



### Introduction

Mulloon Consulting is a specialist consultancy with an unrivalled reputation for providing high quality technical and practical advice to successfully rehydrate and restore agricultural landscapes. We support farmers in adapting to new and changing environmental conditions.

We deliver service excellence across the entire lifecycle of landscape rehydration and regeneration projects, from site assessments and planning, and on ground works to monitoring and review. We also provide education, having developed a curriculum to build capacity of landholders through interactive hands-on workshops and bootcamps.

### Wheatbelt water cycle restoration

Farming operations within the WA Wheatbelt region are being increasingly affected by salinity and waterlogging. This is due to the degradation of the natural water cycles caused mainly by the removal of deep-rooted perennial plants, and their subsequent replacement with short-lived and shallow-rooted annual crops and pastures. This has resulted in water accumulating in the lower, formerly productive areas of the landscape rather than being cycled and spread across the upper ridges and middle slopes. Raised water tables in low lying areas and valley flats also lead to salt concentration at the soil

surface. Other common issues are erosion of steep slopes and bare soils, scouring of water courses due to high velocity flows during heavy rainfall, and a decline in biodiversity and overall ecological resilience. In this context, our solutions focus on restoring the water cycle across the whole landscape to reduce waterlogging and salinity.

**Mulloon Consulting works with a wide range of Wheatbelt farming enterprises including cropping, livestock grazing, horticultural production, agro-tourism and mixed farming focused businesses.**

**We tailor solutions to meet the specific production needs of our clients so they can maintain long-term profitability.**

*ABOVE: Revegetated ecological corridors improve water cycling and biodiversity.*

*BELOW LEFT: Workshop participants observe first hand a brush weir that was installed to prevent further erosion and encourage regeneration of a salt scalded gully.*

*BELOW RIGHT: A grader constructs a contour bank to intercept and infiltrate surface water flows during rainfall events as well as re-distribute water to drier parts of Paraway Farm in Boyup Brook.*



Firstly, we complete an initial site inspection to discuss the operational requirements of the business, undertake field investigations of environmental parameters such as water quality, salinity levels, soil profiles and vegetation cover, and research the environmental and planning context of the property.

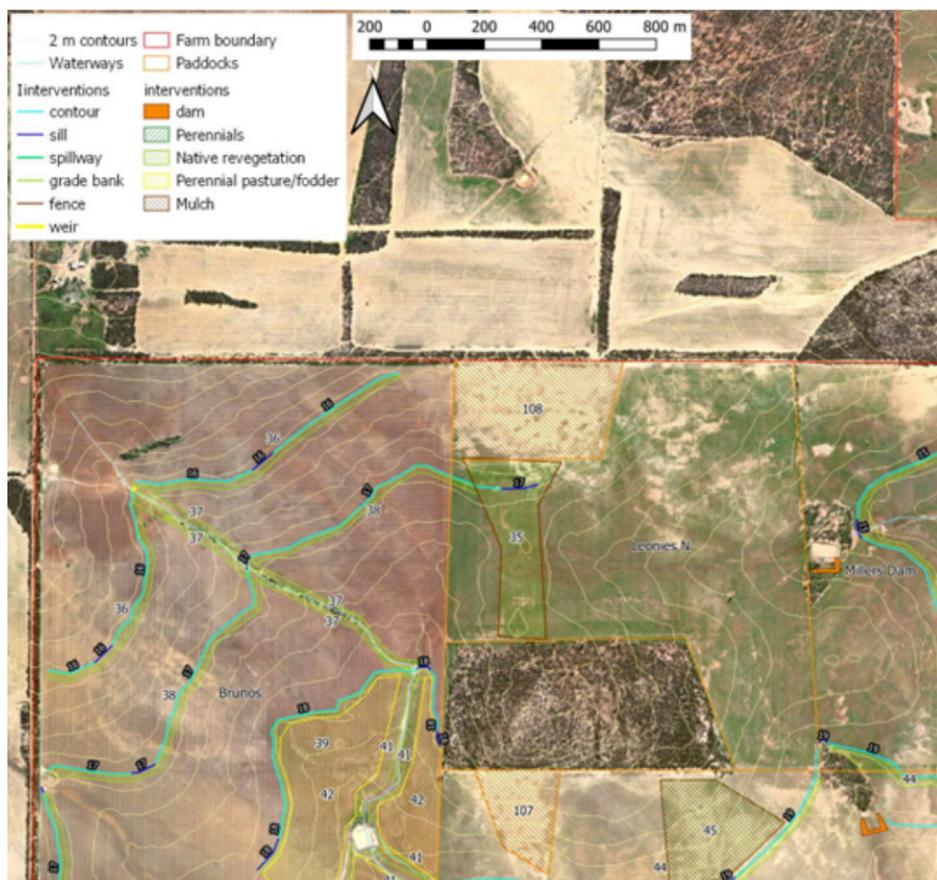
Next, we develop a tailored design and report, including maps and detailed descriptions of recommended works and management solutions.

We can provide implementation (including set out and supervision of construction) and monitoring services for more complex projects to ensure high quality outcomes.

We also facilitate educational field days and workshops in the Wheatbelt region to upskill local land managers about hydrological function and water cycling, as well as the practical elements of designing and constructing landscape rehydration interventions.

## Capabilities

- Solutions for increased productivity in salt affected and waterlogged landscapes.
- Tailored designs to suit multiple agricultural business priorities – cropping, grazing, horticulture and mixed farming operations.
- Liaising and communicating with a wide range of land managers and stakeholders to determine key hydrological issues and concept solutions.
- Initial site assessment and desktop analysis of geographic and planning information.
- Sourcing and utilising high accuracy terrain mapping, such as LiDAR and drone technology to survey project sites.
- Measuring and mapping soil and water salinity.
- Specialist advice to remediate and restore productivity and ecological function on salt-affected land.
- Detailed designs and reports for implementing landscape rehydration and related intervention measures.
- Logistical support for sourcing materials and equipment.
- Surveying and marking out proposed construction works, revegetation and pasture management zones onsite.
- Supervision and implementation of construction and other landscape rehydration works.
- Monitoring and provision of advice for long-term maintenance of landscape rehydration interventions.
- Capacity building via educational field days and workshops.



ABOVE: Landscape rehydration design plan for Tirrana Farm in the northern Wheatbelt of WA.

## Mulloon Institute

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