

CASE STUDY



Looking at Wirrealpa through new eyes

Warren and Barbara Fargher own and manage 'Wirrealpa Station', a 1500 square kilometre pastoral station located 30 kilometres east of Blinman on the eastern edge of the Flinders Ranges in South Australia. Wirrealpa has been owned and managed by the Fargher family since the early 1950s and, today, it is a diverse business operating wool, lamb, beef and tourism enterprises.

Warren and Barbara manage the station on their own, with the casual labour input of backpackers at times.

An important aspect of running Wirrealpa is the sustainable management of its natural resources. The introduction of Ecosystem Management Understanding (EMU)[™] in 2010 enhanced this focus and increased Warren and Barbara's

enthusiasm for the business, which has provided production, environmental, financial, and people benefits.

This case study tells how a sequence of events since 2009 has allowed Warren and Barbara to see their station through new eyes.





Wirrealpa Station, April 2013

A MOTIVATION TO CHANGE

Wirrealpa, like other stations within the Flinders Ranges region of South Australia, experienced a 20-year drought to 2010.

The timing of the first drought-ending rains came at a time that the business was moving through succession, undertaking a change in business structure, and Barbara had completed a postgraduate course in Rangeland Management through the University of Queensland.

These factors, combined with the breaking of the drought, allowed Warren and Barbara to capitalise on opportunities which they previously were unable to.

At this time, Warren and Barbara recognised the opportunity to submit an Expression of Interest and commenced their involvement in EMU™.

Warren and Barbara recognise the value of production and environmental diversity within their business. EMU™ has allowed the business to focus on maintaining the sustainability of Wirrealpa's natural resources.

EMU™ is a big commitment, and intervention works to date ultimately

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have been aimed at making the most of the limited rainfall the station receives, ensuring water from rainfall spreads across more of the land to benefit the native vegetation and livestock production, rather than being lost to creek systems.

BUSINESS SNAPSHOT

Name	Warren and Barbara Fargher
Property Name	Wirrealpa
Location	Eastern edge of Flinders Ranges, 30km east of Blinman, SA
Size of Property	1500km ²
Enterprise Focus	Wool, lamb and beef production, plus tourism
Number of people working in the business	Warren and Barbara (full-time), plus casual labour at times
Rainfall	Average annual rainfall for Wirrealpa is 187mm Previous annual rainfall recorded for Wirrealpa include: 2010 – 249mm 2011 – 264mm 2012 – 370mm

Barbara and Warren Fargher of 'Wirrealpa Station'





An aggressive gully system was eating away some of the more productive country found on 'Wirrealpa' while also draining water away.



This is the same area once the machinery were engaged at the 'Drug Creek Site'. The gully system was flattened to produce a good platform for the bank to be built.



The first of five banks was built on the site. The first bank needed to be 'chunky' to take the first hit of storm flows of water. The other banks were smaller, and also cheaper to develop. Images taken in 2011.

HOW IT WORKS

What is EMU™?

Ecosystem Management Understanding (EMU)™ is a holistic approach to land management which incorporates land manager knowledge and experience with scientific expertise.

Developed by landscape ecologists Ken Tinley and Hugh Pringle, EMU™ has been adopted by pastoralists in Namibia (southern Africa), the Gascoyne-Murchison catchments of Western Australia, the southern Northern Territory, and more recently in the Marla-Oodnadatta, Gawler Ranges, and North Flinders districts in the SA Arid Lands region.

Experts involved in the delivery of EMU™ work closely with the land managers, utilising their local knowledge about the land, its processes, condition and trends, and also what needs attention.

This information is used to provide advice and guidance in the development of a specific program for the property, with the information first summarised using a series of maps (clear overlay sheets) laid over a satellite image of the property.

On-ground and aerial inspections add further detail with the resultant map a permanent and invaluable record for measuring and monitoring the land and tracking changes and strategic management interventions.

All information collected and developed is confidential and remains the property of the participating landowner.

Following the mapping process, key activities are identified, often addressing priority issues which require on-ground management change. EMU™ activities may include:

- developing whole-of-property grazing strategies
- preventing and halting erosion of productive landscapes
- redesigning infrastructure to protect fragile landscapes
- monitoring landscapes and specific management issues
- redirecting water from tracks to allow it to move across the landscape
- protecting special areas
- pest and weed management.

Finally, after works have been undertaken, monitoring points are installed. The collected data provides a measure of the project success and, if issues arise, they can be managed in a timely manner.



Warren Fargher standing at the 'Drug Creek Site' in April 2013. Note the banks in the background and the vegetation on the right side of the image, plus the small tree in the background which has been barely disturbed during the works.



BENEFITS OF EMU™

- Builds trust and confidence
- Embraces local knowledge
- Develops confidence to implement change
- Provides knowledge and sharing of information, creating landscape-literate managers and communities
- Generates more productive and healthy landscapes
- Highlights other business opportunities and enhances or reinforces key values of the participating businesses
- Improves understanding of what the landscape can offer, its limiting factors/issues, and promotes 'mindful management'.

KEY EMU™ STEPS TAKEN AT WIRREALPA

1. An initial meeting between Warren and Barbara Fargher, a Natural Resources SA Arid Lands representative, and EMU™ director Hugh Pringle, identified the Fargher's objectives, management history and key issues.
2. Overlay maps were created which plotted Warren and Barbara's knowledge of land condition, processes and problem areas.
3. An aerial survey was undertaken based on this mapped information with photos taken to show significant or problematic areas. Key issues and points of interest were then mapped as a result of the aerial tour.
4. On-ground site visits were undertaken to more closely inspect areas of interest using the maps and aerial photos for reference.
5. The major review period identified the most valuable production areas across Wirrealpa as well as any associated issues. The review also considered the works that might be undertaken, the expertise required to carry out on-ground works, and how to fill any knowledge gaps.
6. Monitoring and evaluation is an ongoing process. It involves the installation of monitoring systems, preparation of project proposals, implementation of projects, and review, revision and refining of practices as a result of ongoing learning and observations.

How EMU™ works at Wirrealpa

Through EMU™ and its associated on-ground works, Warren and Barbara are reducing the impact of erosion caused by water running down gullies, and reducing the advancement of gully heads. The water is now being diverted, spreading across a larger area, rehydrating the soil, and encouraging native vegetation growth. In undertaking EMU™ activities, Warren and Barbara are conscious of minimising the impact to the surrounding soils and vegetation as much as possible.

In addition to their EMU™ projects, Warren and Barbara are also carrying out smaller manageable projects such as road and track development. Many of Wirrealpa's roads and tracks lead from the hills through to the flats – the same direction the water flows on the property. To prevent them forming into creeks in the future, Warren and Barbara have learned how to repair and construct roads/tracks.

Warren and Barbara continue to work with the team of experts involved in the delivery of their EMU™ projects, seeking advice and planning future works as necessary.

The EMU™ process engages the landholders and experts to develop a series of comprehensive maps which overlay a satellite image of the property. The maps, as seen above with Warren, remain the property of landholders which also maintains confidentiality. This process proved to be very rewarding for Warren and Barbara.



For 20 years, Wirrealpa has run a successful tourism enterprise.

LOOKING FORWARD

Warren and Barbara are considering retirement within the next 10 years. In recent years they have experienced significant benefits from the good season and from their participation in EMU™ and they will continue to focus on running their business more efficiently.

They have recognised the importance of diversity in their business and aim to maintain their wool, lamb, beef and tourism enterprises.

They have a strong desire to improve the environmental condition of the property for the long-term benefit of the environment, and for future generations. They are thinking about the natural resources and how they can most effectively manage their land 'all the time'.

They aim to continue undertaking their EMU™ projects and identifying opportunities to improve their livestock enterprises to maximise cash flow while also reducing labour needs.

And they are also aware of the ongoing infrastructure improvements required and the need to undertake these improvements in a manner that reduces the impact on the property's natural resources; is financially viable; and considers their retirement goals.

OTHER ENTERPRISES – 'SPREADING THE RISK'

Cash flow on Wirrealpa is spread across the year by running complementary livestock and tourism enterprises.

Livestock

In 2012 Warren and Barbara sold all of their 18 month old merino ewes, plus all 'cast-for-age' ewes, achieving good prices, given the positive state of the sheep markets at that time. The ewes were sold with production efficiency in mind.

During the drought it had been difficult to keep the ewes in good condition to support themselves and their lambs, and this impacted lambing percentages and wool production. With retirement goals in mind, and to manage the risks associated with running a self-replacing merino flock, Warren and Barbara purchased 18 month old merino wethers which they plan to retain for 3-5 years.

The change of enterprise model has improved wool production and reduced the labour requirements associated with managing a self-replacing flock. To meet processor needs and assist the business through cash flow generation, Wirrealpa are now also shearing every 8-10 months.

The introduction of a dorper prime lamb enterprise will ultimately see a reduction in shearing costs and fly strike impacts. With beef cattle numbers also increased, the combined meat and wool enterprises will allow the business to spread the risk of fluctuating markets.

Tourism

For 20 years, Wirrealpa has run a successful tourism enterprise, an accommodation and catering services which has provided significant support to the business during the drought. With its central location in the eastern Flinders Ranges, Wirrealpa provides tour groups with a 'stop-over' for morning or afternoon tea and Warren and Barbara also offer accommodation with 35 beds spread across cottages, a house, and shearers quarters.

Wirrealpa has been the site for various corporate advertising campaigns, workshops and groups. Warren and Barbara have experienced many benefits from their tourism business including the establishment of networks and friendships.

PAYOFF AND NEW PERCEPTIONS

Warren and Barbara now see their land through a different set of eyes.

While flying over Wirrealpa, they no longer focus on where the stock are but also the landscape and any changes.

Gully heads have always been of concern but now they have a better understanding of how these areas can impact the wider property and methods for managing the issues.

Warren and Barbara also have an increased understanding of the impact of vehicle tracks and the importance of mindfully travelling across their property. And they have recognised the impact of water movement as a result of livestock pads and adopted measures to prevent the pads from creating their own waterways, with filters made from fallen branches allowing the water to slow, spread further across the ground, and rehydrate the soil.

They have also seen opportunities in educating visitors and other land managers about the EMU™ work undertaken to improve and care for the land. Warren and Barbara will be hosting a 'landscape literacy' session on EMU™ at Wirrealpa in June 2013 where they will be guest speakers. This gives them an opportunity to promote both EMU™ and their tourism enterprise.

Then there are the financial benefits.

The decisions made and practices implemented over the last three to four years have presented Warren and Barbara with increased optimism about the business and their future as a result of involvement in EMU™.

And they are seeing significant environmental benefits that will continue to benefit the station and ultimately lead to financial benefits for the business.

THE FINAL WORD

Warren and Barbara make the following broad business recommendations to other pastoralists:

- Value your time – of all the jobs required to be undertaken within the business, which are the most valuable and deserve priority?
- Focus on what is going to provide you with the best outcome for your business.
- Work as a team – large properties, isolation and reduced labour mean good communication and teamwork are critical to achieving your business goals.
- Be flexible with your projects and your people – recognise that seasonal variability can impact the progress of projects.
- Diversify – enterprise diversity can help with cash flow management and drought-proofing of your business.
- Make considerations for education of children, and early.
- Plan – considered plans are important for business success.
- Make individual superannuation contributions to fund your retirement.
- Monitor and evaluate – you cannot manage what you do not measure.

RESOURCES

Centralian Land Management Association Fact Sheet 'Ecosystem Management Understanding EMU™ – empowering pastoralists to manage for sustainable and productive landscapes' www.clma.com.au

Pringle, H.J.R. 2009, 'Ecosystem Management Understanding (EMU) pilot in northern South Australia' Report to SAAL NRM Board.

SAAL NRM Board, 2011 'EMU™: land management using local knowledge' Fact Sheet www.naturalresources.sa.gov.au/aridlands

SAAL NRM Board, n.d, 'Monitoring Photo Points' Fact Sheet www.naturalresources.sa.gov.au/aridlands

Walton, J. and Pringle, H.J.R. 2010, 'The Ecosystem Management Understanding (EMU) pilot project: building landscape literacy using local knowledge to improve rangeland health in the Neales River Catchment of South Australia' www.austrangesoc.com.au

BESTPRAC

Bestprac (co-funder of this case study) is an Australian Wool Innovation network providing support for pastoral wool, sheep meat and cattle producers to improve their business and production performance. Pastoralists benefit from the tools, information and innovative ideas presented by Bestprac via a dedicated website, at forums, in e-newsletters and case studies. Visit www.bestprac.info for more information and to register for the monthly electronic newsletter.



Rural Directions Pty Ltd is the National Coordinator for Bestprac. For more information contact Pene Keynes or Carlyn Sherriff on (08) 8841 4500 or email bestprac@ruraldirections.com.

FURTHER INFORMATION

On behalf of the SA Arid Lands Natural Resources Management Board, Natural Resources SA Arid Lands is delivering various regional projects in cooperation with local land managers, industry, government agencies and environmental and community groups to manage water resources, native vegetation, threatened species, weeds and feral pests. These activities aim to develop sustainable management practices which support communities, drive business activities and address processes that threaten valuable natural resources in the region.

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