



Case study: Centralian Project

Project location: Australian Central Rangelands, NT

Size: Approx. 8,000 hectares across four properties

The project will plan, design and establish four working demonstrations of landscape rehydration and regenerative agriculture across properties on four creek catchments.

The project will also be evaluating the effectiveness of old rehydration works on Woodgreen Station using on-ground data plus historical satellite imagery. Rehydration works on this property have been undertaken at the landscape scale for over 50 years. The intent of the project is to demonstrate drought resilience at scale at major watercourse catchments in central Australia.

PARTICIPANTS

- Aileron Station
- Ahakeye Aboriginal Land Trust (old Ti Tree Station)
- Glen Helen Station
- Narwietooma Station



Above – Erin and Lance setting up survey equipment in the early morning sun at Glen Helen station

Right – Constructing earth banks using a front-end loader for bulk earthmoving and a skid steer for placing woody material



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Station Rehydration Approaches

Glen Helen Station

Organic Beef operation and pastoral lease owned by Hewitt Cattle Australia. (Narwietooma, Glen Helen, Derwent and Napperby Stations form a cluster of land owned by Hewitt Cattle Australia).

The station is approximately 1,400 square kms, 150km North West of Alice Springs at the western end of the West McDonnell Ranges.

The project site lies within the Western Plateau Drainage Division, where it forms a sub-catchment of the Burt River. The site has a catchment of 2,500Ha and includes many minor streams which originate in

the West McDonnell Ranges, and which drain into the Dashwood Creek.

The site was chosen due to its close proximity to an area referred to as Crossing Bore, a stock water point.

Due to limited bore sites at Glen Helen, the Crossing Bore paddock has been historically over-stocked without rest, resulting in almost complete loss of topsoil and extensive major and minor erosion gullies within a 5 km radius from the bore.

Narwietooma Station

Organic Beef operation pastoral lease owned by Hewitt Cattle Australia. (Narwietooma, Glen Helen, Derwent and Napperby Stations form a cluster of land owned by Hewitt Cattle Australia)

The station is close to 2,800 square kms, 135km North West of Alice Springs at the western end of the West McDonnell Ranges. It neighbours Glen Helen Station to the west.

The project site lies within the Western Plateau Drainage Division, where it forms a sub-catchment of the Burt River. It includes many minor streams which originate in the southern ranges, and which transition



Above – The team inspect a contour bank constructed by station worker Ben at Narwietooma station

Left – Shane guides a grader during the construction of a contour bank

to major streams in the southern foothills of the site before draining towards the north-east of the site.

The catchment is dominated by a large floodplain feature that drains into an ephemeral lake in the northeast of the site. Narwietooma Station has a history of being overstocked resulting in intense grazing pressure and the degradation of soils. At the chosen site, historically heavy grazing pressure has degraded the soil sufficiently so that topsoil has been lost through overland flow, creating large bare areas. Topsoil loss and the subsequent reduction in ground cover have allowed overland flow to concentrate into incised and actively eroding channels that have been dehydrating the floodplain.

Aileron Station

Aileron Station is a pastoral lease that operates as a cattle station in the Northern Territory, 130 km north of Alice Springs owned by Aileron Pastoral Holdings, a wholly owned subsidiary of Caason Group. The Reynolds and Anmatjira ranges extend into the north-west portion of the property and the Stuart Highway transects the center of the property from north to south.

The project site is a 6,300Ha catchment to the west



of the Stuart Highway and approximately 3.5 km west of the Aileron Roadhouse. The site comprises a gently sloping valley floor confined by rocky hillslopes to the north, east and west. The valley floor contains floodplain pocket features and a couple of single, partially discontinuous and braided channels including Rabbit Creek which drains from the northern ranges down into the south of the site.

Above – We used woody debris cleared as part of a nearby road construction project to construct a leaky weir at Aileron station

Below – Lance and Erin work with James and Clayton, Aboriginal Rangers from the Central Land Council to construct a simple brush weir



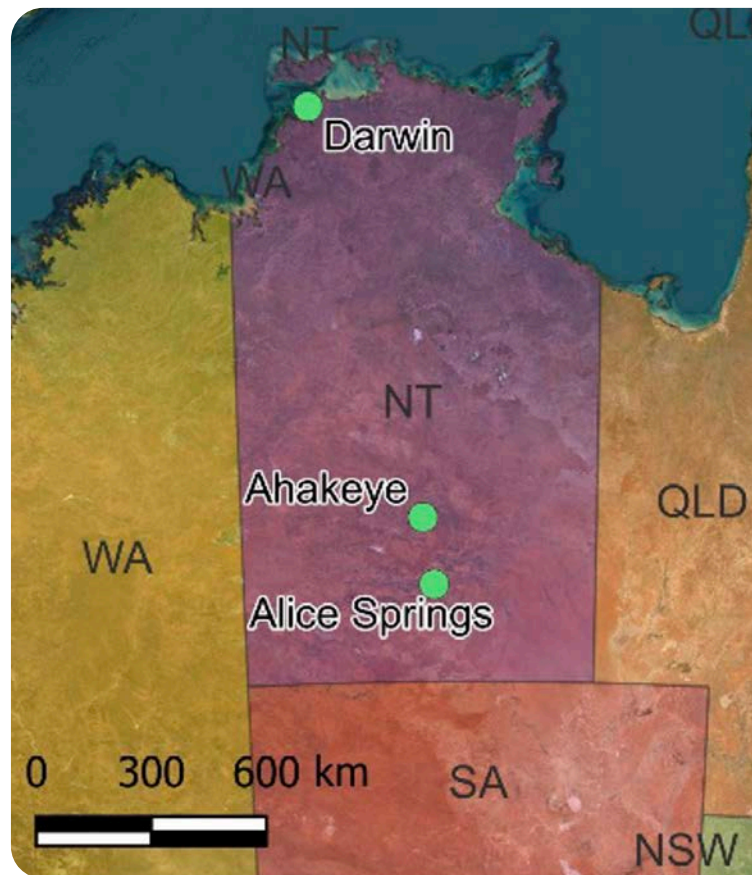
Ahakeye Aboriginal Land Trust

Ahakeye Aboriginal Land Trust (AALT), formerly known as Ti-Tree Station (a 2,700 square km pastoral lease that currently operates as a cattle station), is 130 km north of Alice Springs. The Reynolds and Anmatjira ranges extend into the north-west portion of the property and the Stuart Highway transects the centre of the property from north to south.

The site was chosen after consulting Anmatjerr Rangers and Traditional Owners Bob, Robin and Angela Purvis, who were concerned about erosion on the access track to Adelaide Bore.

Landscape rehydration design works within the 1,200Ha catchment project site called Ahakeye East aim to re-instate the hydrological function of the stream network, slowing stream flow and improving the rehydration capacity of the landscape. Left unchecked, the incised streamlines and active erosion will continue to deepen the existing channels severely degrading the Eastern Ahakeye catchment.

(A controversial aspect of the project – there was apparently a handshake deal between the current pastoral beef operators at Ti Tree Station and an Elder representing the Traditional Owners, the Elder has since passed away and now AALT is established and has given the station operators 12 months to move off the land)



Above: The remote location of Ahakeye Aboriginal Land Trust

Below: Lance and Shane measuring levels of a healthy creek system, where the creek bed level is higher than the surrounding floodplain

Funding

The Centralian project is funded by the Australian Government's Future Drought Fund - Drought Resilient Soils and Landscapes Program through the Charles Darwin University. It is a collaboration with members from Mulloon Institute, Northern Western Australia and Northern Territory (NWANT) Innovation Hub and Tierra Australia and station managers and owners from the central Australian rangelands.

