



Local Landholder Case Studies



Stories from the Cross Property Planning project



Murrumbidgee Landcare Inc

Local Landholder Case Studies: Stories from the Cross Property Planning Project

20 farmers from Murrumbidgee Landcare's Cross Property Planning project talk about their experiences with natural resource management, and how they integrate conservation and production on their properties.

This publication was authored by Nicole Maher and Jacinta Christie
of Murrumbidgee Landcare Inc.

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Acknowledgements

Murrumbidgee Landcare would like to thank all the landholders involved in the CPP project for your inspirational work.

To the landholders featured in this book, we thank you also for allowing us to interview you and document your stories.

We wish you all many more years of successful Landcaring!

Murrumbidgee Landcare's *Cross Property Planning to Balance Production and Biodiversity* project was assisted with funding from the NSW Environmental Trust and the Australian Government.

Front cover images

Top: John and Nicole Hopkins, Illabo

Middle: Bundle and Peter Lawson, Book Book

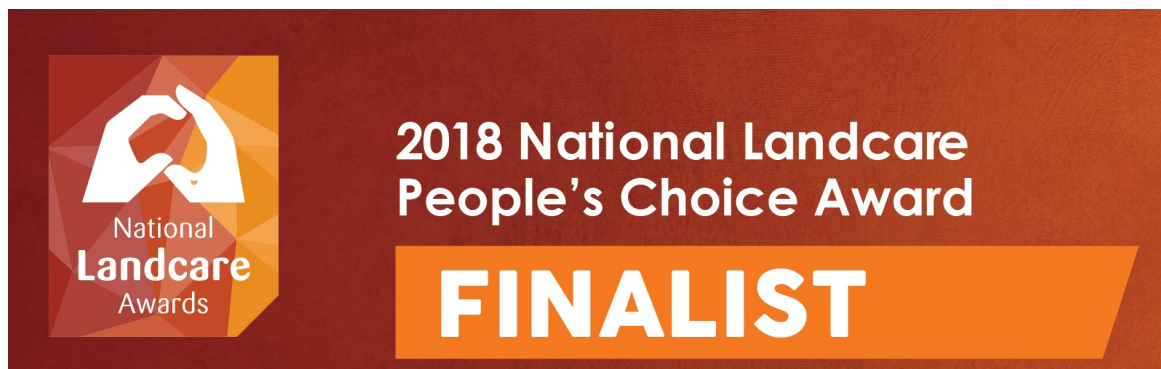
Bottom: (Left to right) Lawrie Sykes, Humula; Nicole Maher, CPP Project Officer;
Jacinta Christie, CPP Project Officer; David Tooke, Humula; Mary Nicholls, Humula

GREEN GLOBE

Winner 2016

The Cross Property Planning project was the winner of the "Natural Environment" Award in the 2016 Green Globe Awards.

The Green Globe Awards are the leading environmental recognition program for NSW, celebrating excellence, leadership and innovation in sustainability.



The Cross Property Planning project was the winner of the Australian Government "Excellence in Sustainable Farm Practices" Award in the 2017 NSW Landcare Awards.

We were also the State Finalist for this category at the 2018 National Landcare Awards.

This recognition for the project was only possible due to the hard work, diligence, passion and commitment of the landholders who participated in the project.

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Introduction

About the CPP project

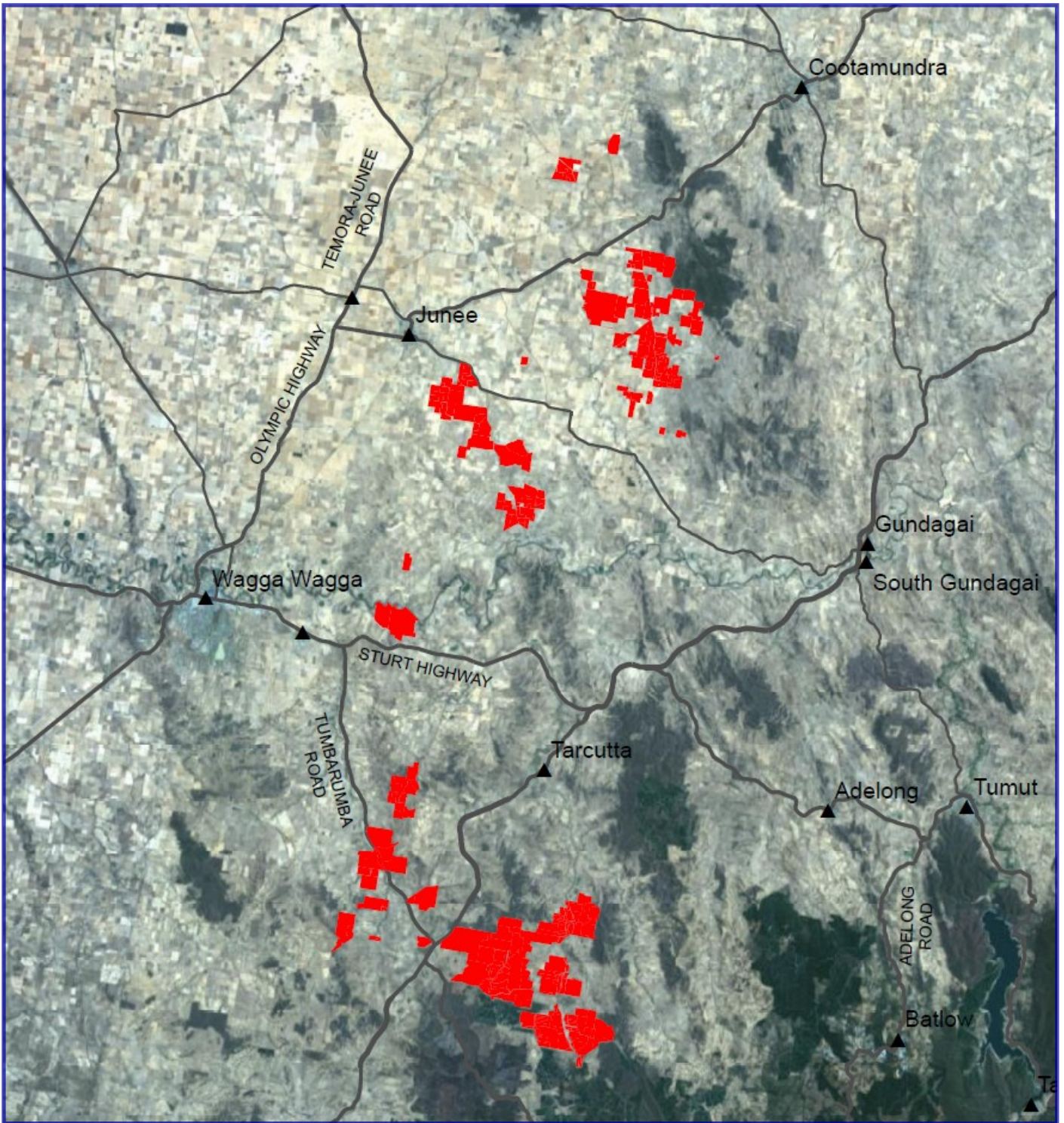
The Cross Property Planning (CPP) project was a six-year community Landcare project to protect and enhance native vegetation in the central Murrumbidgee region. This region has been extensively cleared for agriculture, with the remaining native vegetation (less than 5% of the total area), including the Endangered Ecological Community of Box Gum Grassy Woodlands, now existing in small, scattered patches on multiple tenures. The CPP project was developed to link and extend the fragmented remnant vegetation across property boundaries to protect and enhance biodiversity and habitat.

The project was run as a partnership between Murrumbidgee Landcare and the three Landcare groups in the project area: Junee Area Landcare Network, Kyeamba Valley Landcare Group and Tarcutta Valley Landcare Group. It was funded through the Australian Government's Biodiversity Fund and the NSW Environmental Trust's Community Bush Regeneration program, and was completed in late 2017.

In 2016, the CPP project was awarded the prestigious "Natural Environment" Green Globe Award. These Awards are the leading environmental recognition program for NSW, celebrating excellence, leadership and innovation in sustainability. In 2017, the project was also awarded the NSW Landcare "Excellence in Sustainable Farm Practices" Award.



CPP Project Officers Jacinta Christie (left) and Nicole Maher, with the Green Globe Award



Locations of the properties involved in the CPP project

Flora and fauna surveys

In September-October 2013, Dr Fiona Christie and Alison Elvin conducted 30 flora and fauna surveys on 24 of the farms involved in the CPP project. The aim of the surveys was to obtain a snapshot of baseline species diversity 'on farm' throughout the region, and to provide the landholders involved with information about the species found on their site.

The surveys were conducted on sites with a minimum of two hectares of native vegetation, either remnant or planted. Dr Christie conducted bird surveys across each site in the early morning and late afternoon, recording all birds heard and/or sighted. Ms Elvin selected a 50 x 20 metre quadrat within each 2 ha site, and identified all visible flora and fauna within the quadrat. Alison also assessed groundcover condition, recording litter layer, bare ground, cryptogams (mosses and lichens), native and exotic groundcover plant species, fallen timber and twigs.

The survey findings overall were positive, especially in an intensively farmed landscape with recent catastrophic natural disasters, including the millennium drought, catastrophic wildfire, and intense storms and floods. Despite such impacts, the surveys of 30 sites recorded:

- Threatened Ecological Communities (with varying levels of disturbance) on 12 farms: Inland Grey Box tall grassy woodland communities on 3 farms, and Box Gum Grassy Woodland communities on 9 farms;
- 7 species of threatened birds: Superb Parrot, Varied Sittella, Flame Robin, Scarlet Robin, Brown Treecreeper, Grey Crowned Babbler and Diamond Firetail;



Wildlife observed during the surveys included (clockwise from top left) a Dusky Woodswallow, White-faced Heron (seen flying to and from the nest shown here), Bearded Dragon and Brown Snake

- Over 90 species of birds, including 87 species of native birds); and
- 188 species of plants, including 154 species of native plants.

The shape, age and connectivity of revegetation areas was found to affect the suite of bird species living there. The surveys clearly showed that the larger and more ecologically intact the remnant, and the closer it was to similar remnants, the higher the number of small insectivorous and nectarivorous woodland bird species. These birds are currently declining in the south-west slopes and tablelands, and it was heartening to find them dominating these remnants. In contrast, long, linear sites that were not inter-connected with larger remnants recorded more common birds, including some exotic species and many Noisy Miners (an aggressive native bird that out-competes woodland birds for territory).

Another clear finding was the presence of numerous native bird species, including the threatened Superb Parrot, in mature River Red Gum forest remnants along watercourses, provided sufficient tree hollows and flowering eucalypts were available.

The findings from these surveys supported the overall aim of the CPP project - to assist landholders to link-up remnant and revegetation areas with other remnants and mature paddock trees, both throughout their own farms and across into neighbouring farms, increasing the overall landscape connectivity without adversely impacting on their productivity.

In order to continue the interest raised by the flora and fauna surveys, three remote sensor cameras were purchased through the CPP project and made available for use by the project's landholders. The nocturnal and often cryptic behaviour of many Australian mammals can make it difficult and time consuming to detect their presence in a particular area. Landholders were able to set up these remote wildlife cameras on their properties, with the camera's operation triggered by the movement and/or body heat of an animal. Animals were encouraged to come into the view of the camera by the placement of bait (either herbivorous or carnivorous) in front of the camera. The use of the cameras was popular among landholders, and provided them with an additional insight into the fauna present on their farms.



Fallen trees, branches and logs provide critical habitat, so landholders are encouraged to leave them in place

On-ground works

There were 76 neighbouring landholders engaged in the CPP project, covering an area of over 56,000 ha. Using mapping and an evaluation of the biodiversity attributes of each property, cross-property plans were prepared to elicit the most effective contribution each property could make to habitat connectivity. The plans were used to guide protection, revegetation and management activities on each property, with incentive funding provided to landholders to undertake these works.

Through the project, landholders fenced and revegetated 697 hectares of land on working farms, focussing on fragile areas of the landscape such as gullies and waterways, to prevent and repair erosion, water quality issues and dryland salinity impacts. An additional 1,064 hectares of remnant native vegetation on agricultural land was protected and enhanced. 86,083 native tree and understorey seedlings were planted, and 109 kilometres of fencing installed to protect vegetation and control grazing in sensitive areas.

Additional work has included fencing of dams and other waterways to control livestock access, with benefits for erosion reduction and water quality; subdivision of paddocks for improved grazing management and regeneration of native pasture; integrated weed management across 13,853 hectares; and coordinated pest management across 27,668 hectares.



697 hectares of farmland was revegetated through the project, with over 86,000 native seedlings planted



1,064 hectares of native vegetation remnants on farmland was protected and enhanced through the project

Events and resources

The CPP project has helped landholders to learn about and implement sustainable land management practices, through a series of field days, workshops and other events. Project events were delivered in response to direct requests or interest from project landholders, but were open to all members of the community to attend, significantly expanding the project's reach.

Over 60 such events were held through the project, with over 1,100 landholders attending. Partnerships with 25 organisations enabled a broad range of events to be delivered, by drawing on the skills and expertise of the many partner organisations. Examples of the topics covered include pasture cropping, low-cost erosion control, low-input pasture management, creation of healthy farm dams, paddock sub-division for improved grazing management, release of dung beetles, and the use of native species to control weeds.

The social aspects of the activities were also significant in reinvigorating community connections, through building and strengthening relationships between landholders in each of the regions.

Project learnings and landholder stories have been recorded in online publications, with 87 resources now freely available to all landholders via the MLI website: www.mli.org.au/projects/cpp.



Events offered to landholders through the CPP project included (clockwise from top left): A Soil Biology Workshop in Humula, a Biodiversity Field Day in Bethungra, a 'Women on Fire' bushfire preparedness workshop in Eurongilly, and a Nest Box Field Day in Book Book

Nest box program

In the final year of the CPP project, landholders were offered up to three nest boxes for their properties. A total of 100 nest boxes were installed, across 36 properties, as part of the CPP project. Mammals such as sugar gliders, squirrel gliders and phascogales need multiple hollows for shelter, nesting and breeding. The clearing and loss of native vegetation, including mature trees with hollows, means there are often not enough natural hollows to support populations of these animals. Given that natural hollows can take over 100 years to form, and revegetated areas often have few mature trees, nest boxes can provide a means of survival for the animals until sufficient natural hollows develop.

When choosing a location for a nest box, a site which is connected to an area which might already have gliders present is ideal, bearing in mind that gliders can glide approximately 50 metres. Proximity to a drainage line is also a big advantage, as when nothing is flowering gliders eat insects (moths, lerps, cicadas, etc); most insect activity is concentrated around drainage lines, where there is more water and so more vegetative growth.

When installing nest boxes, a height of around 3 to 4 metres is sufficient, and will make it easier to get up and check the box. Placement on the eastern side of the tree, with lots of branches and canopy cover around the box, will help provide protection from the elements and also from predators such as owls.

A series of field days were conducted several months after the installation of the nest boxes, to investigate whether any had yet been utilised, and allow landholders to learn more about the maintenance and monitoring of nest boxes. In addition to regular maintenance of the boxes, it is important to check each box at least twice a year, to record its usage by native wildlife.

Looking inside nest boxes is much easier with the use of a remotely operated camera on a long pole. One such set-up was purchased through the CPP project, and made available to landholders. While the nest boxes were only recently installed, there have already been signs that some boxes are being investigated by local wildlife, with the presence of green leafy nesting material, and scratch marks on several boxes, indicating possible signs of gliders.



Mason Crane installing a nest box in a mature Yellow Box (Eucalyptus melliodora)

Landholder surveys

Three landholder surveys were conducted through the CPP project: at the start (2013), middle (2015) and conclusion (2017) of the project. The surveys aimed to determine landholder practices and knowledge in relation to NRM and native vegetation, and how this changed throughout the course of the CPP project.

Some of the interesting results which the surveys revealed include:

- 96% of surveyed landholders now recognise the value of native vegetation as habitat for native wildlife, in addition to its role in providing shade and shelter for livestock;
- 88% of surveyed landholders now have a sound understanding of the meaning of biodiversity, compared to less than 10% of surveyed landholders at the start of the project;
- Landholders have developed a far greater awareness of the threat which weeds and pest animals pose to biodiversity, and 95% of surveyed landholders are now actively addressing these threats, compared to 49% at the start of the project;
- 100% of surveyed landholders believed that the project had improved their knowledge and skills in relation to NRM and sustainable land management;
- 100% of surveyed landholders felt the provision of Project Officers was important to their involvement in the project;
- Over 84% of surveyed landholders have learnt new approaches to conservation management through the project, and 50% of surveyed landholders have already implemented what they have learnt;
- 64% of surveyed landholders felt that the CPP project has had an indirect influence on the integration of conservation and production in the project area;
- 56% of surveyed landholders believe that, compared to at the start of the project, their family and farm are now part of an active district network; and
- 88% of surveyed landholders feel that their properties are now a more satisfying and desirable place to live, compared to the start of the project five years ago.

Importantly, 100% of surveyed landholders responded that they had a positive experience with the CPP project. It is pleasing to know that the CPP project was valued by the landholders involved in it, and that it was able to assist landholders to run profitable and sustainable farming businesses.

76 landholders 

26  partner organisations

697 ha revegetated with native plantings



existing native vegetation protected

1,064 ha

86,083 native seedlings planted 

60 workshops and field days



1,100 people trained

3  Landcare Groups


total property area
58,399 ha


109 km fencing installed to protect habitat

 project newsletter readership
1,200

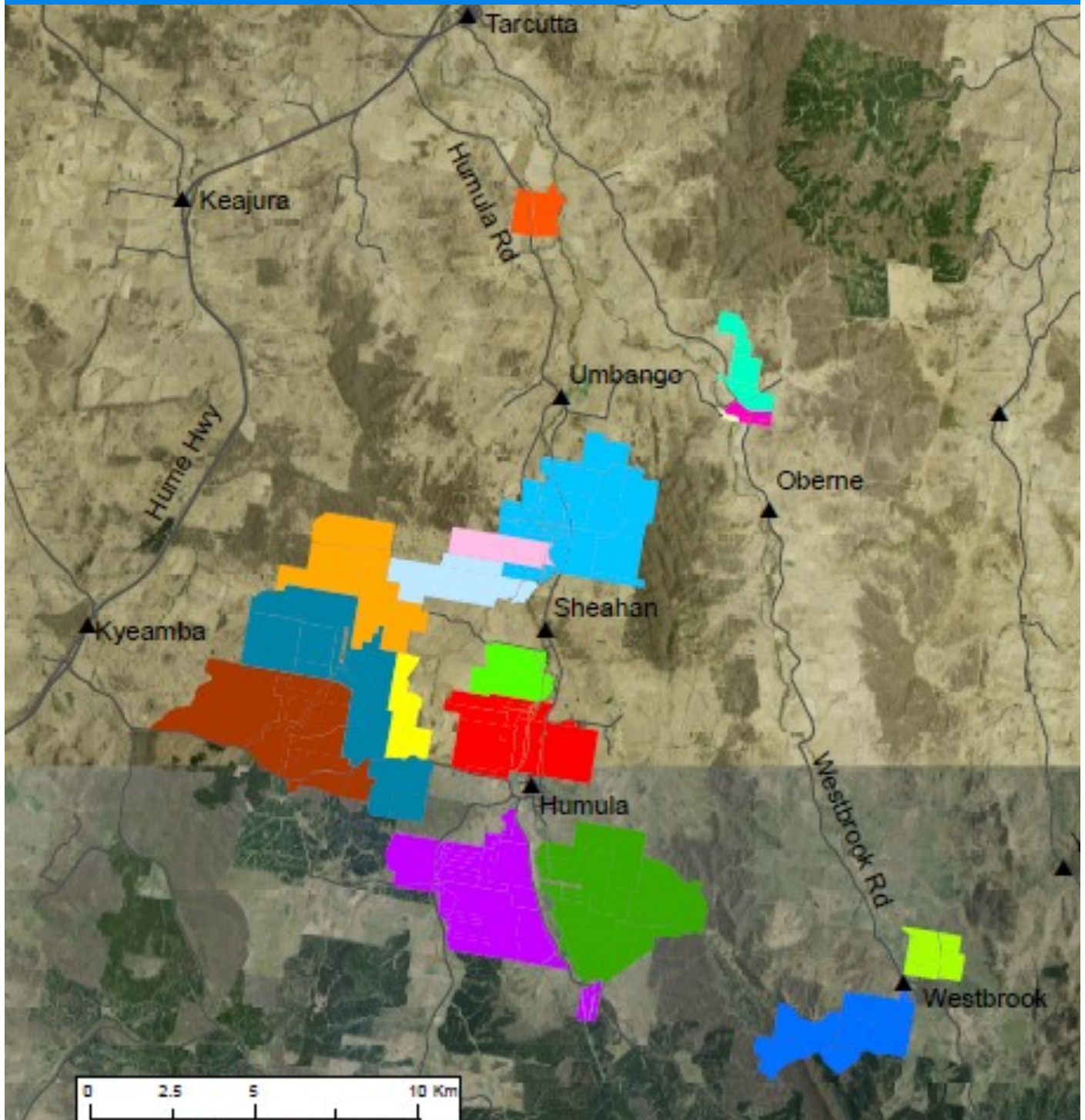
27,668 ha managed for pests 

87 resources produced & freely available 


managed for weeds **13,853 ha**

Summary of the key outputs from the CPP project

Case Studies from the Humula-Tarcutta CPP Group



*Tarcutta Valley
Landcare*



Tom Heaney

“Vitonga”

Humula



Tom Heaney (with CPP Project Officer Jacinta Christie)

Tom Heaney has been farming at ‘Vitonga’ in Humula for nine years, ably assisted by John and Mary Nicholls. Not long after taking over the property, Tom was inspired by his neighbours to join the CPP project. With limited previous involvement in NRM projects, he was enticed by the idea of working with his neighbours to achieve landscape-scale change, across many connecting farms.

“I could see how we could gain benefits by connecting the adjoining properties”

“I could see how we could gain benefits by connecting the adjoining properties, for environmental, flora and fauna reasons. We could collaborate and have weed management and feral animal control over a vast area of the

district, rather than ad hoc, here and there”, says Tom.

Tom, Mary and John have been heavily involved in many aspects of the CPP project, attending numerous workshops and field days, and participating in coordinated control of foxes, blackberry and St John’s wort, to name a few. They have also fenced and planted several tree lots, and planted a number of scattered paddock trees to provide connections between larger areas of remnant native vegetation. In late 2016 they also installed three nest boxes, to assist local squirrel glider and sugar glider populations.

Over the years Tom has been involved with the CPP project, he has learnt a few strategies to ensure better results. “Paddock tree guards need to be made of heavy mesh, or cattle panels” he notes. “Also, trees are best planted prior to the middle of July”.

Another great technique Tom has learnt is to plant his seedlings into bigger pots, and allow them to grow for another year in the pots, prior to planting into the ground. He proudly states, “This method resulted in 100 percent success with our Red Box and Yellow Box trees”.

Through the concerted effort applied to weed control, there has been a massive

Property size

262 ha

Farming enterprise

Beef cattle

Soil types

Loams and shales

Annual rainfall

700 mm

reduction in blackberries and St John's Wort on 'Vitonga'. Tom believes that the reduction in the area covered by weeds has already had a beneficial impact, with increased production area opened up.

In the hill paddocks where St John's wort had long been a problem, Tom has had further success through management of grazing for weed control. This involves grazing the wort in winter through to early spring, to suppress plant growth, prevent flowering and seeding, and help allow competitive pasture species to grow.

It is important to note that St John's wort contains hypericin, which can poison livestock, particularly horses, and cause photosensitisation. For this reason, you should never graze wort in late spring-summer. When grazing in early spring, only graze until the flower stems reach around 5 cm height, as hypericin concentrations become too high above this. For further information about grazing wort, see the NSW DPI WeedWise website: <http://weeds.dpi.nsw.gov.au>.



Tom, Mary and John have devoted considerable effort to the control of blackberries (left) and St John's wort (right) on 'Vitonga'

With the CPP project coming to an end, Tom has commented on the variety of field days and guest speakers that he has been able to learn from throughout the project, "Always learning new ideas and management practices". With the revitalization of the Tarcutta Valley Landcare Group in recent times, we are sure that there will continue to be plenty of opportunities for Tom, Mary, Bim and other locals to hear, learn and trial new innovations on their properties.



Tom has planted many scattered paddock trees for connectivity across 'Vitonga'

In terms of on-ground works, Tom still has more work he'd like to do, declaring his next focus to be "Gully erosion! Along the 3 Mile Creek from the 8 Mile Road, down past the homestead." We wish Tom and his team at 'Vitonga' the best of luck, and look forward to seeing the results of their ongoing hard work.

Tom's Top Tips for successful NRM work

- Listen to the "experts", and try to incorporate their ideas into your projects
- Talk to neighbours about adopting similar practices, such as planting connecting corridors of trees for birds and wildlife. This will give you a more extensive outcome
- Be open to new ideas!

Liz McCallum

“Tintenbah” &

“Ivy View”

Humula



Liz McCallum

Liz McCallum has been an important part of the Humula community for over 30 years, since she and Hector moved here from Rosewood in June 1987.

Of first coming to ‘Tintenbah’, Liz recalls: “I told my family that no one was to touch my kangaroo grass paddock! Apart from a small amount of Super Mo [a pasture fertiliser containing molybdenum and superphosphate], that is all that

“I knew that the native pasture wouldn’t pose a bloat risk to livestock in the spring”

the paddock has had. I wanted it left, because I knew that the native pasture wouldn’t pose a bloat risk to the livestock in the spring”.

Anyone who has had the good fortune to visit ‘Tintenbah’ will be able to attest to the value of Liz’s foresight, with the kangaroo grass still thriving and providing valuable feed. “We had always stocked conservatively to ensure plenty of groundcover year round, so this has also protected many of our native grasses such as the kangaroo grass on our property”, Liz adds.

Liz admits that she has always had an interest in the environment, and natural resource management, “I have always cared for the land, wildlife and animals”. She recalls an early fascination with nature, sharing: “When I first went to high school, I lived with my aunt and uncle on a large dairy farm in Victoria that used flood irrigation. I remember being fascinated with the fish in the channels - these were carp, that were introduced into the irrigation channels to reduce aquatic weeds!”

In the early days of their time on ‘Tintenbah’, Liz and Hector noticed an area of the property, at the top of the Shearing Shed paddock, that was very wet. So around 20 years ago, they planted a tree lot there in a V-shape, to dry it out. This proved successful with Liz saying “It worked extremely well, as previously we couldn’t even drive across it.”

The McCallum’s also spent money on constructing dams, and changed some fence lines to create lane ways for easy stock movement around the property.

Property size

448 ha

Farming enterprises

Self-replacing
Hereford herd,
prime lamb and
wool

Soil type

Clay loam

Annual rainfall

750 mm



Some of the scattered paddock trees which Liz has planted for connectivity

Liz has been an integral part of the CPP project, having been involved in countless project activities and events, and hosting numerous field days and workshops on her property. For her on-ground works with the project, Liz fenced off and revegetated around a dam adjacent to a mature remnant area. She also planted a series of scattered paddock trees and, in a true show of her dedication to the cause, Liz went around her scattered paddock trees and individually watered them, as it was so dry!

The trees were establishing well, but in a heartbreaking turn Liz had a bushfire on 1 April this year, which burnt out around 200 hectares and destroyed 712 individual trees. The CPP project was able to assist Liz to replant a number of trees, and there is no doubt that with Liz's characteristic determination and hard work she will achieve her plan to replace the lost trees, and continue to create a wonderful wildlife haven at 'Tintenbah'.



An example of the extensive damage on 'Tintenbah' from the April 2017 bushfire (left); and a sample of the diverse native pastures on 'Tintenbah', including Weeping Grass and Wallaby Grass (right)

Liz's Top Tips for successful NRM work

- Control the weeds
- In the Humula area, it's best to plant in July/August, to avoid the really dry periods
- Make sure that you don't have stock in the paddock that can knock over the guards
- Make sure your plantings are well watered.

Lawrie & Nicole Sykes

“Miowera”
Humula



Lawrie Sykes

Lawrie and Nicole Sykes would be well known to most in Humula, with Lawrie having grown up in the area and both heavily involved in a range of community groups and activities. But not everyone may be aware of the strong effort the family have put into the conservation and enhancement of the natural resources of their property.

Lawrie recalls it was around 25 years ago that he first became interested in NRM: “Seeing what other people had done was probably what first got me thinking about it. And I think just knowing that something needed to be done to help the sustainability of the property”.

Much of the work the Sykes’ have done has centred around erosion control, but they have also done extensive revegetation works, and also put in a fair amount of perennial pastures.

When the CPP project came along, Lawrie says that they were keen to get involved “because it sounded interesting, and we liked the idea of the cross-property networking. You don’t realise the connectivity of everything until someone explains it to you, but it’s so important! For instance, in the paddocks adjacent to a forestry lot we had fenced off, we didn’t have any red-legged earth mites, while the neighbours were really struggling with the mites, even after spraying them. We found that the reason was because the birds which were in the trees were eating the mites and controlling them for us!”

Through the CPP project, Lawrie and Nicole fenced off two large areas around some major gully erosion and then, with the assistance of Lawrie’s brother, did some earthworks to fill in the eroded areas, before finally planting around the gullies. Lawrie commented on this process, stating “We designed it so that we fenced off enough country on the sides and head of the gully to allow pasture growth - a lesson we learnt from previous gully work. When you fence off a larger area of the paddock, it allows you to use that area for grazing in the future. You can control the grazing because of the fences, and the smaller paddock can be a useful tool in your livestock management.”

Property size

1,500 ha

Farming enterprises

Beef cattle, fat lambs and wool

Soil types

Shales to heavy loams

Annual rainfall

700 mm



A magnificent view over the hills of 'Miowera'

This use of carefully designed fencing for grazing management is representative of a wider change the Sykes' have made in recent times, whereby they have utilised fencing to better control their livestock and manage pastures. They have also adapted their revegetation work, with Lawrie saying that now "We wouldn't plant just eucalypts and other trees in a gully; these days we would definitely include shrubs in our plantings. We also wouldn't fence off an area of gully erosion without doing any earthworks - and we wouldn't do earthworks in spring!"

Importantly, Lawrie notes: "We've learnt the importance of the connection between native wildlife and pastures and native timber. I think the main thing we've learnt is that you just need to be sustainable."

"We've learnt the importance of the connection between native wildlife and pastures and native timber"

An unexpected benefit from the erosion control work the Sykes' completed through the CPP project was a reduction in weeds. However, Lawrie laments that weed control is still a big problem, and costs the industry a lot. "At the moment our main problems are with Erodium, corkscrew and silver grass. But we'll continue to do more earthworks and gully erosion control, and will also put in more perennial pastures. We still have plenty to do!"

While weed control will continue to be a focus, Lawrie and Nicole have been pleased with the success of the work they have undertaken, and comment that "We've definitely noticed an increase in native wildlife, particularly birds." Benefits such as this are a well-deserved bonus for the hard work they have done.

Lawrie's Top Tips for successful NRM work

- Do it properly, and do it once!
- It's imperative to rip and spray for seedling growth success, and to plant the seedlings as early as you can in winter to give them a chance to establish before summer hits.



Lawrie standing on an area of gully erosion which was fenced and revegetated through the CPP project in mid-2016, and is already showing signs of stabilising

David Tooke

“Jiliby”
Humula



David Tooke

There have been a lot of changes at ‘Jiliby’ in the 21 years since David Tooke and his family purchased the property. During their time there, the Tooke’s have fenced out all of the creeks - around 20 kilometres - and are in the process of fencing out the dams. The work has involved a series of projects designed to stabilise the riparian vegetation.

Fencing out the creeks has proven to be very beneficial, particularly for the swampy land in the back country. This area was inundated during the two severe floods of 2010, but the water was slowly absorbed into the soil, rehydrating it. The flats did not fare so well in the floods, with the four creeks that all converge on the property unleashing a massive amount of water here.

Says David, “I was completely astounded by the volume of water that flowed across the farm in the two floods, and the subsequent damage. Fences that had been in place for over 20 years were removed, the amount and size of timber that came through was unbelievable; the damage that was caused will take years to replace and repair.”

In addition to the productive farming enterprises they undertake, the Tooke’s have also established an environmental stewardship arrangement to protect the Box Gum Grassy Woodland on their property. Researchers at ANU have been undertaking a monitoring program of this area, and have found a wide range of woodland flora and fauna present, including some rare and endangered species.

David has been heavily involved with the CPP project, and has undertaken a broad range of on-ground activities through it. This started with a coordinated weed control program across ‘Jiliby’, targeting in particular blackberry and Bathurst burr. David then had a new dam constructed, to provide an alternative water supply following on from their work fencing out the creek. This dam was fenced out to control grazing around it, and David has since installed additional sub-divisional fencing on various parts of the property, to better facilitate the rotational grazing system he has moved towards.

Property size

480 ha

Farming enterprises

Fine wool SRS Merinos, and Charolais, Angus and Murray Grey crossbred cattle

Soil types

Sandy loams rising to shale-based ridge country

Annual rainfall

700 mm

David says that he has found his involvement in the CPP project to be both useful and enjoyable: “This has been the best program that we have been associated with, because of the information days and the quality of the speakers, the scope of projects included and the total environmental impact that is being created in the participants and their families and subsequently their farms”.

During their time at Jilliby, the Tooke’s have become active members of the community, hosting many field days and property inspections over the years. David credits his neighbours and the community with providing valuable guidance, local knowledge and new opportunities: “Having learnt my farming on the dairy farms of the south coast, I needed heaps of help to develop and establish the skills and knowledge to farm in this area. Neighbours, communities, and Landcare groups have been a godsend in very trying times and the projects that we have participated in over the years have allowed us to take positive steps.”

“Liz and Hector McCallum, in particular, have been amazing and should be acknowledged for their tireless efforts for farming and the environment”, David continues. “The broader Tarcutta Valley Landcare Group have reinforced the message and provided the forum to have a wide range of topics discussed and information disseminated, and social interaction with like-minded people”.

The Tooke’s are now focussing on removing the damaged fencing following the floods. They are also working towards their farm plan of establishing the paddocks and water points for a complete rotational grazing pattern. Of the CPP project, David says, “This provides a new opportunity for the community to be involved in an informative and productive process”.

“Neighbours, communities and Landcare Groups have been a godsend in very trying times”

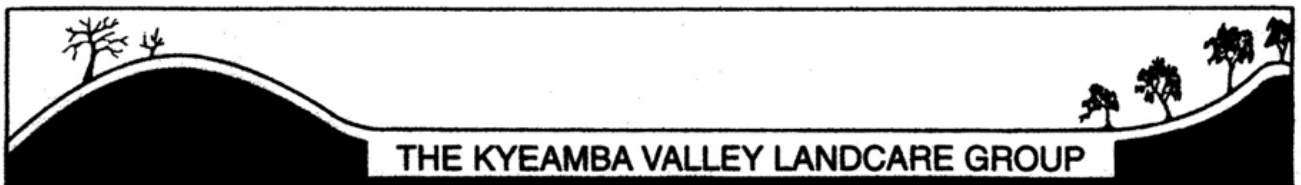
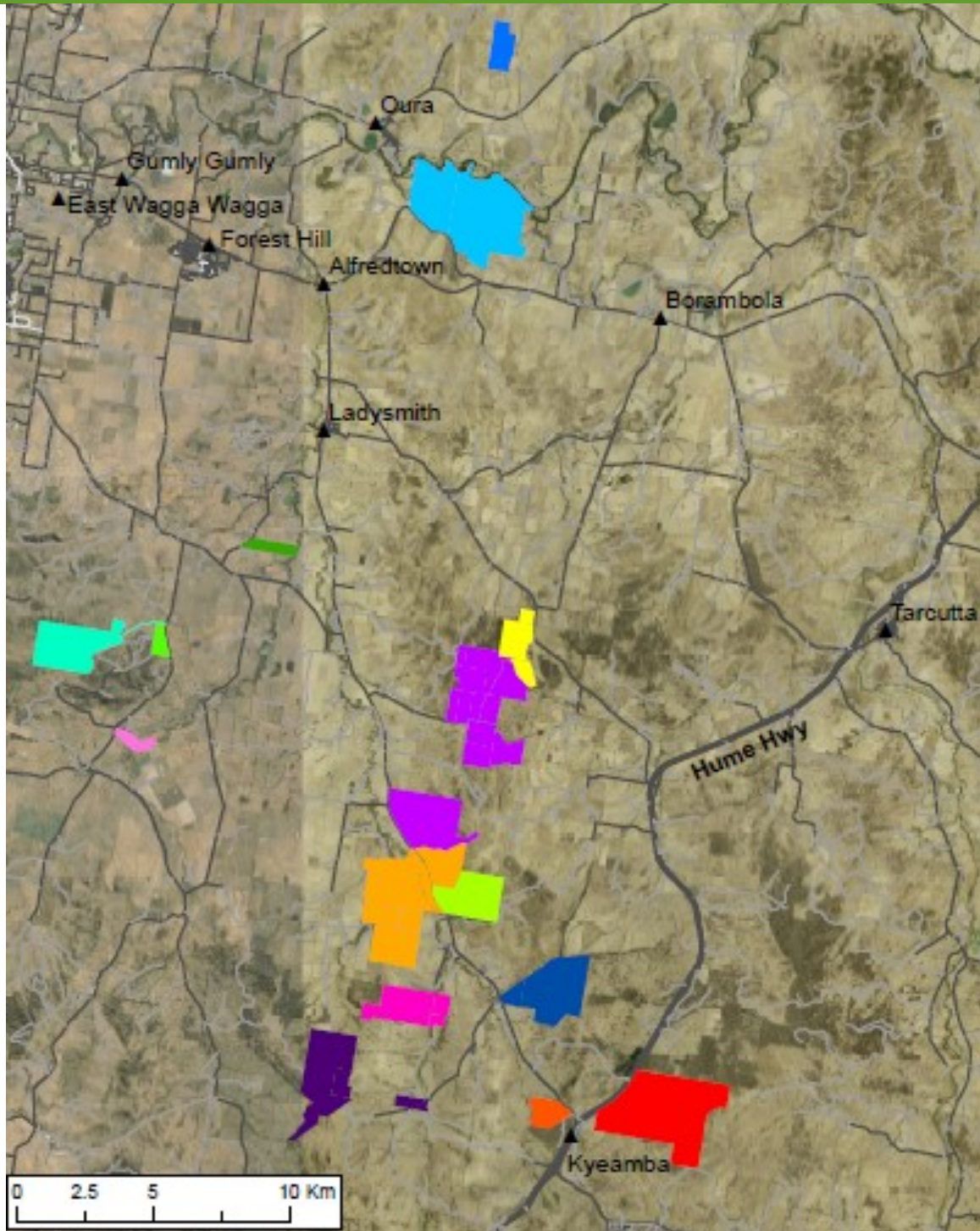


A phalaris paddock on ‘Jilliby’, with remnant and revegetated native vegetation visible

David’s Top Tips for successful NRM work

- Try something that has been demonstrated or discussed at the field days
- Keep discussing ongoing consequences of your changes with your fellow neighbours.

Case Studies from the Kyeamba CPP Group



Robert & Andrew Dunn

“Book Book Station”
Book Book



Robert Dunn

Andrew Dunn and his father Robert own and manage the 1,000 hectare ‘Book Book Station’ in the Kyeamba Valley. Through the CPP project, they hoped to continue their long history of NRM work on the property. Areas of particular interest to both Andrew and Robert were the protection of their isolated mature paddock trees from cattle, and the protection of a patch of remnant vegetation.



In 2014, the Dunn’s used the CPP funding to protect a number of paddock trees using cattle panels. They also fenced a two hectare area around an existing dam, incorporating a nearby area of remnant native vegetation, and also revegetating with a range of trees and shrubs, to create a biodiverse dam and wetland area.



The dam in 2014, prior to any work (top) and in 2017, with shrubs and other natives revegetating successfully (bottom)

Andrew and Robert continue to consider more areas on their property that they can protect for conservation and biodiversity benefits in the future, while they enjoy seeing the biodiverse dam come to life.

Property size

1,000 ha

Farming enterprise

Beef cattle

Soil types

Mostly loams

Annual rainfall

625 mm

Katie & Brad Collins

“Ayrshire Park”

Big Springs



Katie and Brad Collins

Brad and Katie Collins, along with their four children, farm on ‘Ayrshire Park’ at Big Springs. Brad’s parents bought the property twenty years ago, with the family moving to the farm in 2009. Since this time they have made a concerted effort to increase biodiversity and tree cover, in an attempt to regenerate land that had been largely cleared by previous owners.

They attribute their interest in NRM to a range of factors, including Katie’s family background in Landcare at Thurgoona, attending Kyeamba Valley Landcare Group (KVLG) meetings, and education in regenerative farming practices including completion of the RCS “Grazing for Profit” course.

The first NRM work which Brad and Katie completed on their property involved some earthworks to build two dams to slow the flow of water through the property, as well as a swale to direct the flow of water into the existing creek system. They also revegetated several wetter areas of the property, to soak up water while also increasing tree cover and biodiversity.

Not long after joining KVLG the Collins also entered the CPP project. Through this project, they have worked on fencing and expanding existing areas of vegetation, and revegetating with a variety of native groundcovers, understory species and trees. They are also revegetating a new tree plot, including a wetland area, to regenerate another of the wet areas of their property.

Katie has noticed many benefits from their NRM work starting to show themselves in different ways: “Our children have been involved in the fencing, ripping and spraying of the tree plots, and have a feeling of ownership towards them resulting from all their hard work - not to mention some handy new skills! We also have been involved with a local high school HSC agriculture class this year, and it was great to be able to help educate the kids on the value of

“I find myself just taking a walk through the tree plots to cheer myself up if I’m feeling down ”

biodiversity on the property. We have also noticed the excitement we get from seeing the tree plots actually growing and thriving, which is a great boost to our

Property size

520 ha

Farming enterprises

Sheep and cropping

Soil types

Clay and red loams

Annual rainfall

625 mm

mental health. I find myself just taking a walk through the tree plots to cheer myself up if I'm feeling down!"

These personal benefits have been an important part of Brad and Katie's involvement in the CPP project. Katie comments, "In a very practical sense I've learnt how to deep rip with the tractor as well as improving my fencing skills! We have also learnt how to work together to our strengths and how to manage the logistics of the project, like filling out applications, and documenting progress and outcomes."

While the benefits to their production are yet to make a great impact, the Collins are confident that with time they will reap the benefits from improvements such as shelter for livestock, habitat for beneficial insects, and improved crop and pasture pollination. In line with this, the Collins have moved towards more regenerative farming practices, focussing on improving the health of their property, noting the long-term benefits of this approach, "rather than simply chasing an increased yield at the cost of the very resource that provides that yield - our soil."

Brad and Katie may have finished their work through the CPP project, but they are certainly not slowing down in their NRM work! They are involved in several other local Landcare projects, and further to this Katie says, "We would love to fence out our creeks and plant these with natives, and are also looking to improve the water quality on farm. Over the next five years, we aim to increase native pastures, increase soil health, increase carbon sequestration in our soil, and increase habitat for native birds." This is an incredible goal, but as Katie remarks, it's not all hard work - "It's fun and worthwhile. You meet lovely people and discover talents you didn't know you possessed, while investing in the future of your environment."



One of the revegetation areas the Collins planted on 'Ayrshire Park' through the CPP project

Katie and Brad's Top Tips for successful NRM work

- Make a timeline for works to occur: what you want to do in which month and who will do it
- Write down key dates and conversations, and keep all your info together in your Landcare file!
- Smile a lot, and take a positive attitude into the work
- Communicate often with the Project Coordinator to ensure you are on the same page with all the details
- Decide who takes the lead in your working team - and let them!
- Co-opt help from whoever offers: friends, family, passers by...
- Don't get discouraged by setbacks; deal with them and move on
- Take photos of everything at timely intervals, and make sure you document it all.

Sue Dunn

“Book Book South”

Book Book



Sue Dunn

Sue Dunn has lived in the Book Book area all her life, and has been interested in NRM since she was a kid, seeing the birds and wildlife around the property: “I think I was just keen to try to enhance the birdlife, and overall flora and fauna. I also wanted to try and stop the erosion, which is pretty significant in some areas” says Sue.

Many landholders in the Kyeamba Valley will be well aware of the significant erosion problems in the region, and the difficulties of trying to prevent and remediate it. Much of the early NRM work Sue completed on her property was focused on this: “I’ve fenced out a lot of erosion gullies, and planted a lot of trees! I’ve also fenced off sensitive areas of the property to keep the stock off; I fenced off half a dam that was eroding, to keep the stock out and only give them access to one side.”

When the CPP project commenced, Sue immediately jumped on board, saying “I liked the holistic approach to the valley - it’s really good to see it all join up in the big picture. Also the project gives you exposure a bit more to other people in the valley, and I like meeting the new people the project brings in. I also like the opportunity to learn more about the environment and how it works.”

For her on-ground works through the CPP project, Sue fenced off both sides of the creek running through ‘Book Book South’, and plant scattered trees at about 30 metre intervals, to provide a link from the large remnant area at the back of the property with the remnants further down. Sue also fenced out an old dam with lots of mature trees around it, and put in a second dam further down. Sue explains, “The original dam was the only water source for the whole paddock, and since it’s been fenced off there’s been a lot of natural regeneration, which is really exciting to see. It’s a beautiful spot up there now - I might build a little cabin up there!”

Sue has made a number of changes to her management practices as a result of things she has learnt through the CPP project. A major change has been to rotationally graze, instead of set stocking, to give the native pastures a chance to recover. She also tries to stock at more sustainable levels, and “basically just

Property size

325 ha

Farming enterprise

Beef cattle

Soil types

Fertile loams, ridge gravel, and dispersive soils along the creek lines

Annual rainfall

625 mm

try to look after the country more.”

While the erosion problem is still there, Sue is positive about the task, and plans to continue to attack it little bits at a time. She also hopes to enhance the biodiversity of her existing plantings and remnant native vegetation, by planting more flowering shrubs, to attract more birdlife. The extensive revegetation and regeneration work she has undertaken has already seen some wonderful results for the property, with Sue observing: “I’ve seen bird species coming back that I haven’t seen on the property before, which is fantastic. I also get compliments on the property - of course, that’s not why I do it, but it is nice that people appreciate that you are trying to work with nature, rather than just flogging the land.”

“I’ve seen bird species coming back that I haven’t seen on the property before, which is fantastic ”



The dam which Sue fenced off through the CPP project, with new revegetation showing good signs of growth



A small remnant which Sue fenced off through the CPP project

Sue’s Top Tips for successful NRM work

- Do little bits, often! You need to make educated decisions, not be greedy or push too hard. When you’ve done lots of little bits, you find you can drive around one day and see all you’ve done. It’s a long term thing
- I find that if I do something wrong I try to do it different next time. The farm is very quick to let you know when you’ve done something wrong! It can deal you some harsh blows, but it’s very rewarding. I’m learning the whole time - I call it a long term work in progress.

Sarah & Stephen Palmer

“Kyeamba Downs” Book Book



Sarah and Stephen Palmer

It has been 42 years since Sarah and Stephen Palmer began running ‘Kyeamba Downs’, the property which Stephen grew up on. Steve says that their interest in NRM projects developed over 20 years ago, and was largely driven by Sarah, “who has always been interested in that side of things.”

Steve shares that it was another member of the Kyeamba Valley Landcare Group (KVLG) that got them started: “Lyn Retief inspired us quite a bit, and through her we got involved in our first project, which was with Greening Australia. We had an area that had been cleared in the 60s, and had since developed five big gullies. It was very hard to muster in there, so we fenced it off - we actually fenced off an area of 70 hectares. It started to regenerate, and has repaired really effectively since then.”

Following on from this gully project, the Palmer’s started planting a lot of tree corridors, and also fencing out the creeks. More recently they have planted bigger tree blocks, in addition to the corridors. “We’ve now planted well over 20,000 trees and shrubs on our property”, comments Steve.

“We’ve now planted well over 20,000 trees and shrubs on our property”

One of the refreshing outcomes that Sarah and Steve have found from their NRM work is that while they have fenced out significant areas of the property, it hasn’t impacted on their stocking rates. “So we are getting the benefits of the erosion stabilisation, shelter and shade, without losing production”, says Steve.

The CPP project immediately appealed to Sarah and Steve, as it allowed them to continue doing the NRM work they are interested in. Further to this, Steve says “We liked the idea of being able to join our plantings up with those of our neighbours.”

Through the CPP project, the Palmer’s have fenced off and revegetated three areas of erosion, to stabilise them and link in with existing native vegetation on ‘Kyeamba Downs’. They also undertook a comprehensive integrated weed

Property size

1,214 ha

Farming enterprises

Sheep and Angus cattle

Soil types

Alluvial at the front, through to granite out the back

Annual rainfall

700 mm

management program for St John's Wort. Steve describes their approach: "We have a paddock which is around 103 hectares that had been invaded by St John's Wort, meaning we were unable to graze it. We sprayed the wort in late 2012 and again in April the next year, and then sowed it to oats. We repeated the process the following year, then the next year we were able to sow it to pasture."

"Hills are difficult for chemical and mechanical control, so using this technique we were able to slow down the growth and spread of St John's Wort to a point where it is now virtually gone. We can continue to keep it under control, and we are able to use grazing management to give the pastures a chance to compete against the wort", continues Steve.



One of the areas of erosion which Sarah and Steve fenced off through the CPP project

Steve and Sarah have been involved in many of the field days the CPP project has held, and have now made some changes to their management practices as a result of the things they learnt through these events, and talking with other landholders involved in the CPP project and KVLG. "We don't set stock anymore, except for joining, which was a big change" comments Steve. "We've also made our paddocks smaller, and put in more lane ways, so we can move the stock around a lot easier. Overall this has really improved our management."

The Palmer's are now at a stage where they are happy with their paddock sizes, and have fenced off all but one of the gullies on their property. They are keen to fence off this last gully, which is located an area of native tea-tree, in the near future. Following on from that, Steve says: "We just need to keep on top of any new gully erosion which forms!"



A tree lot the Palmer's planted through the CPP project in 2013, to assist with erosion

Steve's Top Tip for successful NRM work

I think ownership of the project is really important; the landholder who receives the funding should be the one planning the work, and doing the work. You have far more commitment to a project that way, compared to a project where people come in and decide what to do, where to do it, and then provide contractors to do it for you.

Trevor Parker

“The Reefs”

Book Book



Trevor Parker (right, with John Feehan the Dung Beetle Expert)

Trevor Parker has been on ‘The Reefs’ at Book Book for almost 40 years, and managing it for over 25 years. His interest in NRM extends almost as long, and as with many in the Valley his early work in this area was focussed on erosion control. “There was significant erosion occurring along the gullies, where we have some dispersive soils, so we began planting trees there to try and control the erosion”, says Trevor.

In the early days of fencing out gullies, Trevor remarks that they didn’t put the fences out wide enough from the gully: “We had a couple of fences hanging in mid-air after some big erosion events!” But he has since changed that, and hasn’t had any problems like that since.

Following on from the work planting trees in the gullies, Trevor notes that they just “continued to plant tree corridors across the property!” Much of the NRM work which Trevor has completed has also had benefits for stock management, both in terms of ease of management and reducing the impact of stock on the land. “I just have a belief that you need to have a balance of everything on your land, so I wanted to preserve the native habitat where we could” he says.

“I just have a belief that you need to have a balance of everything on your land”

Trevor was keen to join the CPP project as he saw it as a good opportunity for local farmers to improve the native vegetation and biodiversity on their properties. The main on-ground works which Trevor completed through the project was to fence off a gully area, protecting the existing native remnant vegetation along the gully and preventing further erosion. The fencing was designed to allow Trevor to manage grazing of the area, as he observes: “By putting a double gate at the end of the site, I can still move stock across the gully and into the adjoining pasture paddock. Fencing it off also encourages natural regeneration within the area, and I’ve already seen some regeneration occurring, with several new Blakely’s Red Gums germinating.”

In addition, the CPP project provided Trevor with funds to help install sub-

Property size

506 ha

Farming enterprises

Sheep (800 ewes)
and cattle (85
calving heifers and
65 weaners)

Soil types

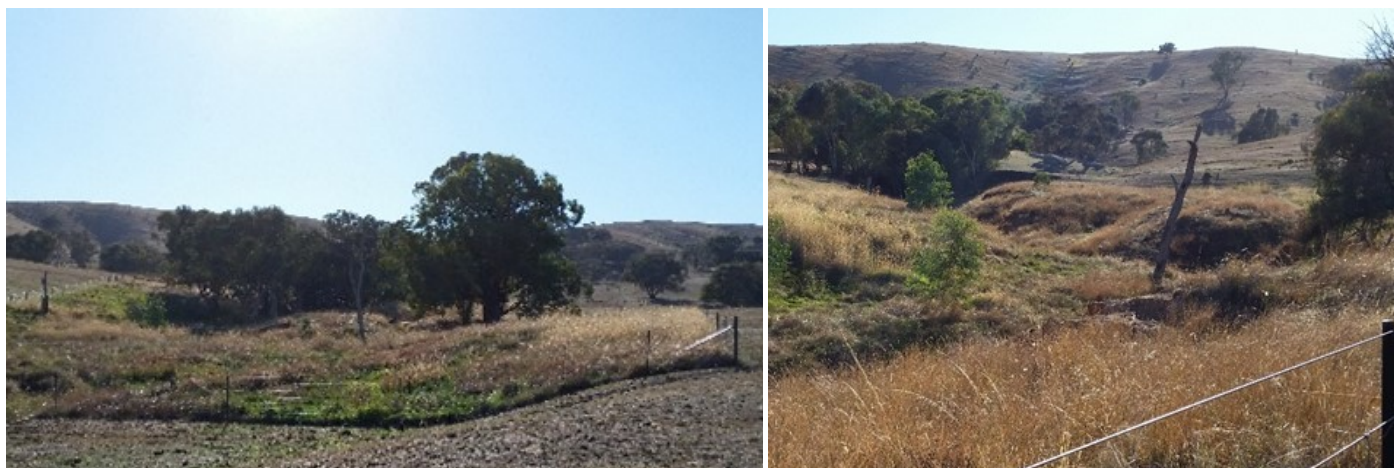
A wide variety, from
red granite to grey
and brown loams

Annual rainfall

615 mm

divisional fencing along a ridgeline. As with his other NRM work, this was designed to have the added benefit of allowing better management of what was previously a single large paddock which crossed the ridge. “Being able to manage the different aspects as distinct paddocks is a big advantage”, says Trevor. “The fencing has changed my pattern of stock movement across the land. It has also helped in the management of pastures, including native grasses.”

However one of the unexpected outcomes of fencing along the ridgeline was that in one of the new paddocks the sheep now camp around the big trees right on the hill, as those are the only trees in that paddock. This has led to baring of the soil, creating issues with erosion from storms. Trevor now has plans to put more fencing in, to manage this and prevent the sheep from camping on that exposed area.



The gully which Trevor fenced off through the CPP project contains a healthy existing stand of native remnant vegetation (left) and has already begun regenerating (right)

Trevor has been a regular at many Kyeamba Valley Landcare Group and CPP project events for many years, and has adapted various aspects of his management following on from things he has seen and heard about. Native grasses have become an important and valued component of his pasture base, with Trevor revealing: “My management of native grasses has changed, and I am now at a point where I would be hesitant to pasture-improve, due to the benefits of the natives. In some paddocks the native grasses are really quite strong now, and when they’re in a phalaris-sub clover paddock, having a species like *Danthonia* (Wallaby Grass) there which can provide good feed through summer has been a big advantage.”

“I’ve also become a lot more aware of the benefits of dung beetles, and have started using Cydectin for cattle drenching [Cydectin is the only drench with no known effect on dung beetle populations]. The dung beetle numbers in the local area are strong, particularly after several neighbours released some new species of dung beetles. We now have beetles active not just through winter, but also right through spring and summer, and into autumn. I believe the work of the beetles in burrowing into the soil has also helped improve infiltration of runoff, allowing more moisture to soak into my soils.”

In terms of pest management, Trevor says that he is now considering using the “Rodenator” after attending a CPP field day where the ability of these units to collapse rabbit warrens through concussive force was demonstrated. “I’ve had good results from calicivirus over the past few years, but I’ve noticed that when the population returns they always repopulate the old warrens, so I think the Rodenator could be useful there”, Trevor notes.

Together with these plans for the future, Trevor says, “I’m always trying to preserve my topsoils, and I’d like to continue to try to do this. The topsoil has all the nutrients in it, and once it’s gone - it’s gone. So I think it’s really important for the health of my property that I do what I can to protect the topsoil.”

Trevor’s Top Tip for successful NRM work

Patience! That’s the key. The changes you make don’t have quick impacts. For example, the trees I’ve planted won’t form hollows in my lifetime, but we need to be planting them now to ensure that there are mature trees by the time all the current big trees are gone.

Peter & Bundle

Lawson

“Trewalla”

Book Book



Bundle and Peter Lawson

‘Trewalla’ in the Kyeamba Valley has been in the Lawson family for 40 years, with Pete and Bundle owning and managing it for the past 20 years. Both have been interested in the conservation aspects of the property since they began farming it, with Pete commenting that the main driver was “keeping things in balance in some form, not making everything about efficiency, both monetary and neatness.”

Between 1998 and 2004 the Lawson’s fenced out large washed out and eroded creeks, in their first step towards controlling the massive erosion problems caused by past over-grazing. This enabled them to have greater control over stock movement through these fragile areas.

It also allowed for further subdivision of paddocks off these fences, again giving a lot more grazing control, and also enabling the Lawson’s to implement their plan of using stock to regenerate their farm soils which had been damaged by erosion, with very little capital. The animal impact on the hard, capped soil has been able to kick-start some regeneration of native grasses and commence the process of restoring the damaged ecosystems.

The Lawson’s continue to implement NRM work with these outcomes in mind. They have completed work on many dams, predominantly to control flow into eroded gullies, but also in conjunction with subdivision of paddocks.

Both Pete and Bundle have been heavily involved with the Kyeamba Valley Landcare Group for many years, with Pete currently holding the role of Chair, a position he has had for around 12 years. In explaining how he first got into this role, Pete declares that he was targeted by the group “because they all wanted out and I was the only one my age around farming at the time!”

When asked why he joined the CPP project, Pete quips “Because you asked me to!” But when pressed, he elaborates: “Having been involved in the pilot program, ‘Communities in Landscapes’, it was just a very refreshing approach to Landcare and NRM, which had been lost with bureaucracy and the advent of the CMA’s. It was based around what we as individual farmers wanted to

Property size

1,600 ha

Farming enterprise

Beef cattle

Soil types

Lighter shale, some sodic through to sandy loams

Annual rainfall

600 mm

achieve on our farms, all of which have the best intentions for their piece of dirt. We had numerous experts to utilise, and make your own assessment of which method suited your way of thinking and what you thought would work best for your land with your management. All this without ever being told 'you have to do it this way!' "

“The project was based around what we as individual farmers wanted to achieve on our farms”

Through the CPP project, the main on-ground works completed on 'Trewalla' involved the creation of two new dams high in the Kyeamba Creek catchment, to slow water flow and prevent erosion and sedimentation downstream. Prior to this work, the existing small dam would overflow in heavy rain through a series of small channels into a heavily eroded creek line. By constructing the two new dams higher in the catchment, and fencing out the dams and drainage lines, the Lawson's hoped to stabilise the erosion and help improve water quality downstream.



The inflow area of the new dams, which is already well-vegetated with native wetland species

The inflow area of the dams was already well vegetated with native sedges, rushes, poa tussocks and other native grasses, forming an ephemeral wetland typical of these tablelands. This tussock-dominated wetland now slows and filters the fast-flowing runoff water, protecting the soil from erosion and trapping sediment and other pollutants from the paddock before it runs into the dam. Slowed water also percolates into the soil, rehydrating pastures.

Pete notes that the work completed through the CPP project "has certainly helped take us that bit closer to achieving our goals. We love the great diversity of wildlife, birds, mammals, reptiles (although some we are not quite so thrilled with!) and plants, grasses, forbs, etc. We are gradually getting more and more cover over the country, and building organic matter, although always slower than you would like. This is slowing the flow of water off our fragile soils and reducing the amount of erosion, although, again, at a far slower pace than we would like."

The Lawson's have been regular attendees at many of the workshops and field days held through the project, and have hosted several events at 'Trewalla'. Pete says that through these activities, he has "learned lots, and quite a lot was just reinforcing what I knew, or thought I did! I don't think our management has changed but our involvement in the project has just helped reinforce our belief in what we are doing and how we are going about it."

Looking to the future, the Lawson's are working towards getting most of their creeks to run for 12 months of the year, and not be so seasonal or spasmodic. They are also committed to building up organic matter, and "allowing the soil to hold more moisture and for longer periods of time, which will lengthen our growing season and hopefully nullify the seasonal variations of 'wet to baked hard and dry' within a very short period of time."

However, Pete notes that erosion remains their major NRM issue, adding "I suspect it should be for a lot of other people as well given the colour of the water in creeks after a rain event!"



A section of the drainage line which runs through much of 'Trewalla'

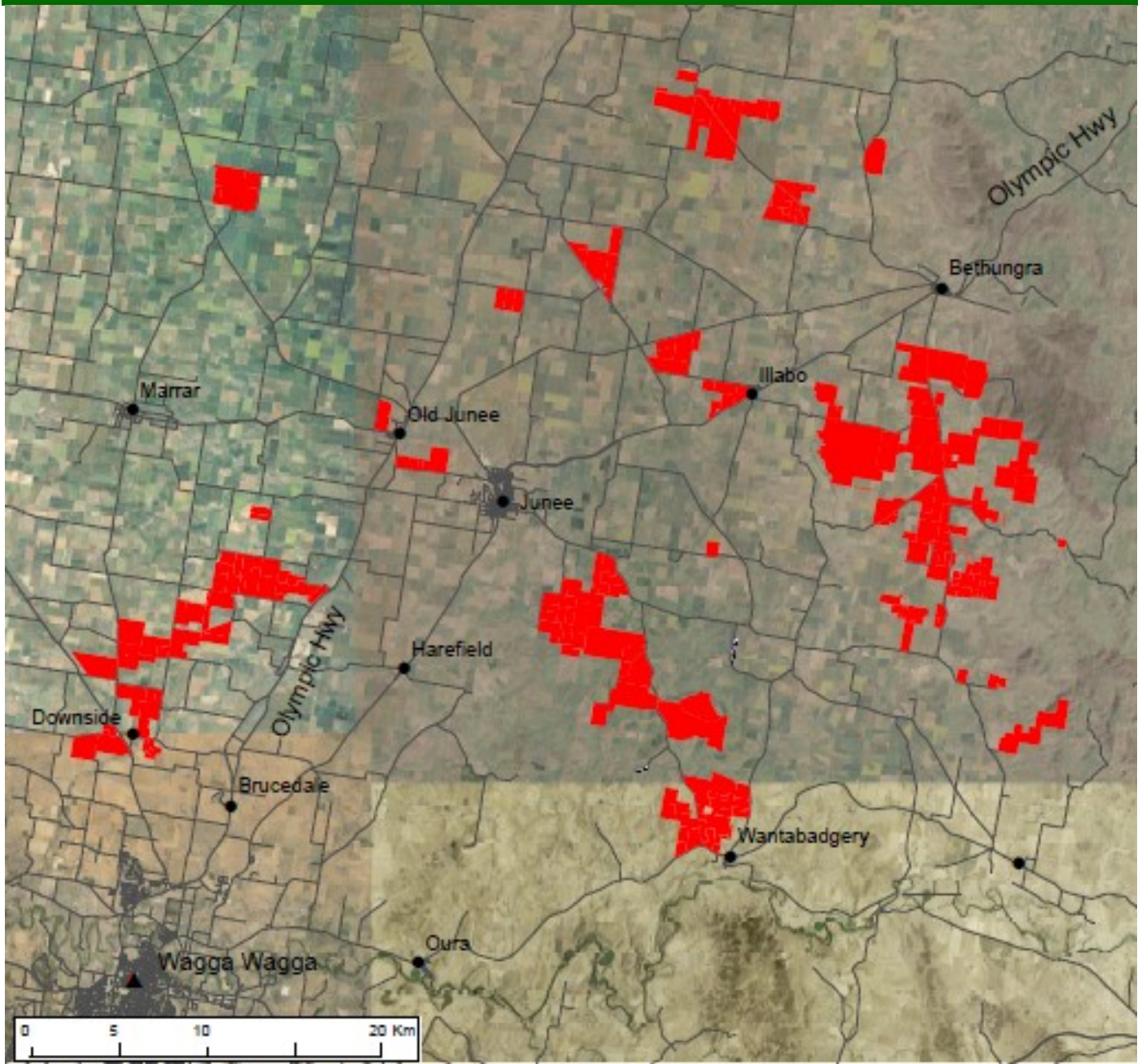
Pete's Top Tips for successful NRM work

- Have a clear goal or outcome that you are trying to achieve and make each job (whatever it is you are about to undertake) take you one step closer to achieving it
- Appreciate the added bonus of enjoying the positive outcomes that come with each little project you do.



A view of some of the native vegetation on 'Trewalla'

Case Studies from the Junee-Illabo-Bethungra CPP Group



Junee Area Landcare Network



Landcare
Junee Area

Skye Bellamy & Tom Wilks

“Coombiana” Downside



Skye Bellamy

With her husband Tom Wilks, a water broker, Skye Bellamy operates ‘Coombiana’, a mixed farm at Downside, about 15 kilometres north of Wagga Wagga.

Skye is a strong supporter of grassroots Landcare and been actively involved in natural resource management both professionally and personally for a long time. When Skye and her husband purchased 183 haectares of their property in 2007, they immediately set about planting around 4,000 trees, with an additional 500 planted in 2009. These works were focused mainly around widening existing single row corridors that were already planted on the property. These six-row native tree and shrub plantings are now connected on the eastern, northern and western aspects to a three hectare area surrounding the main house, where Skye and Tom have planted lucerne, fruit and nut trees, a vegetable garden, and yards for chicken and ducks.

In 2012, Skye joined the CPP project, and used the funds to protect a swamp area inhabited by frogs, toads and toadlets; and to enhance and protect the native vegetation on the farm.

In January 2016, the property was increased from 183 to 404 hectares with the purchase of a neighbouring block of land on Houlaghan’s Creek. With the assistance of the CPP project, 8,360 trees and shrubs were planted on the new section of the farm in August 2016. This work included a seven-row shelterbelt and a number of wildlife corridors that provide valuable connectivity across the landscape.

The new shelterbelt on ‘Coombiana’ consists of a mix of trees and shrubs including: White box (*Eucalyptus albens*), Blakely’s red gum (*Eucalyptus blakelyii*), Yellow box (*Eucalyptus melliodora*), Grey Box (*Eucalyptus macrocarpa*), Deane’s wattle (*Acacia deanii*), Sweet bursaria (*Bursaria spinosa*), Rosemary grevillea (*Grevillea rosmarinifolia*), Purple kunzea (*Kunzea parvifolia*), Spiny-headed mat rush (*Lomandra longifolia*) and Grey honey myrtle (*Melaleuca incana*).

Property size

404 ha

Farming enterprises

Beef cattle, fodder and some grain

Soil type

Clay loam

Annual rainfall

450 mm



One of Skye's large shelter belts, planted through the CPP project in 2016

In designing Skye's shelterbelt, the larger Eucalyptus trees were planted in the centre three rows, while the smaller trees and shrubs were placed in the rows on either side of this, to prevent shading out and to add greater density at varying heights.

Shelterbelts incorporating trees and shrubs in three to six rows are effective in most situations, but by widening the shelterbelt to seven rows, Skye has significantly increased the number of species of woodland birds which the belt can support. This is due primarily to a reduction in the edge effects and species predation, with an increase in the safer internal area.

Skye acknowledges the role of regional bodies in targeting parts of the landscape for priority treatment. However, she maintains that the activities funded by these bodies must be complementary to the work done by farmers with

incentive funding provided by State and Federal governments for Landcare:

"Landholders, when they work together with grassroots groups and networks such as MLI, enjoy programs that are community- and family-friendly. Farmers enjoy the comradery of working together and sharing information, and the funds available for revegetation and rehabilitation can be applied more flexibly, more efficiently and more cohesively" she said.

Skye added that community groups and the community approach must be nurtured by regional bodies:

"Progressive changes in farm businesses mean that the guidelines that apply to incentive funding require updating from time to time. Farm families are now time-poor, forcing a



Protected paddock trees on 'Coombiana'

re-evaluation of how groups operate and participate. Updating and flexibility are needed in terms of the costings that are applied to 'in-kind' farmer contributions, the strings that are attached to funding, and the guidelines that seem to be part of the package. For example, the range of 'approved' trees and shrubs is often limited, whereas more than 60 species have been planted out on 'Coombiana'."

Skye estimates that around 12% of 'Coombiana' is now planted to native vegetation and permanently protected, with around seven linked corridors. Rather than viewing this work as separate to the operation of the property, Skye sees these areas as an integral part of the farm. Gates have been included in her planting sites to allow stock access, and troughs will also be installed to incorporate controlled stock grazing once plantings are established.

Says Skye, "I am especially proud of the life we have encouraged and protected at 'Coombiana'. We have dung beetles, worms, spiders, moths, butterflies, frogs, toads, permanent and migratory birds (including Spoonbill Ibis, Cranes, Egrets, Flame Robins, White Faced Chats and Superb Parrots), lizards, one echidna, sheep, pigs, cattle and horses. Annually we are visited by a Superb Kingfisher, and we now have a small flock of Cockatiels".

"I am especially proud of the life we have encouraged and protected at 'Coombiana'."



8,360 trees, shrubs and understorey seedlings have been planted on 'Coombiana' through the CPP project

Skype's Top Tips for successful NRM work

- Always plant into moisture
- Good preparation is essential, including ripping and spraying
- Be an opportunist, so you are always ready to act when funding is available to assist with work
- Work in with grassroots groups and networks to achieve on-ground works.

Pat & Marion

Drew

“Anunaka”

Bethungra



Marion and Pat Drew

“NRM is just a part of farming”

Pat and Marion Drew have been farming in the area for over 25 years, and have been interested in NRM for just as long. Says Pat, “I’ve always been interested in it really - it’s just a part of farming”.

The Drew’s first environmental improvements on their property involved fencing off some of their remnant vegetation, and planting trees, a project which was done with the assistance of funding from Greening Australia. They were very pleased with the results, with Pat commenting: “It really enhances the property”.

Through the CPP project, Pat and Marion fenced and planted a corridor to connect with some areas of existing native vegetation on the property, and provide shelter for livestock. They also did some extra plantings to fill in gaps in some of their existing tree lines.

Pat is really enthusiastic about the results of the work they have undertaken: “We’ve seen much more birdlife, especially Superb Parrots, which has been exciting. Also the shelter for our livestock has been a big help; we planted trees in spots where they could act as a windbreak, and it’s certainly made a big difference”.

The CPP project also helped Pat and Marion to get more confidence in the NRM improvements they are making. Pat says, “I feel like I have a better idea now of what to plant and where, when and how. I also understand better the importance of planting for connections”.

The Drew’s have no intention of stopping their great work when the CPP project finishes. Pat says, “We want to continue to plant trees. We still have areas on our property where we would like to connect habitat and create shelter and shade. We’d especially like to get some more shelter for our lambing ewes.”

We wish Pat and Marion well as they continue with their great efforts, which provide a wonderful example of successfully balancing production and conservation.

Property size

378 ha

Farming enterprises

Livestock-dominated mixed farming, mostly Merino’s

Soil type

Clay loam

Annual rainfall

550 mm

Kellie & Peter Crawford

“Terlinga”
Wantabadgery



Kellie and Peter Crawford

Anyone who has driven past ‘Terlinga’ at Wantabadgery will have noticed the healthy coverage of trees scattered across the property. But it hasn’t always been that way. When Peter’s parents first came to the property, as with many properties at the time, there were no trees on it at all. With great foresight, Peter’s parents quickly started planting a lot of trees, and as Peter notes, “since we’ve been working here, we’ve really seen the importance of that”.

Peter and Kellie Crawford have been farming at Wantabadgery for 13 years, with both developing an interest in NRM soon after taking over the property. Kellie describes some of the extensive environmental improvements they have completed: “We’ve done a lot of tree planting - even through the drought! We’ve also focussed on groundcover retention, that’s been a big thing for us.”

“We also had a lot of gullies, so we’ve done a lot of erosion control work - soil works, managing tracks and banking the creek up. More recently we’ve been clearing out springs in the creek to try and hold the water more, and give it time to soak into the soil, sort of in the Peter Andrews-style.”

When the CPP project came along, the Crawford’s say that they “took it as good encouragement to get more trees in!” However it was the structure of the project which ultimately appealed to them, as Kellie explains: “The project allowed us to put trees where we think we need them, rather than being required to plant in a pre-determined location.”

“We wanted to be able to scatter trees all over the property, rather than doing a single mass planting”

“We wanted to be able to scatter trees all over the property, rather than doing a single mass planting, which is what most projects require you to do. Scattered trees are

far better for us, because we don’t have the land to set aside to big planting areas, but by putting in scattered trees we can still get the benefits for stock protection and also beautification of our property.”

Property size

404 ha

Farming enterprise

Sheep

Soil types

Grey and sandy
loams

Annual rainfall

500 mm

The balance between production and conservation is a challenge which many farmers face, particularly in cropping regions. With the increasing scale of cropping operations, remnant native vegetation is under rising pressure, and planting new areas of native vegetation is often well down the to-do list. But as the Crawford's can attest, there are multiple benefits which stem from having trees and shrubs across their property, with Peter sharing: "We've noticed a lot of benefits from having trees across the property in terms of shade for the stock, and of course habitat for birds and animals."

As is always the case, it hasn't all been plain sailing, and there have been many lessons learned as the Crawford's have undertaken their many NRM projects. One early such experience related to the impact of increasing groundcover across the property. Kellie notes that while this "has had enormous benefits in slowing the gullies and improving erosion, it has also stopped runoff – which means we now need to rely more on troughs. It stands to reason, but we didn't really think about that consequence when we set out!"

Peter has also noticed the impacts of the choice of species his parents planted all those years ago: "My parents put a lot of tree lucerne's in, which are now all dying; if they'd put more long-lived trees in, we would have some really well established, mature trees across the property now. My parents also put a lot of English softwoods in, which we wouldn't have chosen!"

While Peter's parents planted many tree lines, Peter and Kellie are keen to continue planting scattered and small



block plantings, which work well with their farming activities as they finalise their change from a mixed farming to livestock-only enterprise. They are also keen to replace many of the old Kurrajong's in the rocky areas, which they are now starting to lose. The Crawford's have collected seed from the trees on their property, and would like to propagate them and plant more of their own seedlings one day. However Kellie adds that this is a long-term project, laughing as she says: "Maybe when the kids grow up!"

Mature kurrajongs grow amongst the rocky outcrops on 'Terlinga', while a revegetation site is visible further down the hill

Kellie & Peter's Top Tips for successful NRM work

- Make sure you actually DO it!! There are always so many jobs to do around the place, but you have to make sure that you set the time aside to do your NRM work too
- Preparation is important, especially for tree planting - you can't leave it to the last minute, or you just won't have any success.

Peter, Sandra, Anthony & Rhonda Heffernan

“Claris Park” &
“Wirega”

Junee



Anthony and Peter Heffernan

The Heffernan family have been revegetating and working to improve the sustainability of their Wantiool farms for over 40 years. Peter, Sandra, Anthony and Rhonda are continuing the work of Peter and Anthony’s father Cletus, who first started planting trees in the 1970s.

Originally part of ‘Wantabadgery Station’, the Heffernan properties had little remnant native vegetation, as a result of being cleared by Chinese labour in the 1800s. Saline salt scalds were also appearing on lower ground sites in the 1980s and were the catalyst to the farming family becoming involved in Landcare. As Peter explains, they were founding members of the Wantiool Landcare group when it commenced in the 1990s, and through this group they had the opportunity to develop a whole farm plan with the assistance of NSW Soil Conservation staff. This plan included map overlays on aerial photos, and allowed the Heffernan’s to map out new tree plantings and works to combat salinity. It also marked out new fence lines, to follow ridge lines and creek lines and incorporated a laneway system for easy stock movement.

“These maps were very valuable and over time with the help of funding from various Landcare projects, we’ve been able to implement most of the works, including planting tree lines for recharge to combat salinity and provide shelter belts and fencing out salinity scalds,” Peter explains. “We planted these saline areas with tolerant species such as Bush Pea (*Pultenaea* spp) and Tall Wheatgrass (*Thinopyrum ponticum*) together with trees. Over time these salt scalds have repaired, and with stock excluded phalaris has been able to establish where previously it wouldn’t grow”.

The Heffernan’s have learnt many lessons along the way since they started planting trees, including the value of planting locally indigenous tree species, and the need to use individual tree guards. “We found that the best survivors through the drought and the 1996 bushfire were the local tree species. Species from other regions, such as some WA red gums and Mallee species, grew well initially but failed to make it through the extended drought and also didn’t survive the bushfire. Using individual plastic tree guards are also vital to

Property size

1,440 ha

Farming enterprises

Self-replacing
Merino and first-
cross ewe flocks,
prime lamb
production, and
cropping

Soil types

Red and brown
loams

Annual rainfall

530 mm

seedling survival and to prevent damage from hares and rabbits.”

With much of the farm plan now implemented, the Heffernan’s focus has turned to environmental works on an additional adjoining property, which they purchased in 2006. Through the CPP project they have been able to extend their farm plan by changing strategic fence lines, and establishing new tree plantings. All plantings were designed to improve connectivity across the landscape and provide habitat for native bird species and other native fauna. “The flexible approach of the CPP project has been great and has allowed us to design our plantings to suit our needs”, says Peter.

“The flexible approach of the CPP project has been great”

Peter and Anthony continue to update and implement their whole farm plan, and have now planted over 2,300 seedlings through the CPP project. They are planning further strategic planting of individual trees to link with existing paddock trees and tree lines, creating excellent habitat connectivity across their properties.



Some of the extensive revegetation work the Heffernan’s have undertaken

Peter’s Top Tip for successful NRM work

Research your local indigenous tree species, and use them in any works.

Ashley & Caroline Hermes

“Deakin”
Bethungra



Caroline and Ashley Hermes

A stash of ‘Wildlife’ magazines may be the impetus behind one of the most beautiful properties in our region! When Ashley Hermes was just a boy, he came across some copies of the long-standing ‘Wildlife Australia’ magazine, and was instantly hooked. “I found it fascinating”, says Ashley, “and I guess my love of the natural environment has stayed with me”. Similarly, Caroline had a love of nature from a young age, always preferring to play with animals to dolls. Once the two came together, it was clear there would be no stopping them. The couple, who have now been farming in the area for 28 years, continue to demonstrate their passion for the environment through their tireless work on the land.

The Hermes first turned their hand to environmental improvements on the Coolac property they previously owned. Here they fenced and revegetated a creek line, which at the time was heavily eroded and poorly vegetated. Fencing it out allowed grazing of the area to be managed, and enabled the new seedlings they planted to establish. Ashley notes that today “you can see it on satellite photos!” The new owners of the property are clearly benefitting from the forward-thinking work undertaken by the Hermes and have reported that platypus have now even been seen in the creek.

When the Hermes purchased ‘Deakin’, their first major project was to put in subdivisional fencing, to allow for rotational grazing. The property originally had two 120 hectare paddocks in the rough native pasture country at the back of the property. These have now been sub-divided into six 40 hectare paddocks, which allows grazing to be managed much more easily, and also aids in the successful regeneration of the pasture. These paddocks now have much stronger native pasture, reduced annual weeds and increased native tree regeneration.

The property already had an impressive amount of remnant vegetation, with around 8-10% of the land timbered. The condition of the native vegetation was also of a high quality, something which contributed to their decision to purchase this particular property. However as they got to know the landscape,

Property size

850 ha

Farming enterprises

Livestock-dominated mixed farming

Soil types

Predominantly red loam, but also some quartz granite on the ridge country, plus some shale

Annual rainfall

575 mm

the Hermes saw an opportunity to improve the connectivity of the remnants across their land. Revegetating with connecting plantings, both in strips and patches, together with fencing of existing remnant vegetation, has therefore been a big focus for them over recent years.

The CPP project was able to assist the Hermes with this work. Through the project, the Hermes have fenced and revegetated box gum remnants, planted seedlings to connect existing remnants, and also planted a lot of scattered paddock trees to provide connectivity across previously cleared areas. Says Ashley, “We are fortunate that the project came along at the right time of life for us to become involved. I believe being financially secure makes it much easier to prioritise environmental projects.”

Over the six years of the CPP project, Ashley and Caroline have fenced remnant native vegetation, and planted over 1,700 seedlings. Much of this planting was completed through their own labour, as was the ground preparation which they have diligently undertaken for each planting. Ashley has highlighted the importance of good ground preparation prior to planting, saying that without it “you are wasting your time and money. We like to get our site prepared for planting about 12 months in advance, as competition from grasses on young seedlings has a big impact on their survival rates.”

The Hermes have been regular attendees at many of the events held by Landcare and the CPP project, including hosting a biodiversity field day last spring. We were lucky enough to see almost thirty different species of birds on our walk through a section of remnant vegetation on their property at this field day, and all who attended enjoyed the opportunity to see this beautiful patch. Ashley has found the social and learning events associated with the project to be really valuable, saying “We have particularly enjoyed having the opportunity to talk to other people about what they are doing”.

“ We have particularly enjoyed having the opportunity to talk to other people about what they are doing ”

In a true testament of their ongoing passion for the environment, Ashley and Caroline have professed that, even without project funding to support them, they still aim to complete at least one environmental project each year. This is an incredible commitment, and a real demonstration of the value that the Hermes place on the environment. The childhood passion which both Ashley and Caroline have maintained has certainly benefited our local flora and fauna, and we look forward to continuing to admire the fruits of their labour in the wonderful haven they have created at ‘Deakin’.



Ashley Hermes hard at work, planting some of the 1,700 seedlings they have put in through the CPP project

Ashley’s Top Tip for successful NRM work

Early and thorough weed control - this is the difference between success and failure.

John & Nicole Hopkins

“Allawah”
Illabo



John and Nicole Hopkins

John and Nicole Hopkins have been farming at Illabo for around thirty years, and through that time have devoted immense efforts to the natural resources of their property. John has a lifelong interest in the environment, which he inherited from his dad: “My dad was a great naturalist but didn’t plant any trees for biodiversity, only windbreaks on his farm in Victoria. I started making bird boxes out of old stumps and have always been interested in birds.”

Nicole has similarly always been interested in the environment, and became even more aware and involved in NRM since meeting John. Some of the first projects the pair undertook on their property involved fencing off the corners of paddocks, and planting trees and shrubs. John notes, “On the farm I started noticing natural regeneration and started to fence this off”. The Hopkins’ began growing a selection of around 20 different species of trees, to see what worked best on their farm. “From this I noticed that pink flowering ironbark (*Eucalyptus sideroxylon*) grew well”, comments John.

The Hopkins also fenced off a dam, which allowed them to create an area that today has grown to become a magnificent biodiverse wetland. The fencing made it possible for them to restrict stock access while the new trees and shrubs were establishing, and has also allowed natural regeneration to occur.

Erosion control has been another focus on ‘Allawah’, with work completed to fence along creek lines and also undertake work on an area of overflow from the creek which had been suffering from erosion. This work was continued through the CPP project, with the Hopkins’ completing on-ground works through the project to fence along a creek line to protect eight hectares of remnant vegetation. They were also able to fence around half a hectare of remnant vegetation along a paddock boundary.

Of joining the CPP project, John says, “I really wanted to keep doing more projects around the property and needed funding to achieve it. We couldn’t complete the work alone, without financial support.”

The Hopkins’ completed their on-ground works around three years ago, and already they have noticed an increase in natural regeneration occurring in the areas they have fenced off. The value of the creek line for birds and other native

Property size

1,040 ha

Farming enterprises

Simmental stud, self-replacing Merino flock, prime lambs and cropping for grain and hay production

Soil types

Red and grey loams

Annual rainfall

575 mm

wildlife has also been demonstrated, as John notes: “We’ve noticed an increase in bird life since fencing off the creek, and an increase in certain species such as the Tree Creepers, Zebra Finches, Cuckoos and Superb Parrots.”

With a lifetime of NRM experience to draw on, it’s no surprise that John and Nicole have picked up some valuable tips (as shown on the following page). Some other changes that they have made recently include using a hotwire on fence lines, to stop cattle rubbing on the fence. John admits that next time he would do this at the time of fencing, rather than later. He also shares that there were a couple of blocks that they fenced off and didn’t put a gate into, and now wishes that they had. Having a gate would allow them to control weeds and other maintenance, plus stock control once the trees are mature.

Another aspect which John and Nicole are working on relates to maintenance, such as weed management and baiting to reduce vermin. Says John, “By not grazing the NRM areas we get better groundcover, so this does compete with our summer weeds, but by not grazing we have a fire risk and hence may be forced to graze some areas to reduce the bulk prior to summer.” Clearly it is a delicate balancing act to successfully integrate production with conservation, but the benefits of working towards this can be profound. John highlights the importance of this when he describes the impact of his work on his mental health: “Additional benefits are my mental wellbeing, and the enjoyment that my family and I get from seeing the growth in the trees and the increase in the variety and number of bird species They are feel good areas.”

“ Additional benefits are my mental wellbeing, and the enjoyment that I get from seeing the growth in the trees and the increase in the variety and number of bird species ”



The biodiverse dam on 'Allawah' is now a haven for countless species of native plants and animals



John and Nicole have completed extensive revegetation and regeneration works on their property, resulting in excellent connectivity across the landscape

John's Top Tips for successful NRM work

- Ripping is very important. You don't need a bull dozer to rip, you can just do it with a decent tractor and heavy ripper
- Weed control - get it right!
- Species selection - in the past I used to plant just trees, but now more understorey is planted. In 2006 we had a major fire which destroyed all our understorey - the hop bushes, wattles and she-oaks. But don't be alarmed by burnt eucalypts as they will surprise you how they can recover
- Planting - it's more fun doing it yourself, and I believe that you get better results as you can be more diligent than contactors. You can easily plant 500 trees in a few hours with the right equipment and ripped lines
- I don't believe that tree lots should be grazed until they are a decent size and well established. It is important to keep lower branches to protect from wind funnelling
- You need a good fence. Don't skimp on it. We use 7-line hingejoint with two barbwire, support wire and hot wire if it's a cattle paddock. Do it right the first time
- Time of year - we like to plant at the end of June-July so the plants have a chance to get established before it starts to warm up.

Tim Kent & Susie Maple- Brown

“Merribindinyah”
Bethungra



Tim Kent

Tim Kent has been managing the iconic ‘Merribindinyah’ property at Bethungra for 20 years. The property is owned by Susie Maple-Brown and her family. Both Tim and Susie are keen advocates of NRM, so the property has benefited from a great deal of conservation work over the years.

While Susie and her family are based in Sydney, they enjoy coming down on weekends and for holidays. The Maple-Brown’s encourage Tim to ensure his management of the property incorporates conservation aspects. For example, they do not like to use aerial spraying on the property as it damages the trees, particularly the Kurrajongs.

Tim says that he has always been interested in NRM, and started applying this to the property gradually: “I dabbled a bit early on, and looked at doing something to look after the country and give something back.” This was at a time when the land had been suffering from several years of drought. Tim recounts: “At the time, the property was heavily overgrazed and carrying around 16,000 sheep at its peak. The heavy grazing combined with the dry years meant there was no groundcover, and I was just watching the property being blown away. The saying at the time on the property was ‘the wind used to blow so much that you could drive over the fences’!”

Backing on to the Ulandra Nature Reserve and Mount Ulandra, the property is very hilly. As a result, the bare ground was susceptible to both wind and rain erosion, which was having a devastating impact. To combat the wind erosion, Tim began to plant windbreaks. “The windbreaks were always at least three rows, and we excluded stock from all of them. Coupled with this was a reduction in stock numbers across the property”, says Tim.

For these early plantings, Tim and Susie used to plant at around 3 metre spacings. However they are now planting six metre spacings, which they have found is giving them better results, and also allows more room for the germination of Acacias.

In terms of the species planted, Tim says “We are still planting the same species

Property size

4,003 ha

Farming enterprises

Beef cattle, sheep,
prime lambs and
fodder crops

Soil type

Red loam

Annual rainfall

575 mm

mix that we started all our revegetation work with, as it is working well.” This species mix includes a large variety of Acacias (Wattles) and Eucalypts, together with Drooping Sheoak (*Allocasuarina verticillata*), Kurrajong (*Brachychiton populneus*), Bottlebrushes (*Callistemon* spp), and species such as *Dodonaea* (Hopbush) and *Kunzea*.



A view of the same area of ‘Merribindinyah’ in 2007 (left) and 2017 (right), showing some of the extensive revegetation work which has been completed on the property

When Tim and Susie were approached to be involved in the CPP project, they were immediately motivated to join. Tim comments that “It was an opportunity to get funding for further environmental work, and also a good opportunity for social interaction, as many neighbours are also involved.”

“Be patient! Not everything will grow instantly”

Through the CPP project, Tim and Susie fenced off the top end of Merribindinyah Creek to stabilise it, and also create a connection to the Ulandra Reserve, providing a direct link for wildlife to travel to the reserve. They also fenced four hectares of remnant native vegetation on a rocky area, and enhanced it with additional plantings. Their last project was to fence and revegetate another three hectares in an adjacent paddock.



Since completing the works to fence off the creek, Tim has already noticed an increase in the stability of the creek bank, and pasture is now growing on both sides of Merribindinyah Creek. Tim also notes an increase in bird life and other fauna in their revegetated and protected areas.

This success has inspired Tim to continue, declaring that he would still like to work more on improving groundcover through better pasture management, to reduce erosion across the property.

While there will no doubt always be more projects on Tim and Susie’s wish list, the ever-increasing list of completed projects is certainly a clear sign of what can be achieved when NRM work is valued and supported on a property of this scale.

Young trees and shrubs growing along the top end of Merribindinyah Creek, planted through the CPP project

Tim's Top Tips for successful NRM work

- Preparation - ripping and spraying are very important. When you are doing large areas like we have you can't spot spray, so you need to get it done right the first time
- Be patient! Not everything will grow instantly so don't expect instantaneous results
- Use contract planters for large jobs.



Washpan Creek on 'Merribindinyah' in 2007 (top), and in 2017 (bottom) after being fenced off to control stock access, and revegetated

Tracey & Bruce MacLeod

“Carinyah”
Wantabadgery



Tracey MacLeod

Tracey and Bruce MacLeod have been farming at Wantabadgery for over 25 years. Over that time they have done a lot of NRM work, with both production and conservation in mind. Tracey comments on the importance of NRM to them, saying “I think we’ve just always been interested in it - you need everything for the flow”.

Much of the early work they did was focused on the creek lines, to protect water flow and control erosion. The MacLeod’s also did a lot of fencing, to subdivide their paddocks. Says Tracey, “Keeping groundcover has been a big goal, to minimise erosion, and obviously keeping groundcover helps with our paddock rotation too.”

“The work we’ve done has also helped improve our management of the property”

“The work we’ve done has also helped improve our management of the property, with the increased subdivision of paddocks helping with stock movement and managing different soil types”, Tracey adds.

The MacLeod’s continued their subdivision work through the CPP project. They also planted a tree line along the length of the new fence they put in through the project. This tree line links up with another tree line on their property. Tracey notes: “We thought it was important to be able to have continuity of habitat. Getting trees back is a long, slow process though!”

While there are now many beautiful patches of native vegetation on ‘Carinyah’, it hasn’t all been plain sailing. Their early attempts to revegetate along the creek line through direct seeding had limited success, and they experienced issues with erosion while trying to regenerate an extensive section of creek line. But as Tracey says, “It’s that old phrase, if at first you don’t succeed... I think you learn the most from your mistakes”.

They now have plans to fence off and revegetate the opposite end of the creek, but this time they have adjusted their strategy: “We’ll work along it over time -

Property size

556 ha

Farming enterprises

Livestock-dominated mixed farming

Soil types

Granite and sandy loams

Annual rainfall

640 mm

not try to do the whole lot at once!”

The work the MacLeod’s continue to pursue is having a big impact on the landscape and across their property, and the habitat connections they have created will benefit our local wildlife for many years to come.



The tree line the MacLeod’s planted through the CPP project was designed to connect with existing tree lines on their own and neighbouring properties



A beautiful double rainbow over the back hills of 'Carinyah'

Bill & Maria Muller

“Nunlong”
Bethungra



Bill Muller

Bill Muller had a dream. When he looked from his Bethungra house across the paddock to his main farm dam, it was typical of many farm dams - surrounded by bare ground and suffering from erosion and water quality issues, it was devoid of any native wildlife. But in Bill’s mind he had a vision of an oasis - a lush, healthy, biodiverse dam with thriving vegetation in and around it, fish, birds and clean water.

With the assistance of the CPP project, Bill was able to turn his vision into a reality. Bill used funding from the project to fence off, enlarge and reshape the dam. This dam now has a well-vegetated in-flow area, including a form of silt trap prior to the water entering the dam. The outflow is also cleverly designed to meander the excess water downstream in as slow and steady a manner as possible, allowing the water to soak into the soil as it moves along.

Bill fenced out a substantial area of the paddock around the dam to control stock access, creating the potential for a wetland to establish in and around the dam. Alison Elvin, from ‘Natural Capital’ was engaged through the CPP project to help with the design of the new dam and revegetation works. Alison’s recommendations included creating ‘shelves’ on the steep dam walls, using logs (or similar) laid along the contour. Initially the logs were held in place with small pegs, but over time the ‘shelves’ have collected sediment, and plants appropriate to the water regime will eventually grow, protecting the sides from erosion and creating a mini-habitat.

Alison also recommended creating additional habitat for fauna by including scattered fallen logs around the edge of the dam, and in the dam itself, as well as occasional piles of rocks at the edge.

Along the northern boundary of the paddock, Bill has done revegetation works that continue across the paddock to connect with the adjacent Grey Box Grassy Woodland remnants upstream. His plantings were also designed to link with larger remnant stands on the roadside and vegetated areas on the neighbouring property.

Property size

336 ha

Farming enterprises

Prime lambs and
Poll Dorsets

Soil type

Sandy loam

Annual rainfall

525 mm

Bill and Maria's plantings were designed to be suited to the different zones around the dam, including:

- Non-riparian Grey Box Woodland species for revegetation within the paddock surrounding the dam: This area was planted with Grey Box (*Eucalyptus microcarpa*) and associated tree species such as Yellow Box (*E. melliodora*), White Box (*E. albens*), Kurrajong (*Brachychiton populneus*) and Bull Oak (*Allocasuarina luehmannii*); various wattles and grevilleas, such as Golden Wattle (*Acacia pycnantha*), Kangaroo thorn Wattle (*A. paradoxa*), Sticky Wattle (*A. verniciflua*), Silver Wattle (*A. dealbata*), Hickory Wattle (*A. implexa*), and *Grevillea floribunda*; and range of forbs, such as Ruby Saltbush (*Enchlaena tomentosa*), Flax Lily (*Dianella revoluta*) and Matt Rush (*Lomandra* sp). Native grasses are likely to appear naturally over time
- Riparian species for revegetation in soil which is intermittently damp or has poor drainage: Species planted in this area included River She-oak (*Casuarina cunninghamiana*), Red-stemmed Wattle (*Acacia rubida*), Native Blackthorn (*Bursaria spinosa*), Prickly Tea-tree (*Leptospermum continentale*), River Bottlebrush (*Callistemon seiberi*), Sedges (*Carex* sp), Tussocky Poa Grass (*Poa labillardieri*), Rushes (*Juncus* sp), Matt Rush (*Lomandra longifolia*), and Water Couch Grass (*Paspalum distichum*)
- Riparian species for revegetation along the water's edge (in relatively permanent water): Species planted along the edge included Prickly Tea-tree (*Leptospermum continentale*) and River Bottlebrush (*Callistemon seiberi*). Additional species are likely to appear over time as the ecosystem develops.

The vegetation around the dam has already become established, and the change is quite incredible. As Bill says, "This dam used to be the worst on my property; now I love it. It's wonderful to see the birdlife that is returning, knowing that the water is clean and healthy for my sheep, and the dam has even been stocked with Murray cod and golden perch!"

This success has also motivated Bill to continue his NRM work, saying "It's inspired me to look at other problem spots across my farm, and try to create little patches of vegetation. With any luck, these will help rebuild native habitat and link to other patches across the region."

"It's inspired me to look at other problem spots across my farm"



The dam in summer 2014, prior to any work; remnant vegetation can be seen just beyond the dam



Bill inspecting his dam in early 2016, after the dam has been redesigned to incorporate an island in the centre and uneven edges with differing levels of vegetation

Fiona & Daniel

Rankin

“Glen Iris”

Bethungra



Fiona, Lily (5), Sam (8) and Daniel Rankin

A little over ten years ago, Fiona and her husband Daniel returned to live on ‘Glen Iris’, the property Fiona grew up on. As well as having a family and working part-time off-farm, Fi and Dan have been busy since then completing several projects to enhance the sustainability of the property. Fiona says this passion developed ever since they came back to the farm: “I love the country, so want to look after it so that it stays good for our kids. As a farmer, it’d be pretty silly to not look after your most valuable asset. I think you need to have a good balance - with a healthy system, everything is more productive”.

“As a farmer, it’d be pretty silly to not look after your most valuable asset”

There are some areas of the Rankin’s property affected by dryland salinity, so one of the first projects they took on was to plant out a salt scald, to try and rehabilitate the land and prevent

further degradation. They also put in a few tree lines.

The support offered by the CPP project came at just the right time, as Fi and Dan wanted to expand their areas of native vegetation, and were also hopeful that the project could help them to create a more sustainable environment on their property.

Through their attendance at several field days and workshops, Fi and Dan were able to further their understanding of the importance of groundcover for land management, prompting them to change their grazing management. Fiona says: “The things we learnt through the project stimulated our interest, so since then we have learnt a bit more ourselves and applied that to our grazing management.”

The CPP project also provided the Rankin’s with funding to assist them to fence off and revegetate two areas that had been pretty severely affected by salinity. Importantly, notes Fiona, “We included a number of species which would also provide some feed for the livestock once they’re established, so in the future this might be a useful area for us.” These species included Old Man Saltbush

Property size

2,023 ha

Farming enterprises

Bond sheep stud,
some cattle and
some mixed
cereals / grazing
crops

Soil type

Clay loam

Annual rainfall

575 mm

(*Atriplex nummularia*), Nitre Goosefoot (*Chenopodium nitrariaceum*), Ruby Saltbush (*Enchylaena tomentosa*) and Hedge Saltbush (*Rhagodia spinescens*).

In terms of the future, Fiona shares that they have lots of plans: “We still have some areas of erosion, and some hills need more shelter. Also we’ve started fencing off our creeks.” As evidence of their motivation to look after the property for their kids, it is lovely to hear Fiona conclude, “There are lots of old trees there but not many young ones, so it would be good to put some new seedlings in now, to plan for the future.”



A beautiful panorama of 'Glen Iris', showing a healthy stand of native vegetation

Fiona's Top Tip for successful NRM work

I think you need to go through a thorough planning process, to decide where to put your plantings in relation to land use. Using non-arable country to plant out can help with stock management in the future, so it's helpful to try to make it sustainable in that way.

Acronyms used in this document

ANU	Australian National University
CPP	Cross Property Planning
ha	Hectares
JALN	Junee Area Landcare Network
KVLG	Kyeamba Valley Landcare Group
MLi	Murrumbidgee Landcare Inc
NRM	Natural Resource Management
TVLG	Tarcutta Valley Landcare Group

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Australian Government