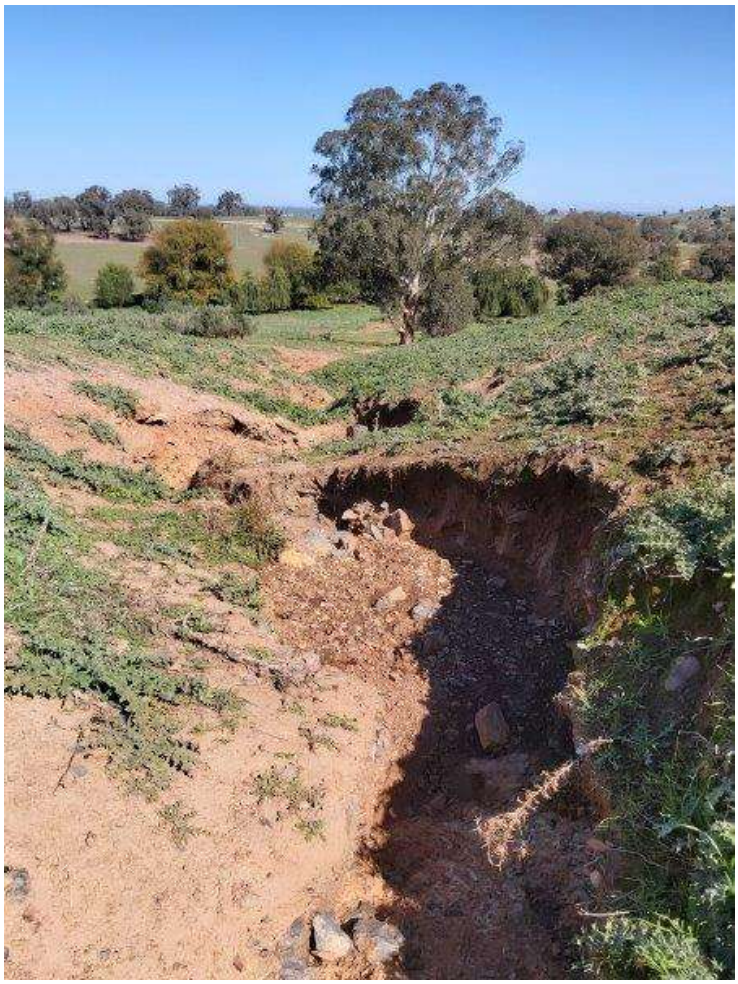
Gully 1 looking downhill, after



Two pictures at right angles to the previous ones give a better perspective of how the landscape has been contoured. The site was seeded afterwards to stabilise it and minimise weed incursions. The yellow arrow is gully 1 and the blue arrow is gully 2.



Gully 2 before, looking downhill

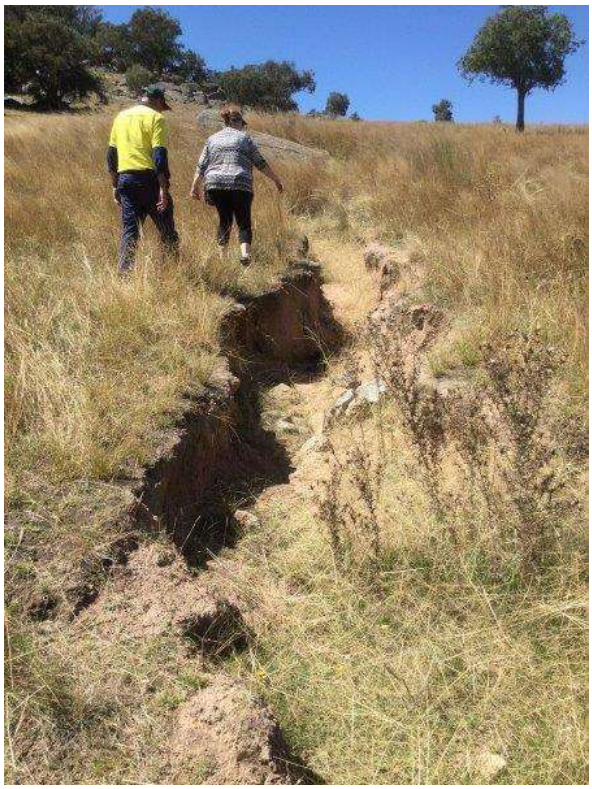


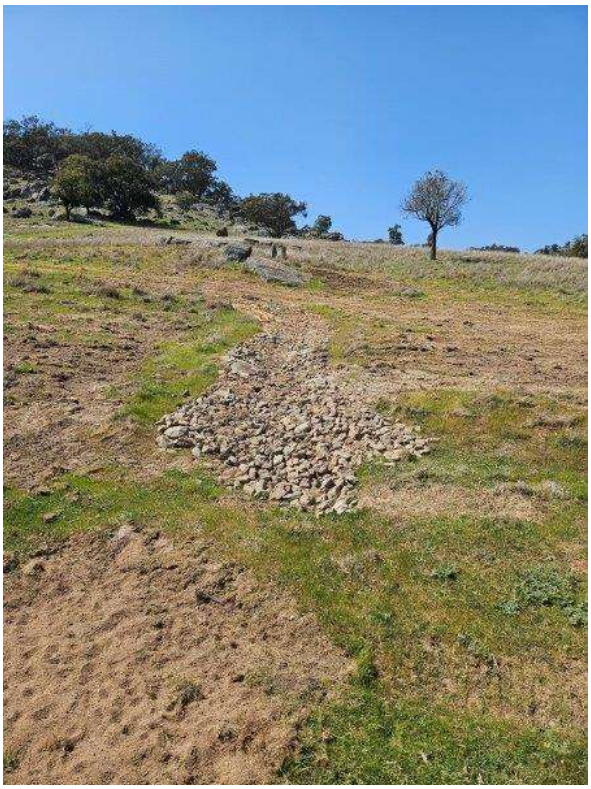
Gully 2 after, incorporated into works

Riverstone site 1 (ET1)

Before and after– above this view, the gully comes from the left, following the contours of the hill

Because it's a relatively shallow gully, and rocks of the right size were readily available from a nearby quarry, the contractor has battered the edges of the gully and filled it with rocks to slow the water flow

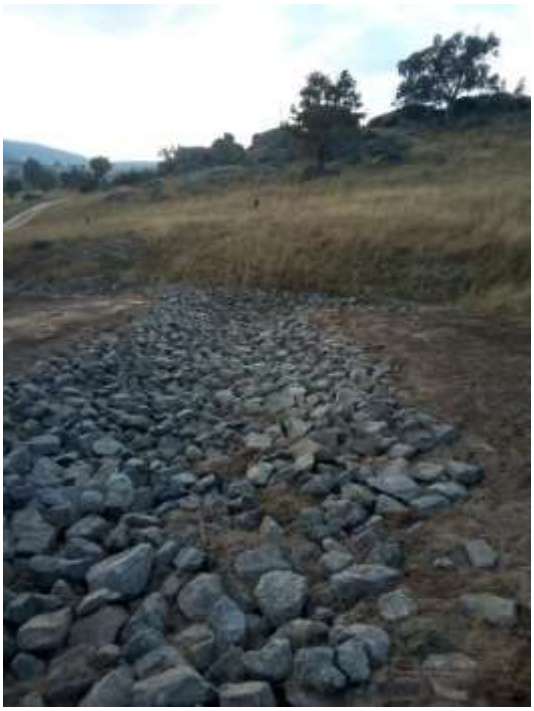


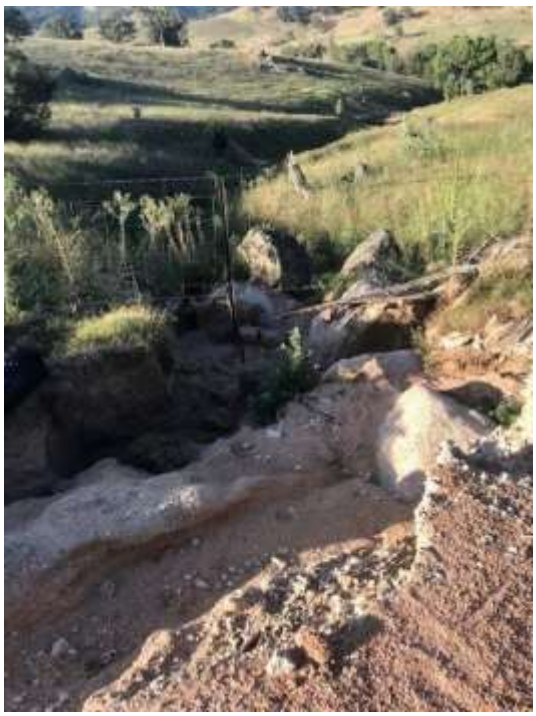


This angle shows the gully before and after as it comes from the left

Riverstone site 2

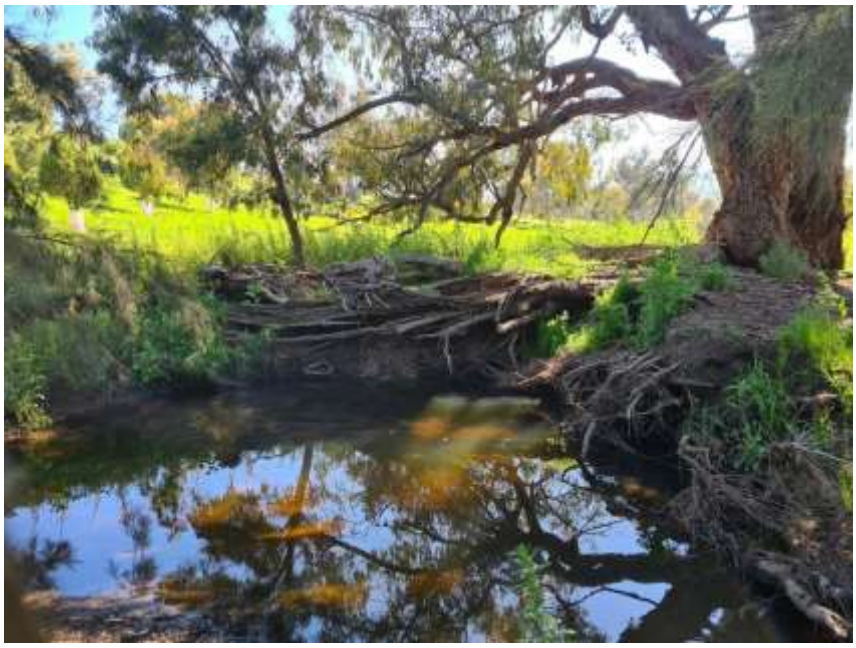
Befores and afters (2023 and 2024). Top section (first two photos) takes a left turn downhill (second two photos).



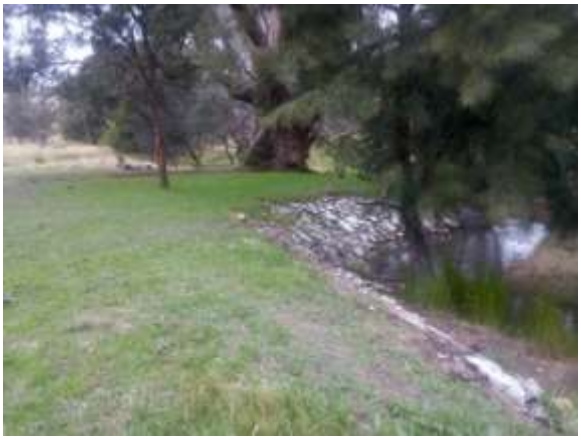


Pindari (ET1)

Before - during flooding, the power of the water coming down the creek was scouring the bank and undermining this large old river red gum.

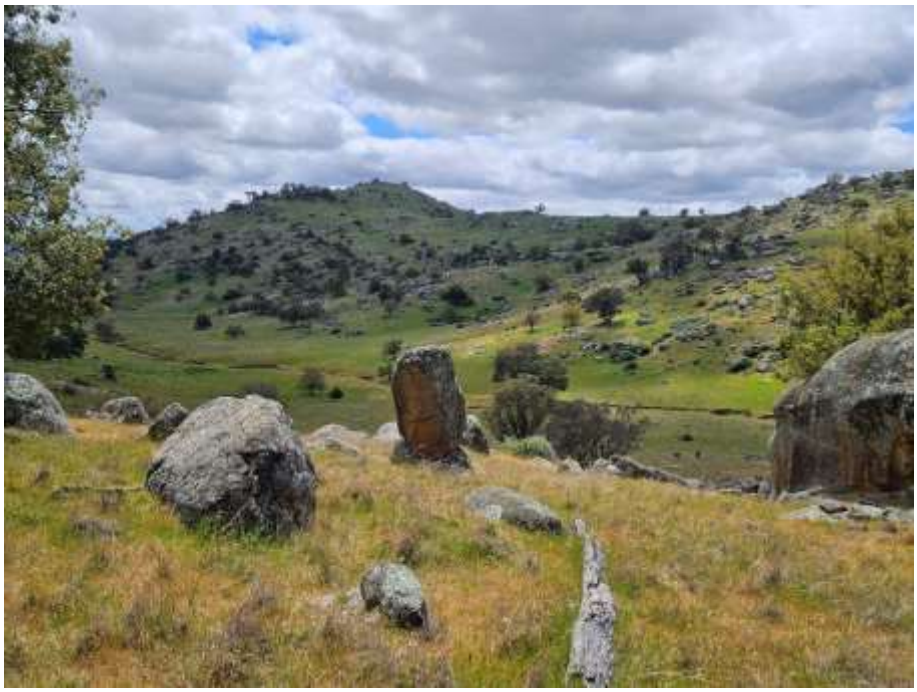


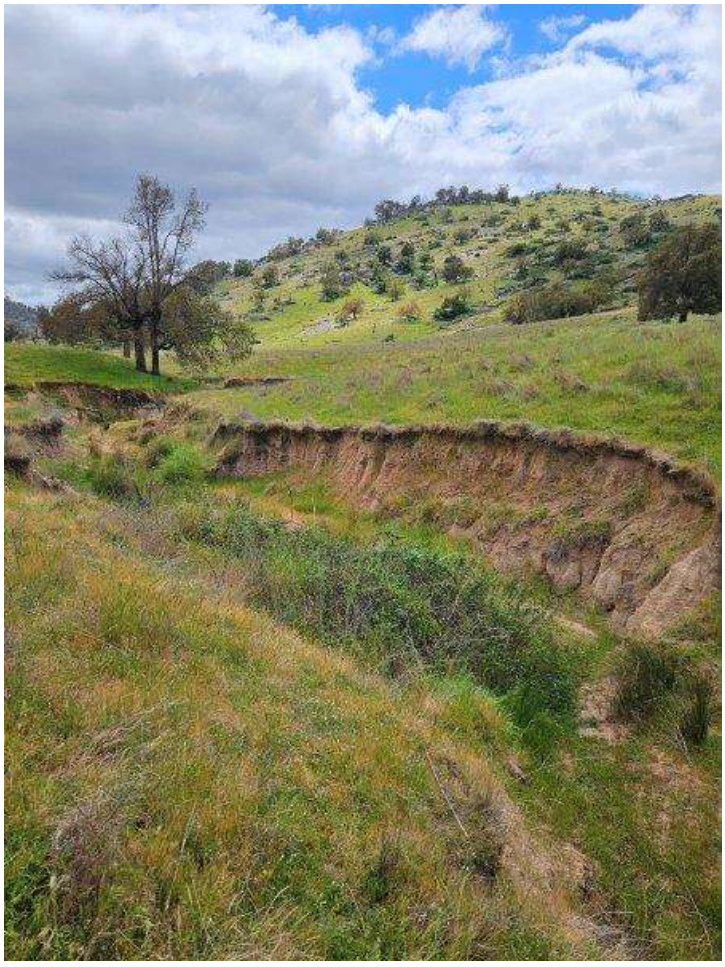
After – the undermined area has been built up and stabilised with a rock groyne, and the bare area seeded. The final image shows the grass stabilising the disturbed area.



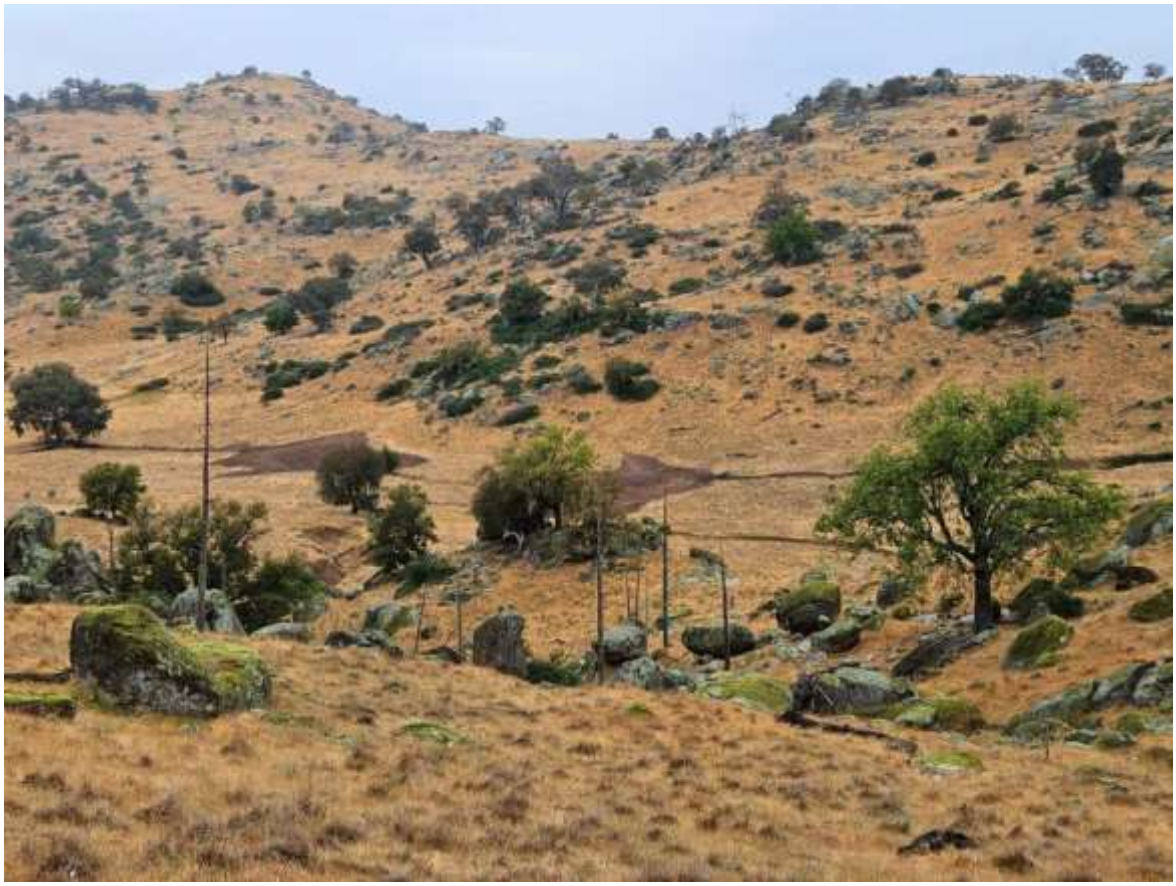
Maryamma (ET1)

Before (Nov 2023) – overview and close-up of the erosion gully. In the first picture, the gully can be seen as a thin brown line running from right to left at the base of the far slope





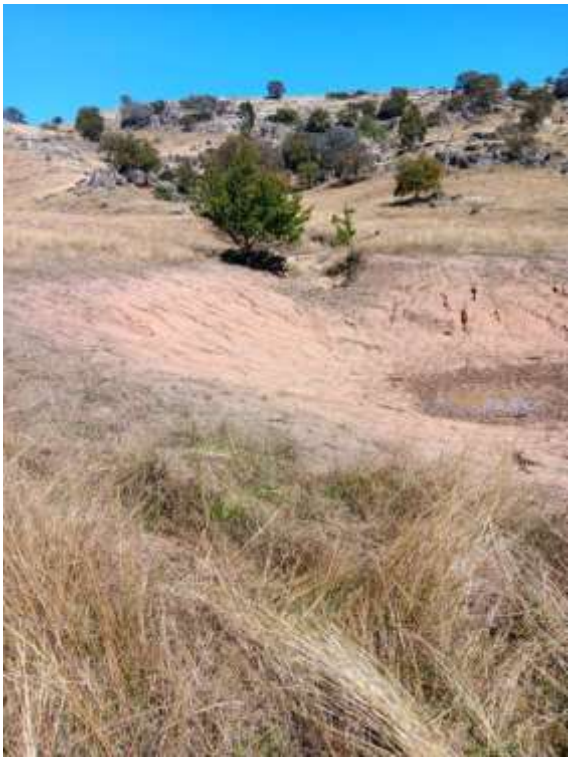
After (Nov 2023) - from right to left, that will hold water for long enough to slow the flow through the valley the gully sides have been battered and the landscape shaped into two shallow areas (showing as dark brown). Heavy plastic was laid first to help with holding water and a trickle pipe laid in the base to allow the water to escape slowly.



Different perspective, looking up the valley Nov 2023

Immediately after works (Nov 2023)

and April 2024

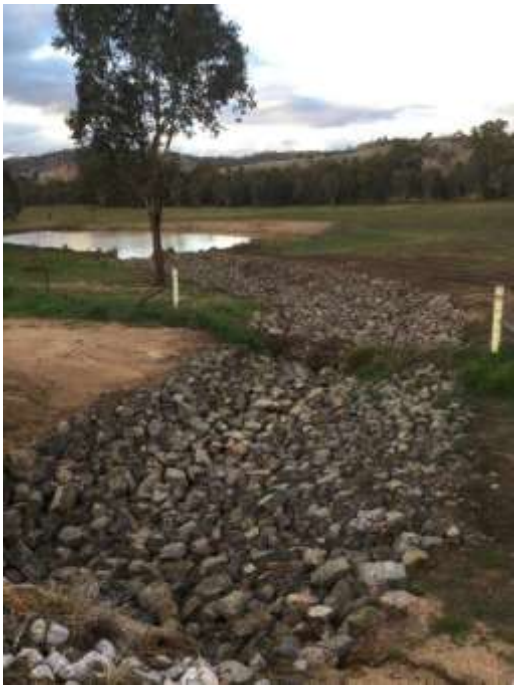


Jerrringomar

Before and after – water coming through a road culvert at high intensity for decades caused an erosion gully leading to the dam area. The issue was resolved by shaping the area, putting geotech fabric down and covering it with a rock-lined channel. The next pictures show planting and fencing from stock, and the strong growth of the stabilising vegetation over the next three years, to the point where the rock-lined channel can't be seen any more.

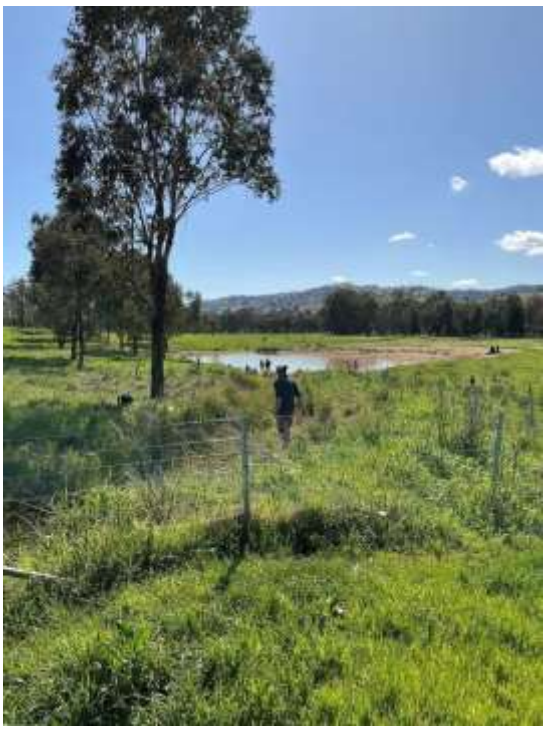
2020

2021



2022

2023



Jerringomar – looking back the other way at the culvert. Hilltops Council worked collaboratively with us to extend the rock-lined channel onto their adjoining land between the culvert and the fence

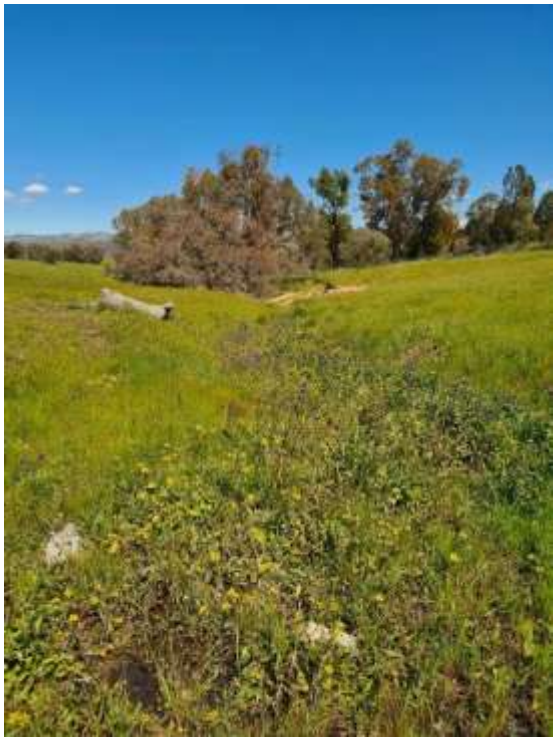
2020 and 2021 – road culvert in background

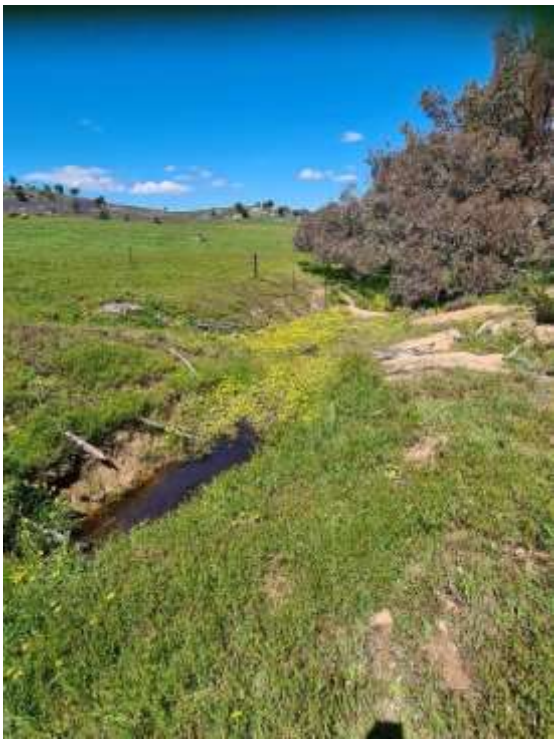
2022 fenced and planted.

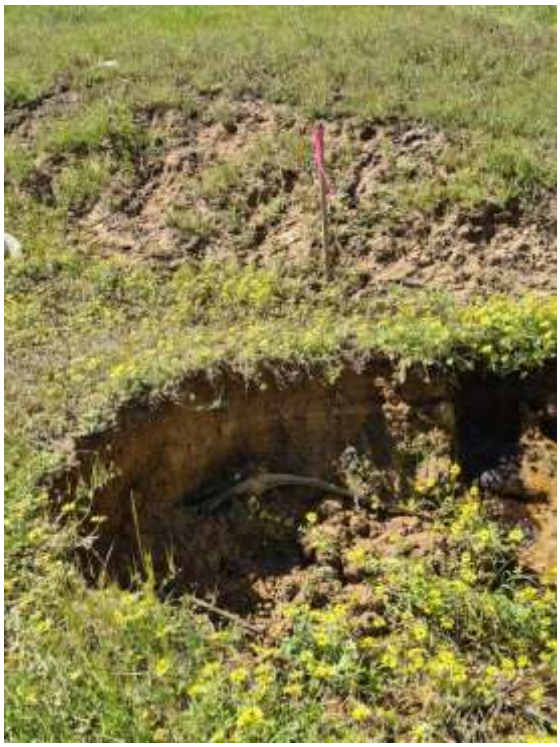
2023 – thick vegetation stabilising the channel and hiding the rocks

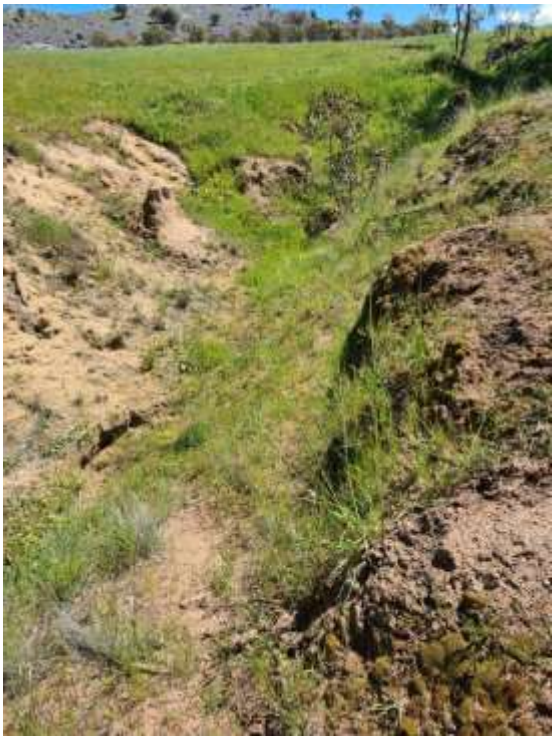
Riverslea site 1 (ET1)

Befores – (2021 after a year of rain. Normally bare and scoured). Long view and close-ups. Concentrated flow from a road culvert uphill has created this erosion gully that plunges steeply downhill in front of the eucalypt. Although normally scoured bare, the vegetation is thick here due to two rainy years

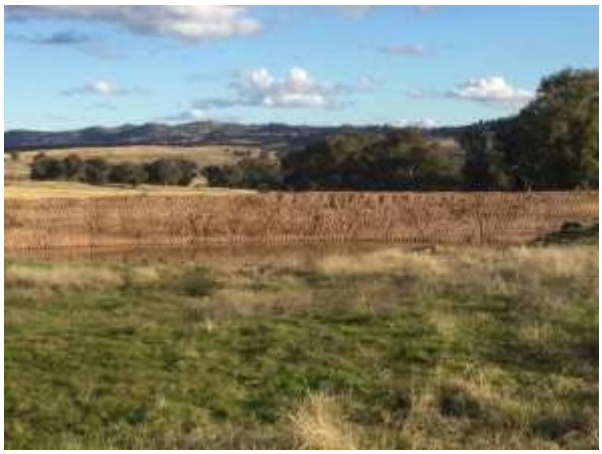
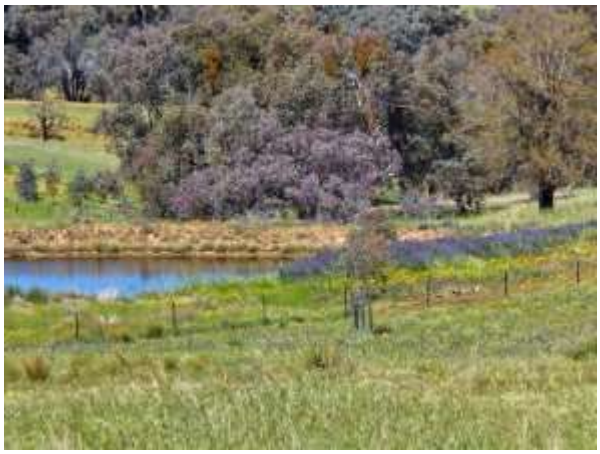






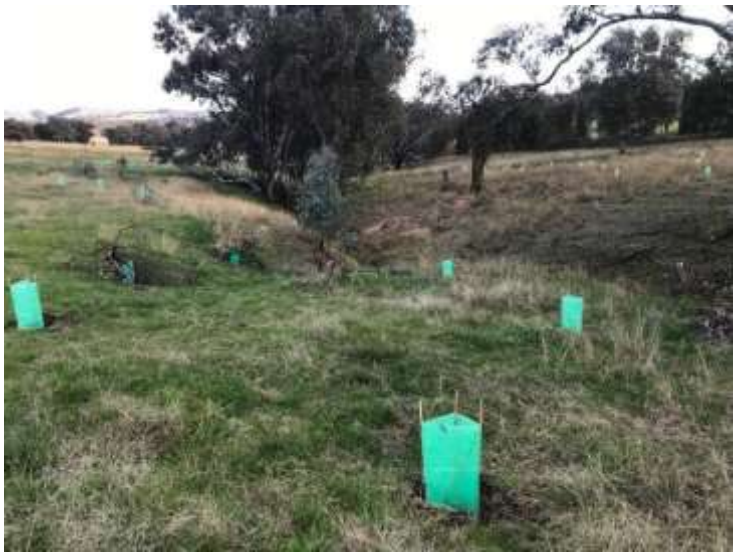
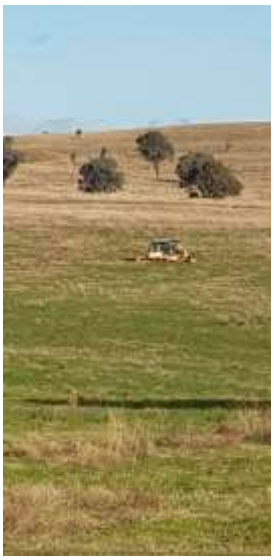


Afters – newly built dam 2022 and same dam in 2023, fenced from stock, planted and seeded and well on the way to being stabilised by vegetation

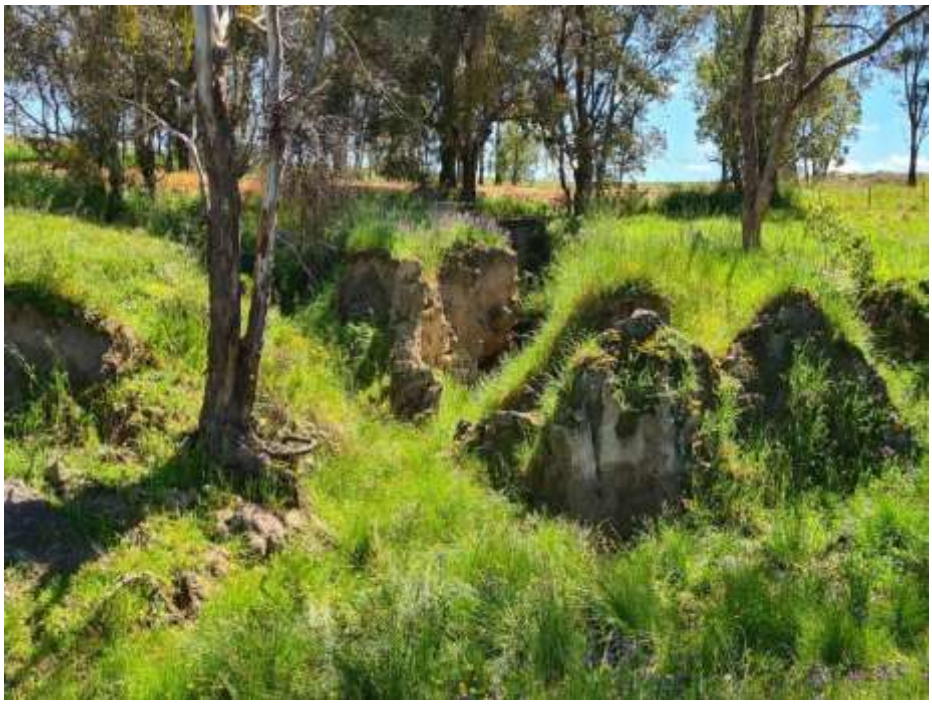
April 2024 (at 180 degrees), showing colonisation of the dam by water plants via birds, and grassing up of the banks. Second image is plantings behind the dam


Plantings between sites 1 and 2 and excavator bogged for 18 months during 2021 and 2022

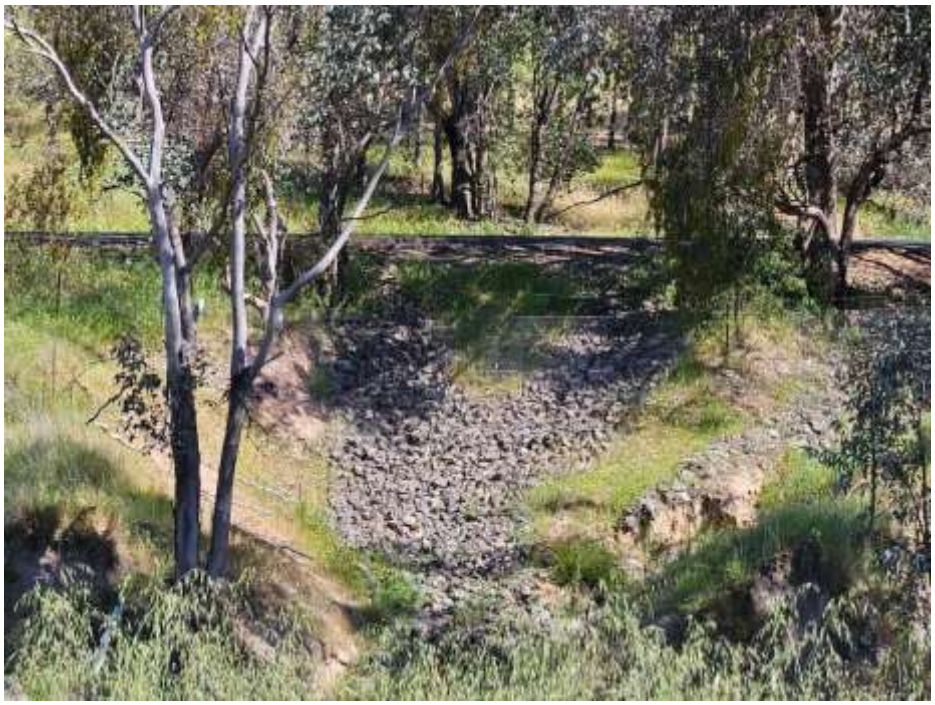



Riverslea site 2 (ET1)

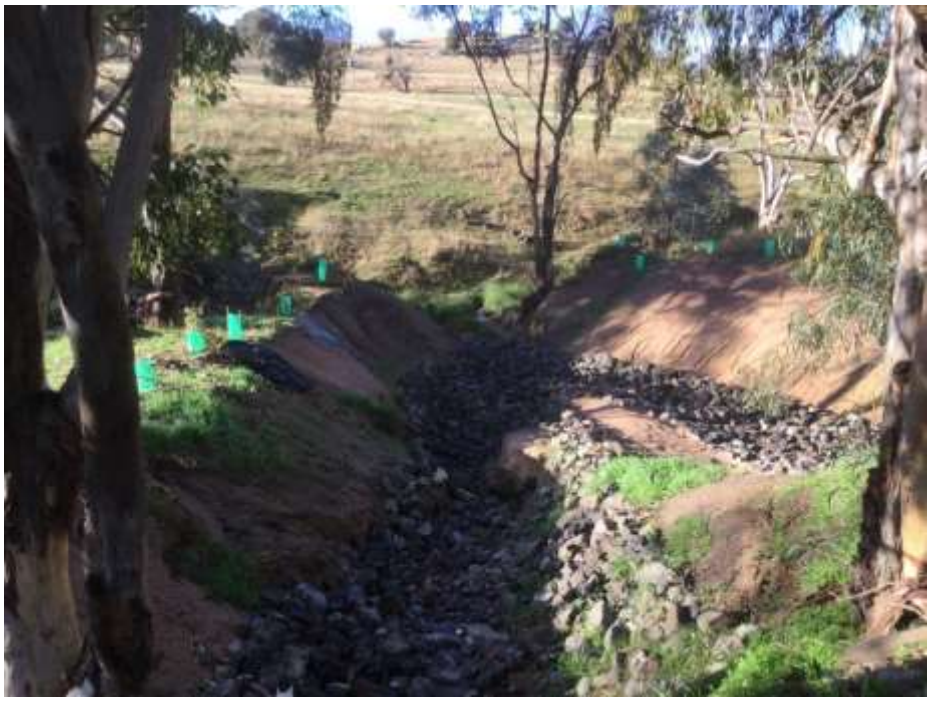
Before (2021) - This deeply gouged, very long gully is the result of decades of concentrated flow from a road culvert on the steep road above, with no structures put in place to slow the speed of the water entering the property. The culvert can be seen in the top middle of the picture just below the road.



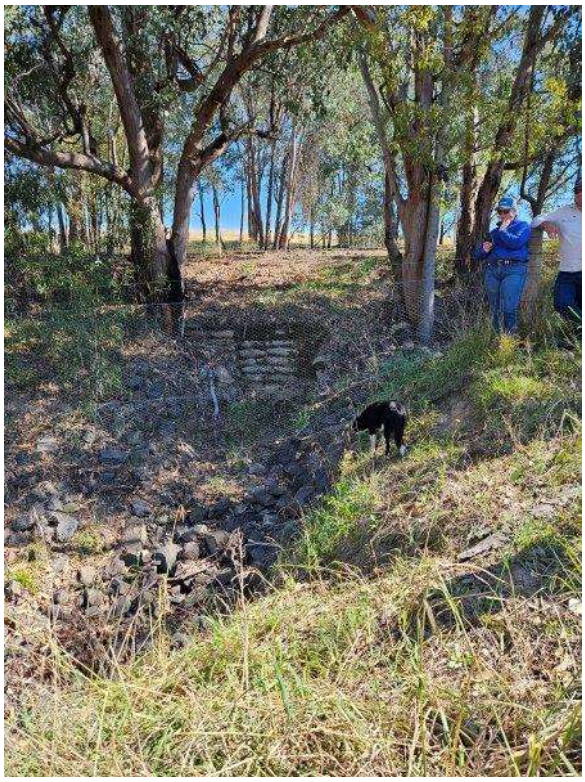
After (2022) – the area where the water enters has been shaped and rocks and sandbags have been installed to slow the water. This has not repaired the long gully but will minimise further damage. The banks have been planted and the area fenced.

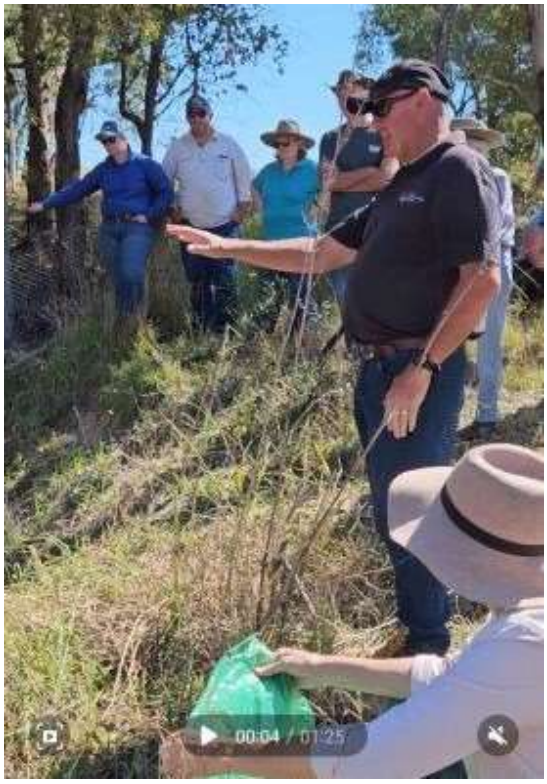


2022 Plantings on the banks (from 180 degrees to previous photo)



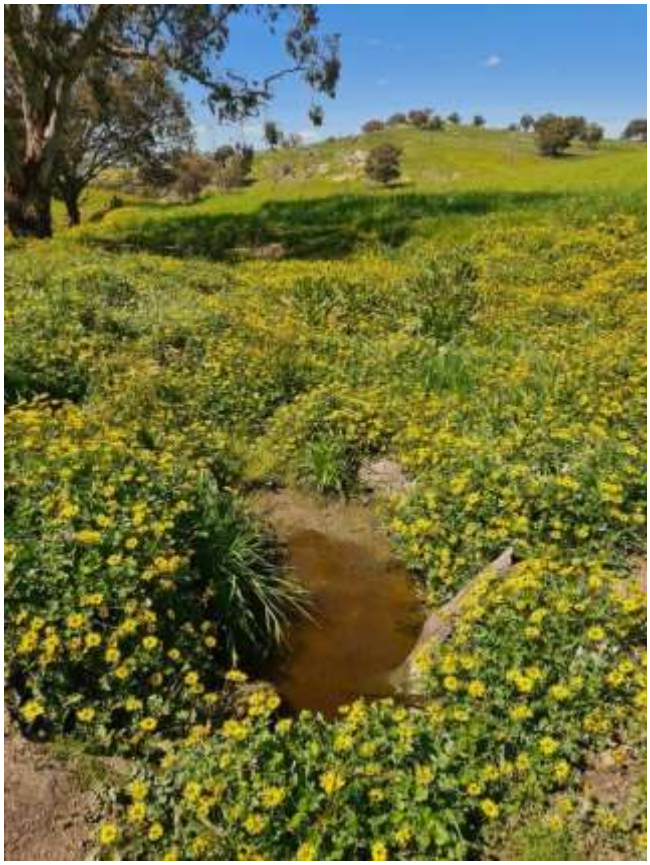
April 2024 at the ET1 erosion control field day. The area has largely stabilised

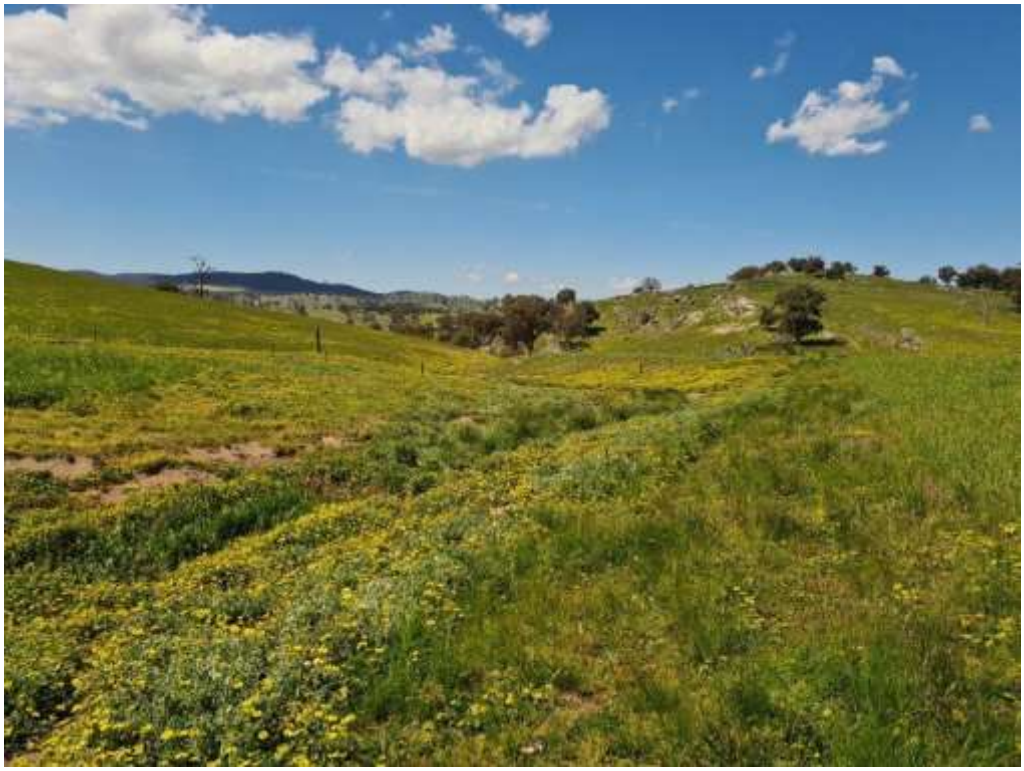




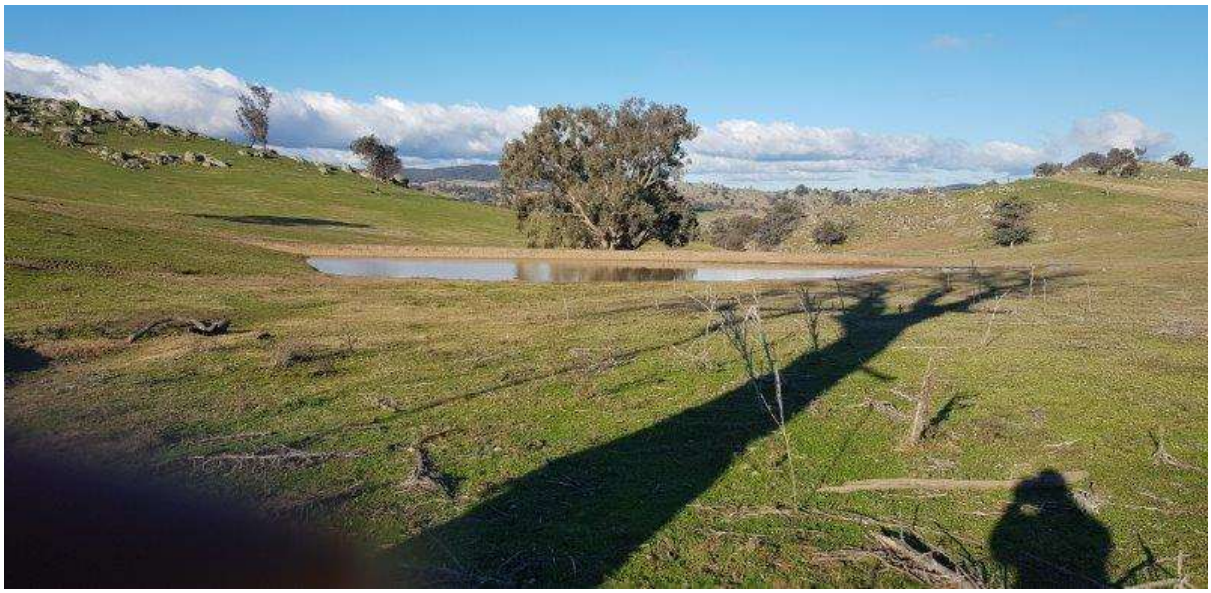
Willow Glen site 1

Befores (2020) - actively eroding head and gully

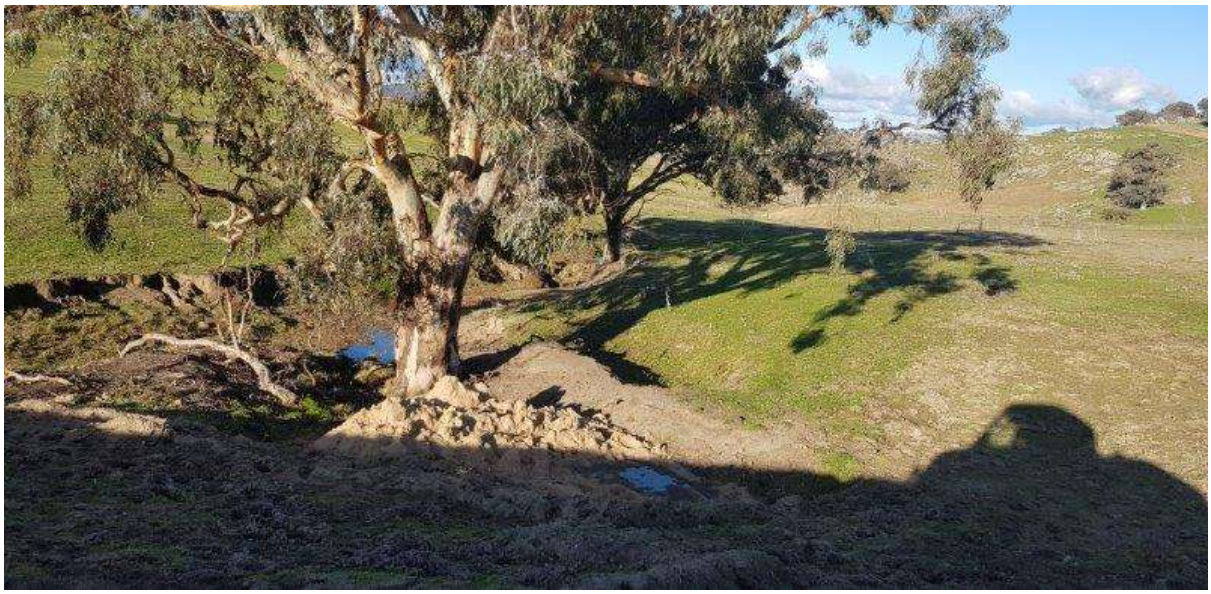




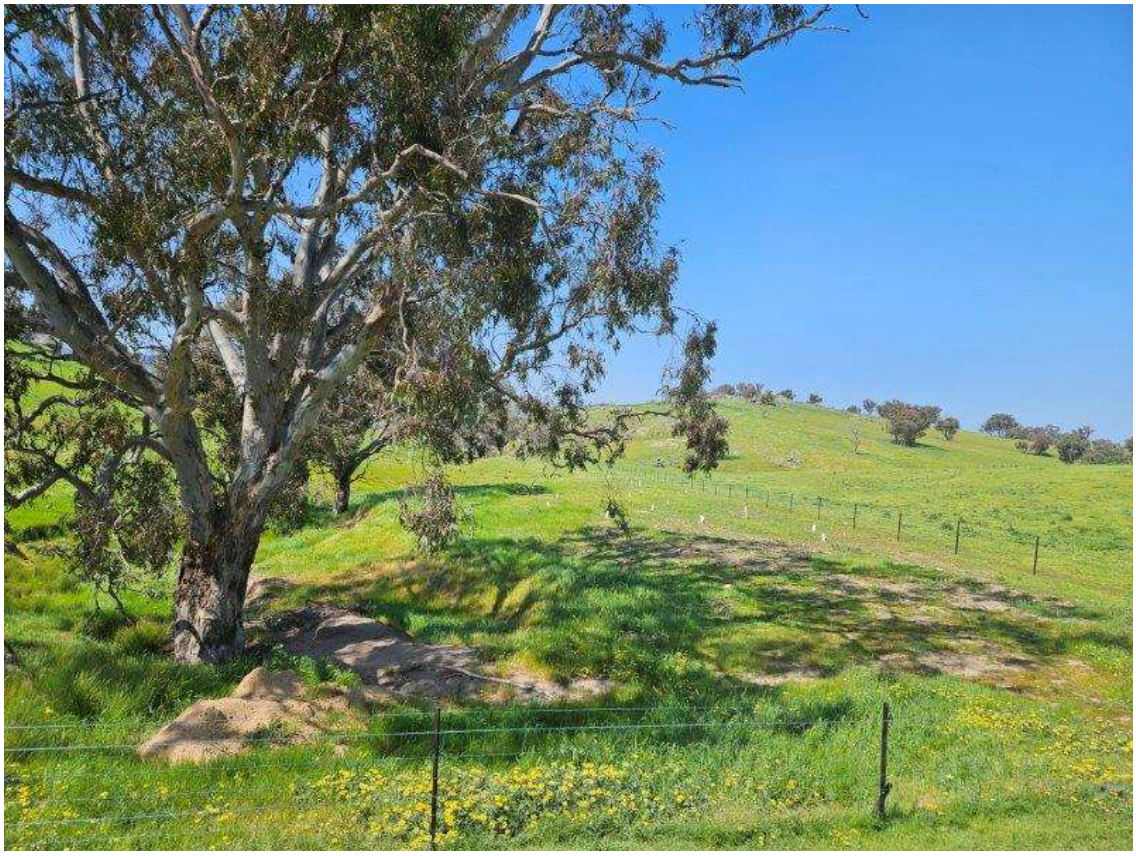
Afters (June 2022)



Looking down the gully from the dam wall



Afters (September 2023) From the dam wall showing fencing and planting on both sides of the gully

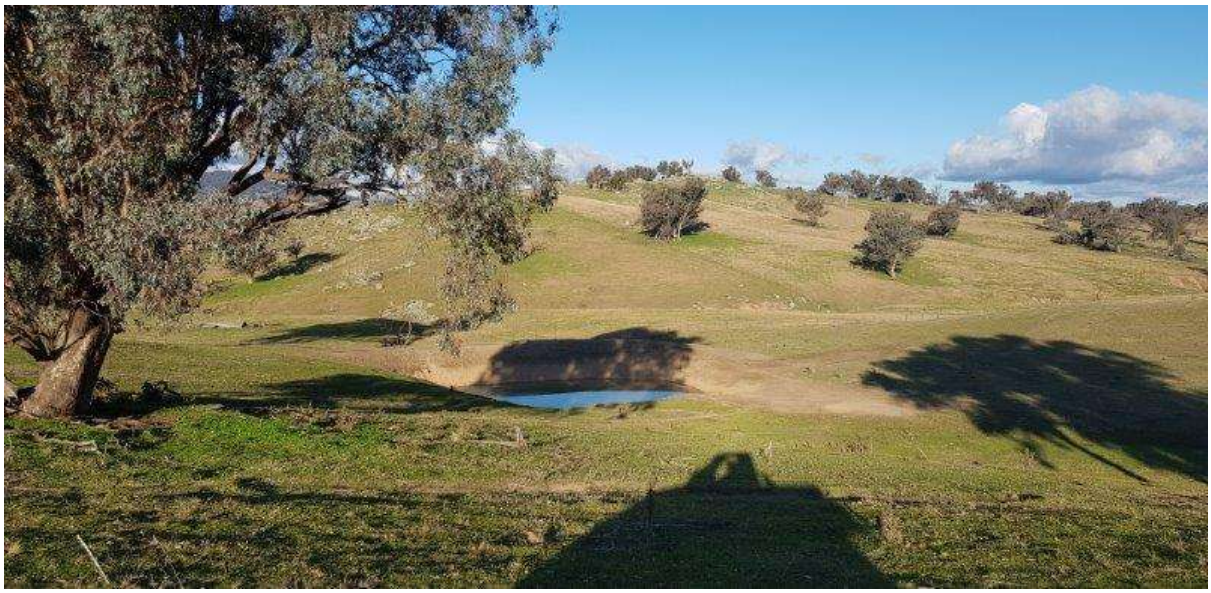


Willow Glen site 2

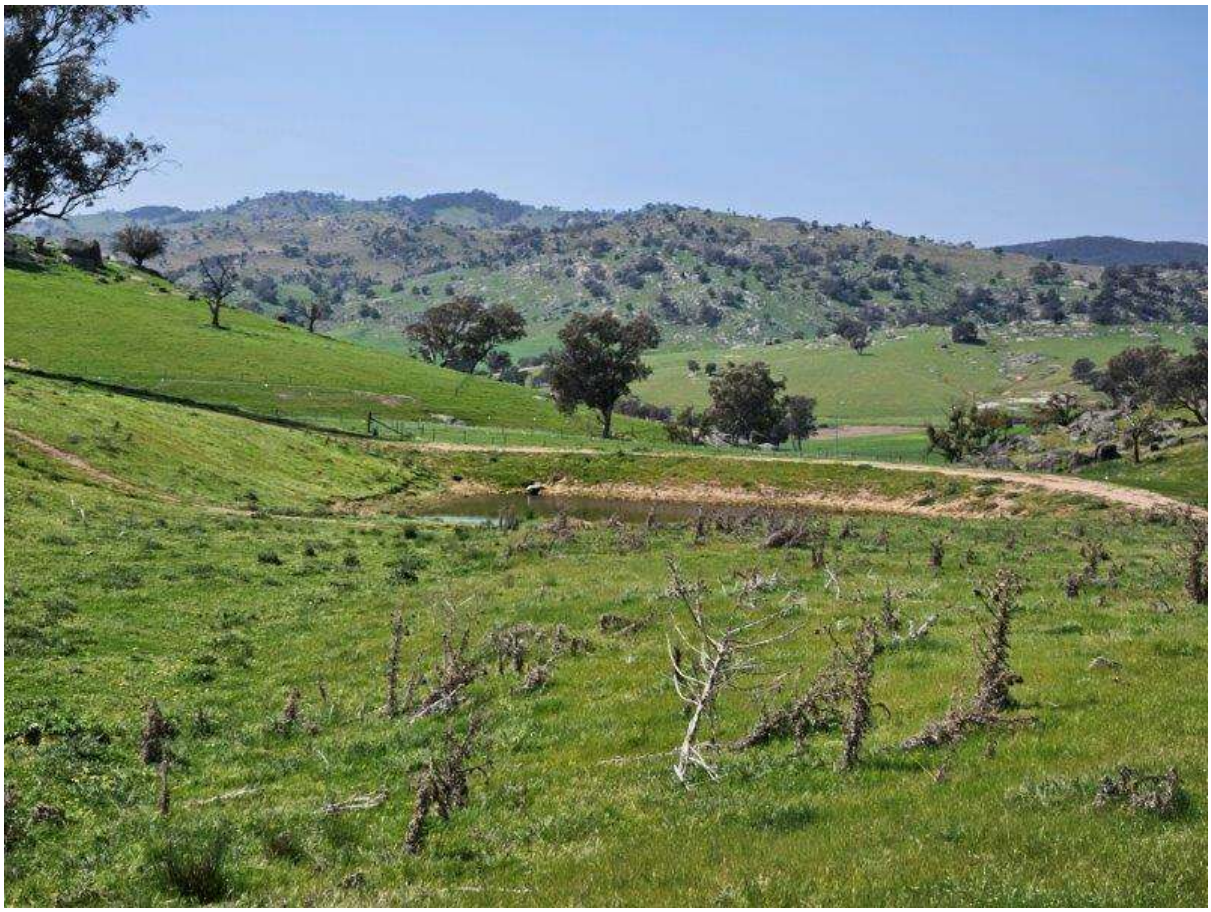
Befores (2020) Actively eroding head and gully heading downhill

Close-up of actively eroding head (taken at right angles to previous photo). Both these photo points ended up under water.

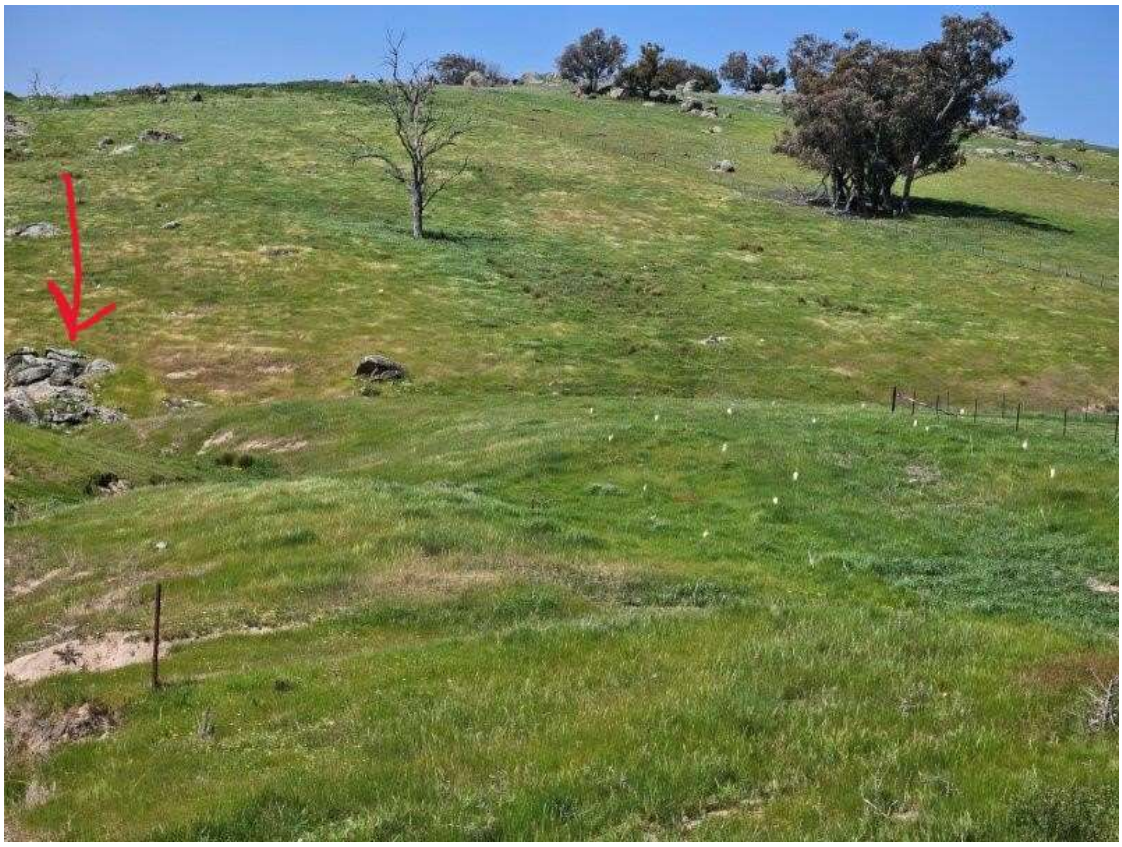
Afters (2022)

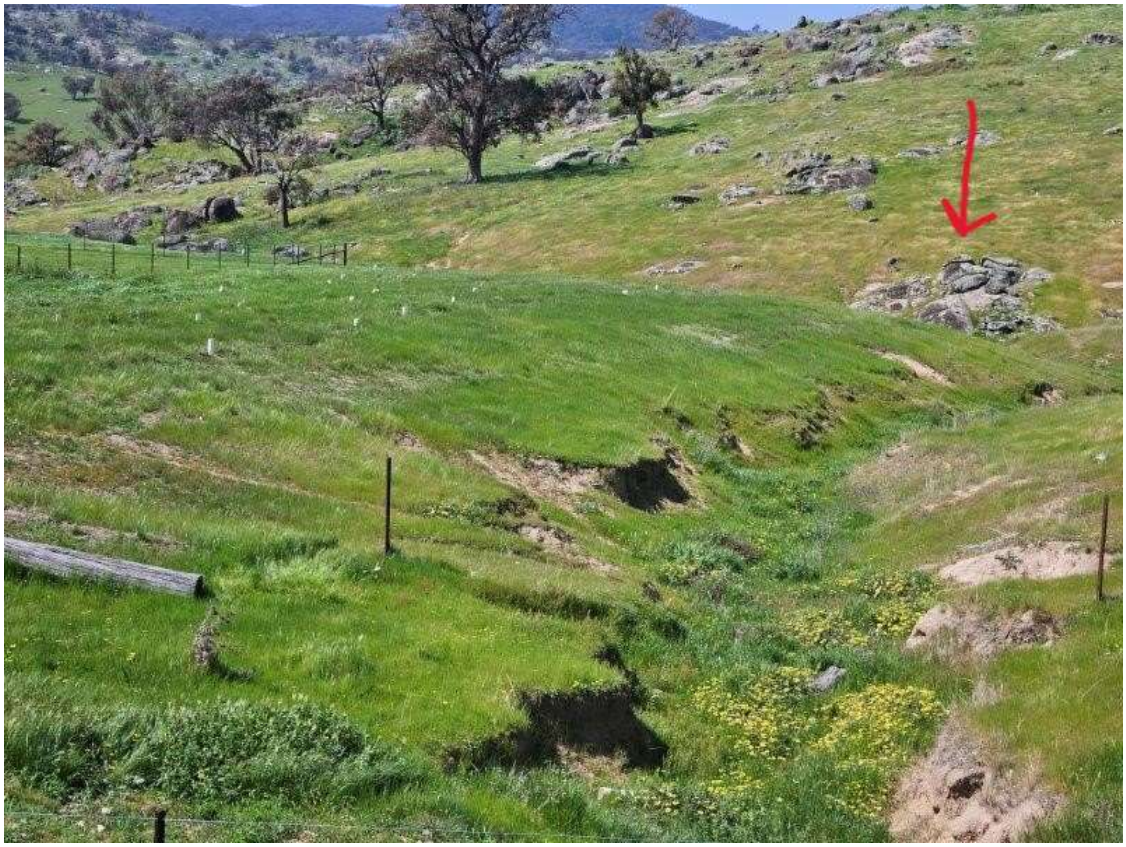


2023 (Poor angle for comparison. Original photopoints were no longer there. Should have been taken from further around to the left}. Same tree on LH side.



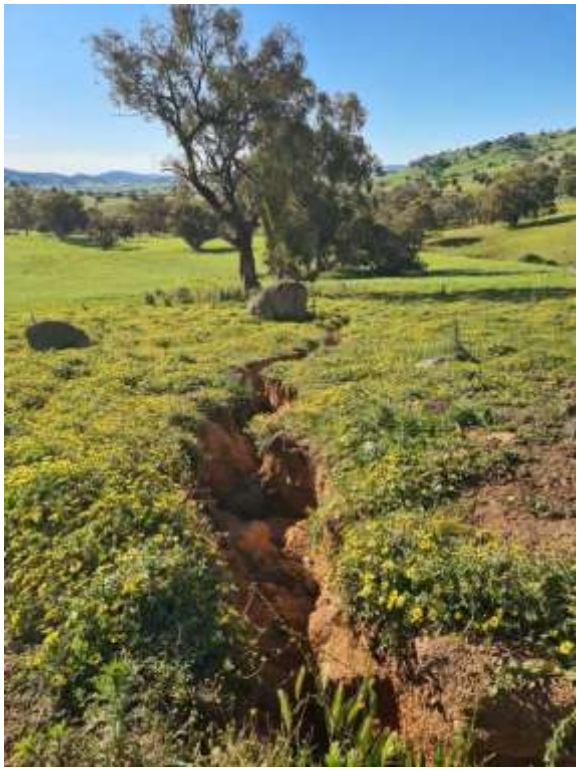
Afters (2023) showing both sides of the gully fenced and planted. Red arrow showing same rocks as reference point



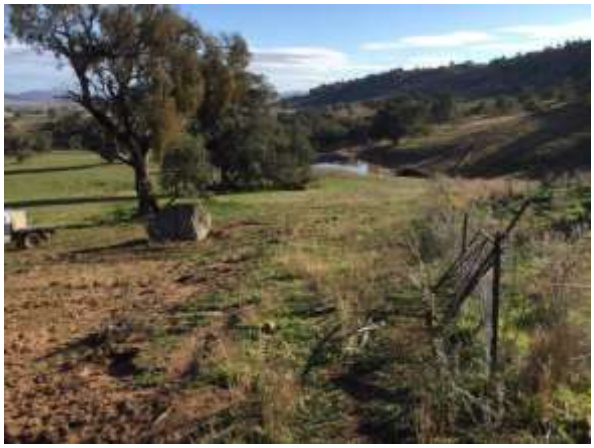


Balloch (ET1)

Site 1 before (2020) Gully looking downhill and looking across the top of the gully

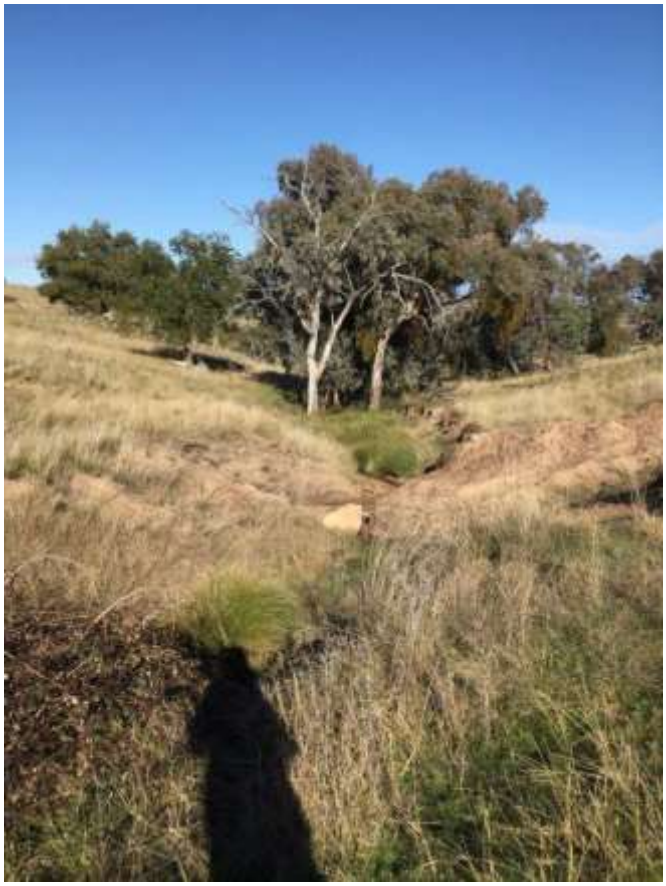


After (2021 and 2023) – sides battered into the gully, shaped and seeded. Site 3 dam in the background.



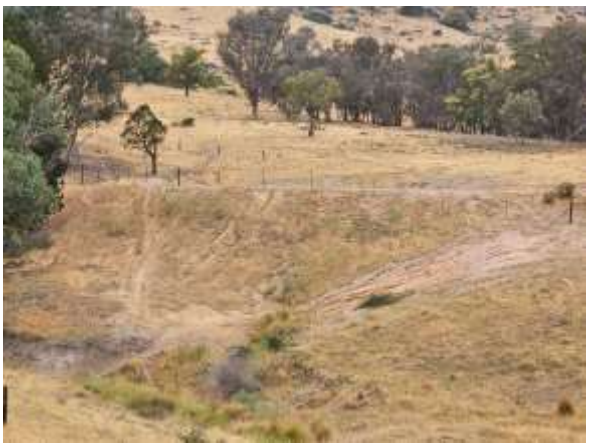
Balloch site 2

Before (2020) Looking down the gully

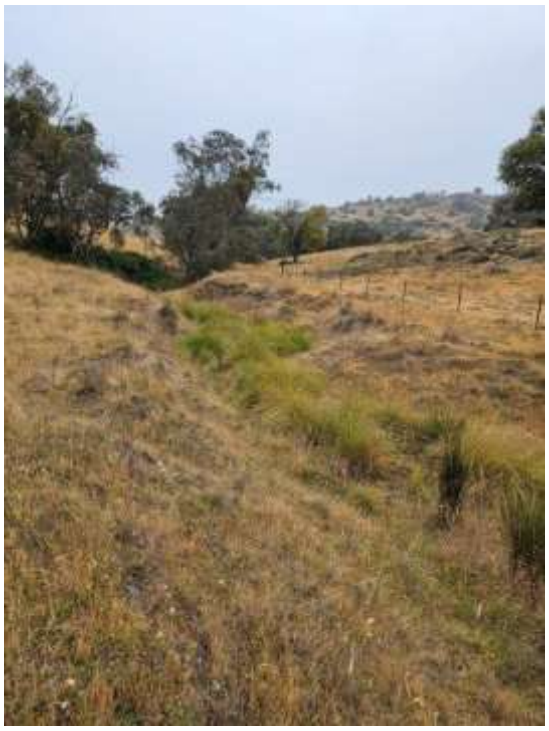


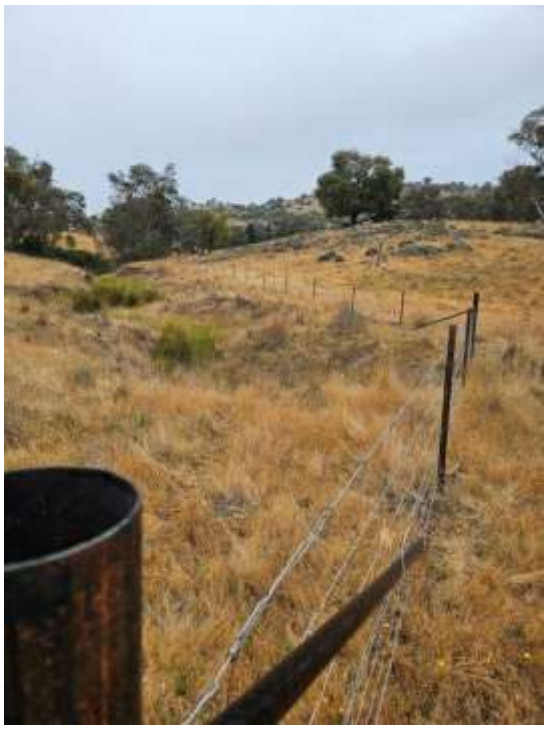
Afters (2021 and 2023)

Unfortunately these photos needed to be taken at right angles to the before photo, looking uphill from the photographer's shadow. This is due to a misunderstanding about the exact location of the proposed dam. They show the gully in the foreground and dam in the background. Note the fencing in the second photo.



Balloch site 2 afters cont. Fencing of the gully at site 2. Dam visible in second photo.



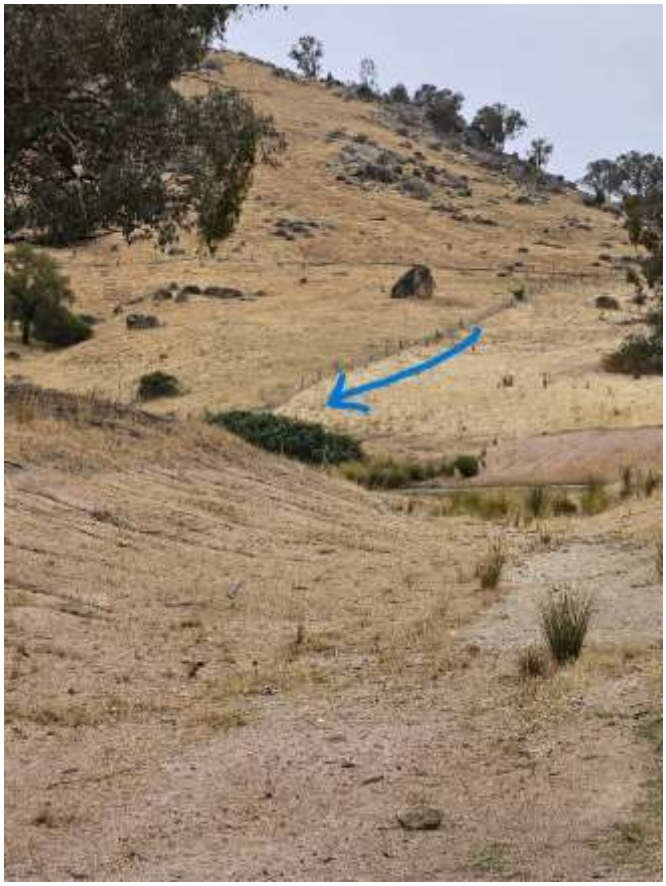


Balloch site 3

Before (2020) blue arrows show blackberry bush for reference

After (2023)

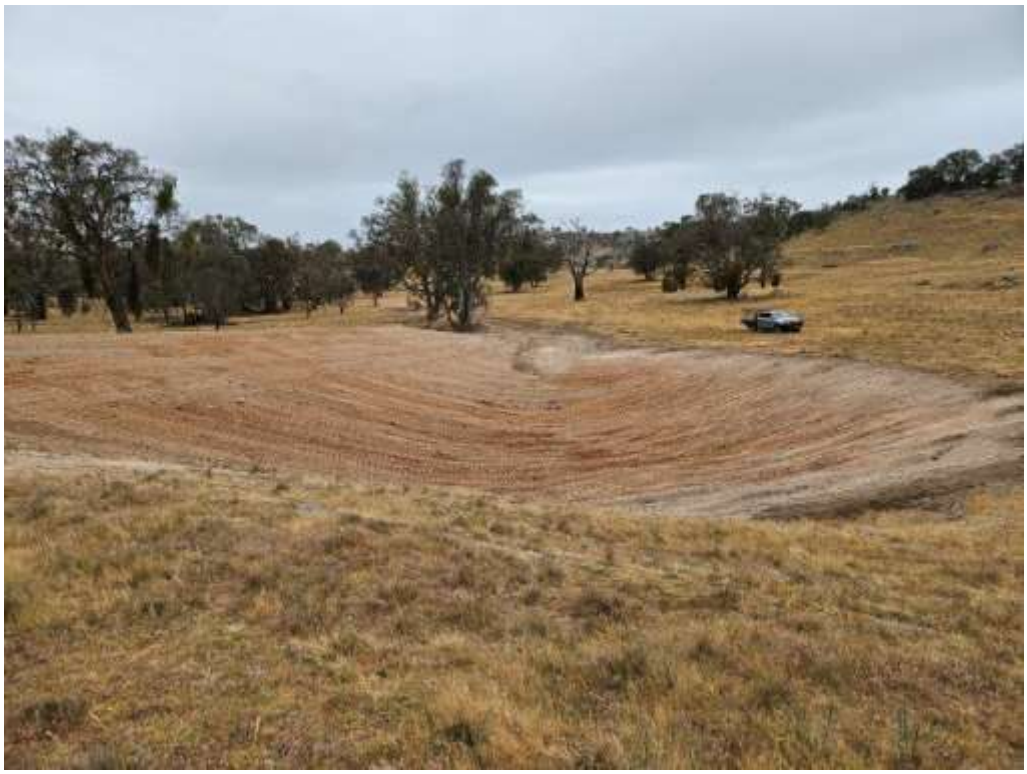
After (2021)



Balloch site 4

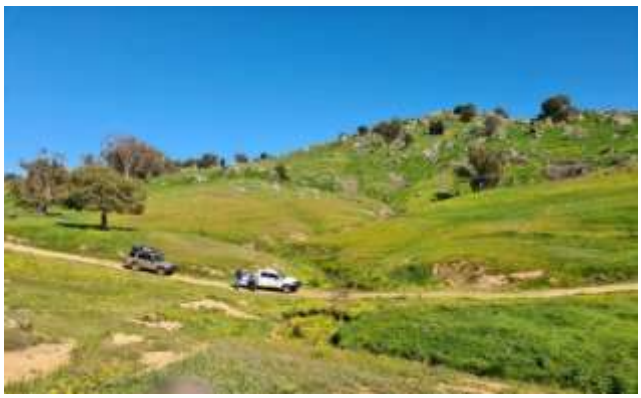
After (2021) The original site 4 was rejected by Soil Conservation Service as having inappropriate soils. This site was selected instead and the dam built before the project manager could get there to take a before photo.

2023 after largely unsuccessful maintenance work to allow this dam to hold water. This dam now operates as a leaky dam ie still slows water but doesn't hold it permanently.

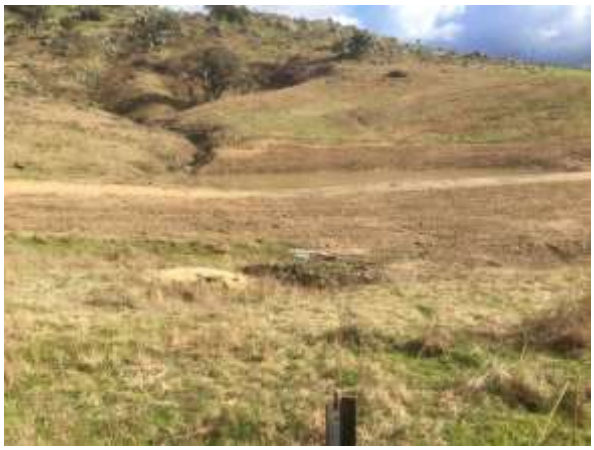


The Junction (ET1)

Before (2020) – water from the steep hill was cutting a deep gully downhill of the road and a section of bank was slumping.

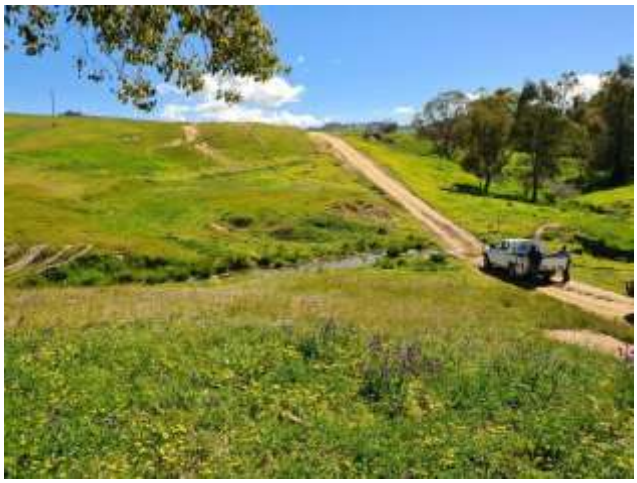


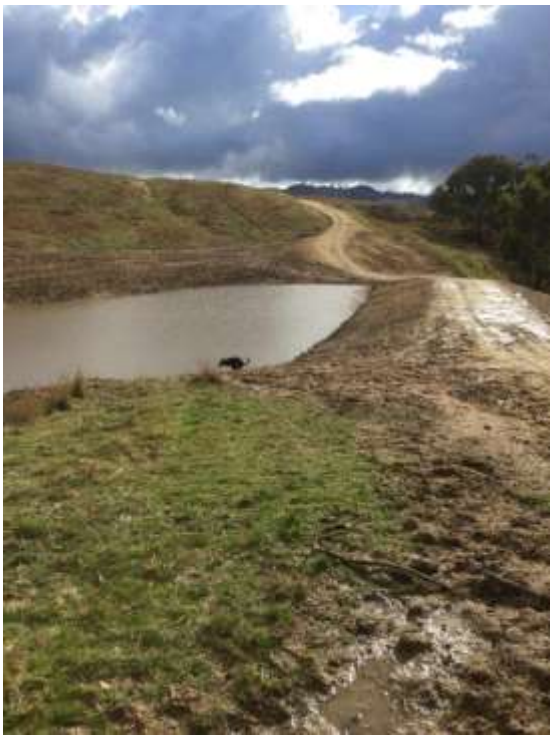
After 2022 and 2023. The dam catches the water and releases it slowly down the gully via a trickle pipe at the bottom of the dam wall. The slumped area has been rebuilt.



Gully showing trickle pipe emerging and a mix of plantings and self-seeded plants.

A different view (at 90 degrees) before (2020) and after (2022)





2023 (taken at 180 degrees to the image above) and 2024 The far side of the dam has also grassed up and there are water plants starting to appear courtesy of ducks.

Stakeholder engagement with Canberra University students

HCLG invited hydrology students from the University of Canberra to help with monitoring of the projects. Students came to three farms in 2022 and 2023 and did a range of measurements including:

- sediment deposition in dams using bathymetry
- alluvial deposition on floodplains
- potential sediment loss of existing gullies
- water infiltration rates into the soil
- ground-penetrating radar to determine the density of soils around the gullies