Department of
Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

Reforestation by Environmental or Mallee Plantings – FullCAM 2014

Weelhamby Farm Biodiversity Project

$615,500
Total project cost

$345,500
CF-LRP funding

+

$270,000
Co-contribution

22,000
Projected ACCUs

David Martin

Location	Perenjori, WA
Project area	230ha
Property size	5,500ha
Permanence period	100 years

Agricultural Productivity | Biodiversity | Soil Health | Salinity Mitigation | Aboriginal Economic Opportunities

Aims

- The Weelhamby Farm Biodiversity Carbon Project's will re-establish habitat in an area of ecological significance using belt and block plantings of endemic species. This project integrates with the Weelhamby Farm Soil Carbon Project.
- Together, these projects aim to prove that carbon farming is viable in low rainfall areas in the Northern Wheatbelt without locking up productive land.
- The goal is to maximise carbon sequestration and land restoration while boosting the profitability of a mixed cropping and livestock grazing enterprise and diversifying the property's income streams. The activities will also increase biodiversity above and below ground across the property as part of a sustainable, regenerative approach.

Above (L-R): Planting at Weelhamby Farm in 2022, Seedlings ready for planting (image courtesy Carbon Farming Foundation)

Activities

- Wildlife corridors are woven across the property, linking 1,500ha of remnant vegetation to the 3 adjacent nature reserves.
- Remnant vegetation has been fenced off to recover from past overgrazing.
- A 230ha revegetation program used manual and machine tube stock planting, and direct seeding.
- Wide belt plantings along existing and new fence lines link remnant vegetation and create cell grazing areas.
- A mix of over 40 biodiverse native tree and understory shrubs endemic to the area have been planted.
- Windbreaks will reduce erosion, offer stock shelter and increase water infiltration by slowing movement of water across the landscape.
- Block planting on land unsuited to agriculture and adjacent to nature reserves will extend habitat for mallee fowl and other threatened species.
- The project will employ Traditional Owners to support On Country activities.

Department of
Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

Estimation of **Soil Organic Carbon Sequestration** Using Measurement and Models - 2021

$1,595,500
Total project cost

$393,100 CF-LRP funding + **$1,202,400** co-contribution

155,000
Projected ACCUs

Weelhamby Soil Carbon Project

David Martin

Location	Perenjori, WA
Project area	3,200 ha
Property size	5,500 ha
Permanence period	25 years

Agricultural Productivity | **Soil Health** | **Salinity Mitigation**

Aims

- The Weelhamby Soil Carbon Project has been designed to integrate landscape revegetation of the Weelhamby Farm Biodiversity Project with pasture rejuvenation techniques to build organic carbon levels in the soil.
- The soil carbon project covers 3,200 ha, making it the largest in WA. It will demonstrate the potential of carbon farming in low-rainfall areas, and how it contributes to increased profitability and improved agricultural resilience.
- Whole of farm and systems scale planning incorporates regenerative and sustainable practices to address historical land management and overgrazing issues.
- The project aims to increase soil organic carbon levels from 0.7% to 1.2% in the top 30cm in the first 10 years using pasture rejuvenation and managed grazing.

Above (L-R): *Soil baselining at Weelhamby Farm (image courtesy Carbon West). Hone Ag soil sampling measures changes on an annual basis, allowing practices to be adjusted*

Activities

- Shift from high input cereal cropping to a grazing enterprise with a 3-year pasture/1-year crop rotation.
- Establish multi-species pastures to protect topsoil, prevent wind and water erosion, increase soil microbial and fungal activity, and build soil organic carbon.
- Year-round ground cover minimises evaporation and run-off, and increases soil water holding capacity.
- The addition of legumes in the pasture mix is a significant change and is expected to make a positive difference to plant-available soil nitrogen levels and reduce fertilser use.
- A qualified agronomist calculates nutrient and pasture seeding regimes to provide the best cropping results while building soil biodiversity and organic carbon levels
- Weelhamby is working with Edith Cowan University to deliver a Future Drought Fund: Long-term Trials of Drought Resilient Farming Practices project. It will trial traditional Maaman Marra Boodja land management practices and landscape manipulation to rehydrate and restore land function.