Final report

P.PSH.1402 - Paraway Pastoral CN30 Collaborative Co Innovation Program

Project code: P.PSH.1402

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Date published: 30/06/2025

PUBLISHED BY
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Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

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1 Project Objectives

1.1 Overview

The purpose of this project was to explore, pilot and scale greenhouse gas management interventions outlined in the Industry's CN30 Roadmap to deliver environmental, economic, and social impacts to Paraway Pastoral and the Australian red meat industry.

The Australian red meat and livestock industry created an opportunity to turn today's challenges into tomorrow's opportunities through its Carbon Neutral by 2030 (CN30) Initiative. Meat and Livestock's investment in technologies and practices that demonstrate the industry is proactively addressing emissions, reinforces the industry's reputation as a global leader in sustainable food production. This is a key point of difference for Australian red meat in a competitive global protein market.

Some technologies and practices being adopted include improved animal genetics and husbandry practices to reduce emissions intensity (per unit of meat produced). Other options require further research and development to validate their environmental and economic benefits for industry and its stakeholders.

Specifically, the 3-year collaborative program's 4 strategic focus areas include:

- Emissions avoidance
- Carbon storage
- Integrated management systems – including identifying, validating, and developing market segments which are willing to pay for carbon and sustainability claims
- Organisational leadership building – with a particular emphasis on innovations that enable new value creation through GHG emissions management with the participant's supply chain.

1.2 The MLA Co-Innovation Program

The Co-innovation Program has enabled Paraway to focus resources to accelerate innovation within the business through trials and analysis. Through MLA's collaboration with leading companies throughout the red meat supply chain, the outcomes of the program not only benefit the participating businesses, but through the partners leadership and capacity building can drive adoption of innovation throughout the industry.

Objectives

The MLA investment to support the Australian red meat industry to reduce net emissions was closely aligned to Paraway Pastorals values and objectives. Paraway agreed to commence a 3-year CN30 Collaborative Co-Innovation program with MLA, with the exclusive focus of the program to explore, pilot and scale GHG management interventions through the value chain.

1.3 Strategic focus areas

The program focused on four strategic focus areas:

- Emissions avoidance
- Carbon storage
- Integrated management systems
- Organisational leadership building

The emissions landscape evolved during the program, and various opportunities emerged and disappeared during the 3-years. The project involved trials of monitoring and calculation technology, assessment of emissions reduction and sequestration options, including value proposition and adoption potential. Importantly, Paraway shared learnings within the company, to the industry and value chain. In a sense, the program is more of a series of discrete case studies aligned with the strategic focus areas.

1.4 Program Key Performance Indicators

Within each of the strategic focus areas several KPIs were developed:

Emissions accounting

- Establish scope 1 & 2 baseline emissions for livestock and cropping enterprises - verified by an independent auditor.
- Set industry aligned/science-based emissions reduction targets for emissions.
- Measure emissions annually and track progress against targets.

Avoidance

- Develop and implement emissions avoidance strategies, with particular focus on livestock emissions
- Assess fossil fuel reduction initiatives

Storage

- Undertake woody veg carbon stock assessment using remote sensing technology.
- Assessment of viability of HIR, environmental planting and biodiversity projects.

Organisational leadership building

- Develop information packs to help managers understand the sources of GHG emissions on their properties and the impact different management activities have on emissions and carbon sequestration.
- Develop station specific emission reduction targets and mitigation strategies

Value creation

- Identify, validate and develop market segments which are willing to pay for carbon and sustainability claims
- Investigate, implement and where appropriate register emissions reduction projects
- Complete annual reporting for two existing beef herd management projects.

- Assess the viability of the projects and feasibility for Australian beef producers to participate and implement.

All of the KPIs were achieved.

2 Project activities

The project activities were structured in a logical sequence; starting with understanding baseline emissions, target setting, developing and implementing emissions avoidance and sequestration initiatives, and ongoing monitoring and verification, while assessing ways to create value from the process. Throughout the program technological solutions were trialled and assessed, and we communicated to Paraway's stakeholders and the wider industry about the findings.

2.1 Emissions Accounting

When Paraway commenced the development of a methodology for calculating the emissions baseline, there was limited guidance on how to undertake the assessment, particularly for a large scale, diverse (both geographically and operationally) producer. There were few calculator options available, none of which were suitable for the company "out of the box". Several international calculators were assessed and deemed inappropriate for Paraway's operations. Ultimately, the Greenhouse Accounting Frameworks (GAF) calculators were adopted as the starting point for developing the emissions baseline. This was due to the tool being open, having all emissions factors and calculations accessible, rather than being a black box. The GAF tools also use emissions factors from the National Greenhouse Gas Inventory (NGI).

2.1.1 Scope 1 and 2 Baselining

The GAF tools[1] were used as the basis for calculating Paraway's 2021 baseline emissions, but due to the scale, geographical spread and complexity of Paraway's operations this was not a straightforward exercise. The challenges are described below.

The GAF tool was not appropriate for a multi-property pastoral business like Paraway to use at the company level, as emissions are calculated based on regional emissions factors (including state, region and rainfall). Additionally, some of the stations have both livestock and cropping, which the GAF tools calculate separately. This meant that to calculate company level emissions, each of the stations needed to be separately calculated using the SB-GAF (sheep & beef) and with separate G-GAF (cropping) for each station that had a cropping enterprise.

In total, 39 GAF calculators were populated, 28 SB-GAF and 11 G-GAF. Scope 1 fuel and scope 2 electricity emissions were not calculated using the GAF tools; they were calculated separately at the station level using the emissions factors in the GAF tools (which are from the NGI). Similarly, electricity (scope 2) emissions were calculated separately.

An issue was identified when aggregating the station level emissions to get whole of company emissions. Stations purchase and sell internally (between stations) as well as externally. For internal sales, the seller's scope 1 emissions are the buyer's scope 3 (pre farmgate) emissions resulting in the same emissions being double counted. To prevent this, only external sales and purchases were

[1] https://www.piccc.org.au/resources/Tools

included when the emissions were aggregated. This was calculated outside of the GAF tools using the emissions factors from the GAF tool.

The GAF tools also do not calculate emissions for aviation fuel, so this was calculated separately using emissions factors in the NGI.

It should be noted that, to date no calculators have functionality to overcome all of the issues. The Ruminati calculator addresses some, allows livestock and cropping to be calculated at the same time and providing a simple process to assign proportions of total fuel (diesel and unleaded) and electricity to enterprises.

Table 1 provides a summary of how the emissions sources are calculated.

Table 1 Data used to calculate emissions

Data	Calculated in GAF	Calculated using GAF and/or NGI emissions factors	Ruminati
Livestock direct emissions	✓		
Livestock pre farmgate		✓	
Electricity		✓	
Diesel and unleaded fuel		✓	
Avgas		✓	
Crop			✓
Fertiliser and lime		✓	✓(for cropping)
Other chemicals			✓

2.1.2 Emissions Calculator Limitations

During the baselining process, the limitations of emissions calculators for an integrated livestock business became clear. By using the formulas and emissions factors from the NGI, which were built to aggregate data at the national level, there are very few options to reduce emissions. For example, to reduce total livestock emissions of a breeding herd without modifying the emissions factors in the GAF, the only options available are to reduce livestock numbers or reduce livestock weight. Modifying the emissions factors moves away from the NGI emissions factors, creating the significant issues described below.

Paraway rebuilt the GAF calculator to allow station specific data to replace the regional data. This resulted in a reduction to the total emissions, but three significant issues were identified which resulted in the project being abandoned:

1. Using station level emissions factors would require continual maintenance and would change from one year to the next.
2. Justification and verification of the basis for making changes would require a comprehensive record keeping process to enable audit.
3. Whenever an emissions factor was changed (e.g. methane GWP100), all historical calculators would need to be updated and re-run.
4. A non-standardised emissions calculation would risk not being accepted by stakeholders.

The cost and resourcing required to maintain and verify a bespoke system would be too significant to justify, compared to any value it achieved.

As it stands the limitations of emissions calculators provides no incentive to implement emissions reducing herd initiatives; such as low methane genetics and methane reducing feed supplements and pastures. However, they do provide calculations of emissions intensity – an indicator metric of production efficiency which gives producers more options to reduce the emissions per kg produced. This was a factor in Paraway adopting livestock emissions intensity reduction targets, as described below.

2.1.3 Emissions Reduction Target Setting

The process of developing Paraway's emissions reduction targets involved a review of international frameworks including the Science Based Targets Initiative (SBTI) as well as the Paris Agreement, IPCC publications and the Global Methane Pledge. Some of the key takeaways for agriculture were that

- methane emissions do not need to be zero to achieve global temperature goals[2;]
- that an emissions intensity (EI) approach can be an appropriate reduction[3], and
- that global targets are not necessarily applicable to individual businesses as they have different starting points and abatement/reduction[4].

Guidance was also taken from the New Zealand split gas approach, which considers the differences between biogenic and fossil fuel emissions and long and short-lived greenhouse gases.

A split gas approach was adopted, with a livestock emissions intensity reduction target and an absolute fossil fuel reduction target, for fuel and electricity emissions. The livestock emissions intensity was calculated as: $Livestock\ EI = \frac{\text{Total emissions for cattle and sheep (t CO2e)}}{\text{kg sold (cattle+ sheep+ wool)}}$

Annual reporting of livestock EI can be volatile due to seasonal conditions and sales programs traversing the annual reporting boundaries. To ensure that the baseline was representative of an average season, a 5-year average EI (2017-2021) was adopted for the baseline. For ongoing annual reporting, both annual and a rolling 5-year average EIs are reported - the latter being the metric with which we monitor progress to the target.

Both scope 1 livestock EI and scope 1 + 3 (for purchased livestock) are assessed to ensure that emissions are not being shifted off farm, as would occur by significant reductions to the proportion of breeding animals to the total herd/flock. Analysis of herd/flock composition showed that the breeding herd/flock is relatively stable as a proportion of total stocking rate, ranging from 40-45% (2017-2024).

The opportunities to reduce our livestock EI were assessed, with consideration to the limited options available to reduce total emissions using the GAF tool, concluding that the best opportunities were to increase the kg sold per emission. In other words, focusing on productivity.

For fossil fuels and electricity, limited options were available to operations however several were identified (section 2.2) and incorporated into reduction targets.

Insetting opportunities and registered carbon projects were identified and factored into targets (sections 2.3.3 and 2.5.1).

[2] https://www.ipcc.ch/sr15/chapter/spm/
[3] https://sciencebasedtargets.org/resources/files/SBTiFLAGGuidance.pdf
[4] https://www.globalmethanepledge.org/resources/global-methane-pledge

2.1.4 Adopted targets

Paraway adopted the reduction targets from the 2021 baseline, presented in Table 1.

Table 2 Paraway adopted emissions targets

Emission type	2030 target	2040 target
Livestock emissions intensity	-10% (-30% with removals[5])	-30%
Fossil fuel and electricity	-15% (-35% with removals)	-55% (-100% with removals)

To date no scope 3 reduction targets have been set as there are no practical ways of reducing them.

2.1.5 Annual Monitoring

Annual emissions monitoring has been undertaken with progress to date presented in Table 2.

Table 3 Annual monitoring

Scope 1 and 2 emission type	2022	2023	2024	2030 target
Livestock emissions intensity	-6%	-10%	-14%	-10% (-30% with removals)
Fossil fuel and electricity	-1%	5%	-7%	-15% (-35% with removals)

2.1.6 Independent Audit

Inputs to the GAF tools have been independently audited to a limited assurance level. The audit process was challenging, primarily due the lack of emissions auditing framework for the agriculture sector, particularly livestock.

2.2 Emissions Avoidance

Paraway's approach to emissions avoidance is influenced by the current state of emissions accounting, with priority given to actions that are measurable and/or recognised in the calculators. These are primarily actions to increase livestock productivity and efficiency (i.e. increase kg sold per emission).

Paraway continues to look at methane reduction technologies and have provided cattle for feed supplement trials. Participation in the Beef Cattle Herd Method (section 2.5.7) has driven productivity improvements across the beef properties.

For fossil fuel and electricity emissions Paraway have trialled and implemented several activities to reduce emissions, described in sections 2.2.2, 2.2.3 and 2.2.4.

[5] Removals will be insetting from sequestration projects.

2.2.1 Livestock Productivity - Sexed Semen AI trial

Several stations have run trials on using sexed wagyu semen to their angus heifer breeding program. Angus heifers are often joined to wagyu bulls for ease of calving for the heifers first calf, with the F1 progeny all being sold. The trial involved using sexed semen to increase the proportion of steer calves, which have higher ADG, meaning they reach sale weight faster and have a lower emissions intensity.

The program resulted in high proportion of steers, which were 20kg heavier than heifers at weaning. The steers continued higher ADG, meaning they achieve the target sale weights 51 days faster than the heifers. This results in the calculated emissions intensity of the steers being 8% lower than the heifers, while attracting a $0.20/kg premium at sale.

There were also non-tangible benefits that managing the steers is easier than the heifers, and the calving window is tighter than from natural joining.

2.2.2 Diesel Emissions - Station Generators

Paraway has four stations that are not connected to the electricity grid, and are powered solely by large diesel generators, which run continually. Paraway has looked at the opportunity to convert these generators to solar/battery systems, with diesel generator backup.

Two procurement models were investigated; a total ownership model and a partial ownership/lease model. Ultimately, the partial ownership/lease model was the preferred option, which comprised owning the solar panels and cabling, with the batteries and inverters being leased. This had several advantages over the ownership model. It reduced the initial capital expenditure. It also reduced the risk of dealing with equipment faults, particularly with the expensive components (battery and inverters), as the lessor only gets paid while the system is operational. The lease fees are less than the current expenditure on diesel.

The four stations are planned to be converted to the new systems in 2025 and will reduce diesel emissions by approximately 800 tCO_2e per annum.

2.2.3 Other Fuel Emissions - Electric Motorbikes and Side by Sides

Paraway invited an electric motorbike seller to the annual managers conference, to show a selection of bikes, and to present some information to the managers. Three managers agreed to purchase electric bikes to trial at their respective stations, one in the New England NSW, one in Southern Gulf QLD and one in the Channel Country QLD.

The NSW station found the bike to be very handy in the hilly country, with it being light and manoeuvrable, enabling it to be easily carried on the back of the ute. The Southern Gulf station reported that being light, it was a good option for smaller staff, who have difficulty lifting a dropped bike. The Channel Country station reported the bike was handy for commuting around the compound and surrounding areas but was not suitable for mustering work.

The QLD stations reported the availability of parts and mechanics to work on the bikes to be an issue and while there were positives from the trial, the ongoing use and adoption of electric bikes would require changes to how mustering is undertaken (or the bikes themselves) to prevent disruptions and

down time. Until issues around serviceability and parts are resolved, the use of electric bikes will be for specific situations.

An electric side by side was trialled in the New England NSW. The machine was found to be too light duty and the battery life insufficient for regular use.

2.2.4 Scope 2 Emissions - Green Electricity Purchase

Opportunities to reduce scope 2 emissions were underway in an ad hoc way prior to commencement of this project. This included some rooftop solar and solar bores. This was largely initiated at the station level, for reasons other than emissions reduction such as financial or grid reliability.

Paraway opted to enter into green electricity agreements in NSW and VIC, paying a premium for electricity sourced from renewables. The decision was made not to enter into a green electricity agreement in QLD as the premium was 40% higher than NSW and VIC.

This initiative has reduced Paraway's scope 2 emissions by 69%, while still providing a financial incentive to consider on-farm solar and energy efficient appliances.

2.3 Carbon Storage

2.3.1 Technology Trial - Forest/Woody Vegetation Carbon – FlintPro

Paraway worked with Mullion group to undertake a portfolio assessment of the forest on the stations using their FlintPro platform. The assessment uses remote sensing data to quantify the area of forest and the FullCam methodology to model the carbon in the forest areas.

The data was useful to demonstrate that under Paraway management, the area of forested land has increased. The tool was also useful for modelling the carbon sequestration in areas identified for potential planting and human induced regeneration (HIR) insetting projects at Malvern Hills and Gregory Downs, the environmental plantings at Beckworth Court and Old Bundemar and the Barton shelterbelts.

Since this trial, other products have been released which can help plan planting and other carbon sequestration projects including PLANR and LOOC-C, though they do not deliver the same level of detail as FlintPro.

2.3.2 Technology Trial - Soil Carbon – Downforce Technologies

Conventional soil carbon sampling is unfeasibly expensive to conduct at scale, so novel approaches are being developed which model soil carbon sequestration, based on landscape attributes and remote sensing groundcover. Paraway trialled Downforce Technologies to assess the soil carbon on a NSW station.

The report showed a 5% (3.39 tC/ha) increase in soil organic carbon over the 6-year assessment period (2017-22), including a 5.17 tC/ha loss reported during the 2018-19 drought, followed by a 7.7 tC/ha increase in 2020.

The user interface of the system is user friendly, and the platform is evolving, to provide insights into the impact of different land management activities and crop rotations.

2.3.3 Sequestration Projects

Paraway has set ambitious emissions reduction targets, both for livestock and fossil fuel emissions. As a consequence of setting ambitious targets, particular from 2030-40, assumptions have been made about technologies that are currently not financially viable or are not commercially available. This uncertainty about the level of emissions in 2030 and 2040, means it is uncertain what proportion of residual emissions will need to be 'netted out' or neutralised by insetting.

To manage this scenario, Paraway has developed several projects to sequester carbon for insetting purposes. Additionally, several projects have been registered under the Emissions Reduction Fund, giving the opportunity to monetise the carbon, should it not be required for insetting. The registered projects are detailed in section 2.5.

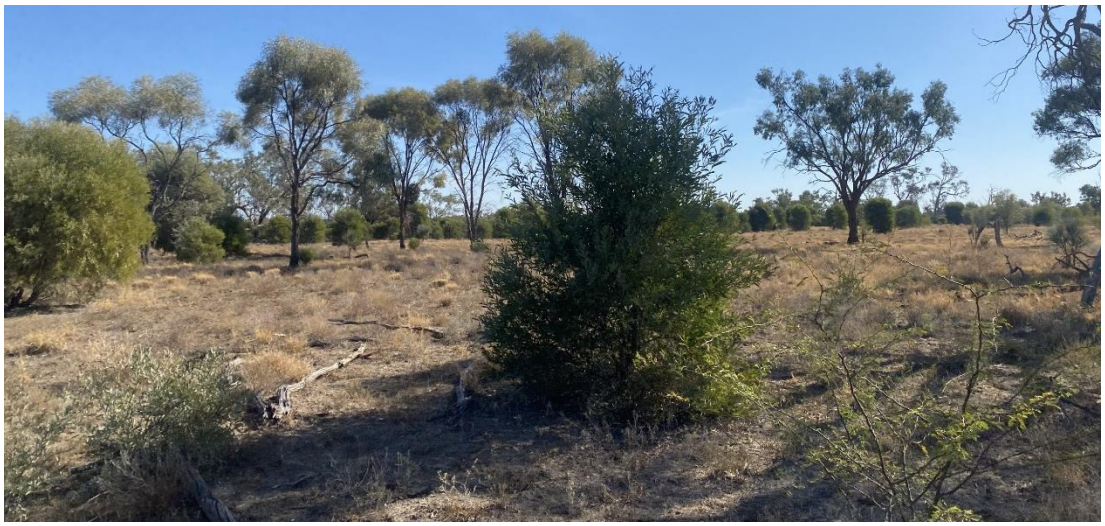
2.3.4 Malvern Hills HIR

Malvern Hills station near Blackall, QLD is operated as a cattle breeding and growing property. The landtype at the station comprises open downs, boree wooded downs, open alluvial plains and soft gidgee. Much of the gidgee country was cleared many years ago and is unregulated land (Cat X) under the Property Map of Assessable Vegetation (PMAV). These areas require periodic regrowth management to maintain the open grassland. Paraway identified 1,550 ha of land that had evidence of historic clearing and therefore the potential to regenerate to forest.

Despite the project not being formally registered with the ACCU Scheme, a carbon removal project was develop;ed in alignment with the human induced regeneration method.. A land management strategy for the project was developed, which included the practice change of ceasing regrowth management in some areas and reducing grazing pressure. Sequestration will be confirmed using visual assessments in addition to remote sensing and FullCam.

The project is progressing as planned, with modelling indicating that the carbon sequestration in the first 25 years could total 95,000 t CO2e.

Figure 1 Malvern Hills HIR. Regrowth in the background



2.3.5 Gregory Downs HIR

Gregory Downs Station in the Southern Gulf of QLD is operated as a cattle breeding property. The landtype at the station comprises Bluegrass browntop plains, frontage and Silver leaved box. The HIR project area is approximately 3,000 ha of frontage and grassland. While there is no known history of clearing, the area has been historically managed with hot burn fires to control woody vegetation and to manage ticks. Prior to the project, the area was regularly used for uncontrolled grazing. A new fence along the road has created a long, thin paddock with the river on the western side.

Paraway acknowledges that there are questions about the degree to which this area could establish and maintain forest, and as such have not included any carbon sequestration from this project in Paraway's emissions targets. Despite this the same rigour has been applied as would have been required for a registered project by developing a land management strategy, which includes the practice change of reducing uncontrolled grazing pressure. Sequestration will be confirmed using visual assessments in addition to remote sensing and FullCam.

Whitewood saplings are being observed in the project area, and these will continue to be monitored. Should the woody vegetation in the project area be able to achieve and maintain forest, the sequestration will be assessed for insetting use.

Figure 2 Whitewood regrowth at Gregory Downs

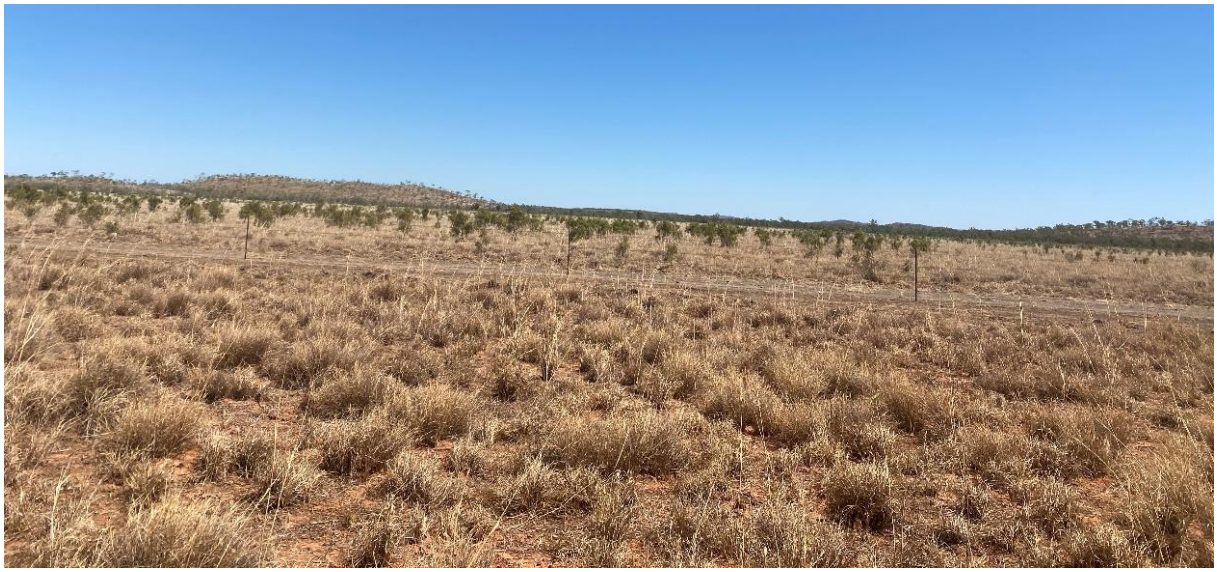


Figure 2 Whitewood regrowth at Gregory Downs

2.3.6 Old undemar Environmental Planting

Old Bundemar is a mixed farming operation in the central west of NSW. The station has a significant cropping enterprise in addition to sheep and cattle. A 60-hectare area adjacent to a riparian corridor was planted with native local species to sequester carbon and enhance biodiversity. The FlintPro[6] platform was used to assess the sequestration potential of the project, which calculated ~13,000 t CO2e could be sequestered in 25 years.

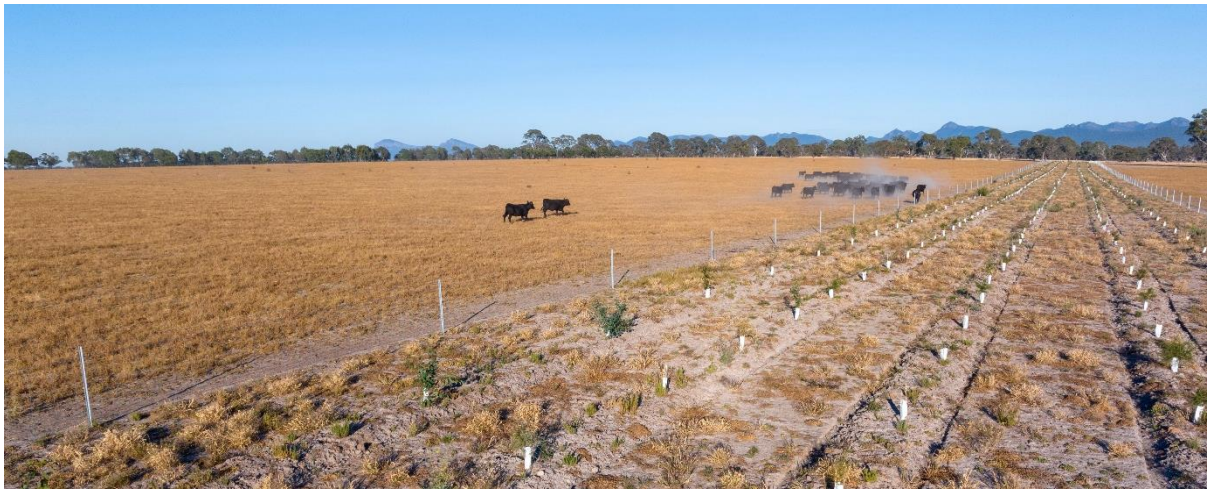
[6] https://www.flintpro.com/

Figure 3 Old Bundemar environmental planting

2.3.7 Barton Shelter Belt Planting

A shelterbelt planting project was developed at Barton Station. The project was designed with multiple objectives, 1. Shelter for lambing ewes, 2. Carbon sequestration and 3. Biodiversity. A total of 31 hectares was planted using tube stock of several native tree and shrub species. The modelled carbon sequestration for this project is 6,400 tCO2e, however the production benefits from the shelter are expected to reduce emissions intensity to a comparable degree.

Figure 4 Barton Station shelterbelt planting



2.4 Organisational leadership building

A key part of Paraway's emissions reduction targets involved capacity building throughout the organisation, from stations to the Board. Several initiatives were undertaken to educate and share knowledge. These incldued incorporating the emissions impact of operational decisions in the business planning and budgeting process, as well as modelling emissions impact of operational decisions. Management also worked with Station Managers to identify opportunities to reduce livestock emissions intensity and fossil fuel emissions. This led to the development of station emissions reduction plans tailored to specific station contexts. Three of the station plans are published on the Paraway website at Net Zero Plans – Paraway Pastoral Company Australia . The published plans include a northern breeding operation, an NSW breeding and growing operation, and a western Victorian sheep and cattle operation.

2.4.1 Industry Field Day Burindi Station

In 2023, Paraway identified an opportunity to extend the capacity building to the wider industry through a "*Getting Started with Net-Zero*" field day at Burindi Station near Barraba, NSW. Over 200 producers attended the day where Paraway described the experience of getting started; establishing a baseline, setting targets, understanding the options available to reduce emissions. Other presentations included Downforce Technologies talking about soil carbon, Warwick Badgery from NSW DPI talking about pasture selection for reduced emissions; Lachie Hart from Stockyard Beef, talking about supply chain perspective on emissions; and MLA, giving an industry and R&D perspective.

Feedback from the day was overwhelmingly positive, with producers appreciating hearing an honest, real-world experience in getting started, as well as practical opportunities to reduce emissions while increasing productivity.

Figure 5 Pasture discussion at the Burindi Field Day

2.4.2 Industry Field Day Barton Station

In 2024, a second field day was held at Barton Station, Moyston VIC. The theme for the day reflected the general increase in awareness of emissions accounting, with the focus being actual actions that Paraway is doing at the station to reduce emissions intensity. These included seasonal containment feeding, short joining windows, planting shelter belts to reduce mismothering and to sequester carbon.

Like the first field day, the feedback from the over 200 attendees to the day was overwhelmingly positive. What was noteworthy was the increase in awareness producers had of emissions and accounting in the year between the events. ***Figure 6 Presenting Paraway's decarbonisation plan at the Barton Field Day***

2.5 Value Creation

2.5.1 ACCU Scheme Soil Carbon Projects

When developing reduction and sequestration targets, there was little certainty about the potential of soil carbon sequestration, particularly in rangelands areas. Paraway chose not to include targets

for soil carbon sequestration in the emissions reduction plan, however several soil carbon projects have been registered to assess the potential.

2.5.1.1 Soil Carbon - Merrimba Station

In 2020, Paraway commenced a soil carbon project at Merrimba Station in the Central West of NSW. The project involved planting multi-species pastures into a 120-hectare paddock. The aim of the project is to increase soil organic carbon by maximising plant growth. To achieve this, high intensity short duration grazing will be used to keep plants actively growing for as long as possible.

No results are available, but resampling is scheduled for the second half of 2025.

2.5.1.2 Soil Carbon – Steam Plains Station

Steam Plains is a sheep breeding property in the Riverina NSW. The property was also a significant rice producer in the past. The soil carbon project at Steam Plains involved re-establishing native grassland on the old rice fields, with living plants being the mechanism to increase soil carbon. The project commenced in 2020. No results are available, but resampling is scheduled for the second half of 2025.

2.5.1.3 Soil Carbon – Gregory Downs Station

In 2024, a soil carbon project was registered at Gregory Downs Station in the Southern Gulf QLD. The project covers approximately 600 hectares, and is a collaboration between Paraway, Agrimix Pastures and Queensland University of Technology.

There are a number of interesting aspects to this project. Firstly, little is known about the dynamics of soil organic carbon in the Southern Gulf region, where a short intense growing season is followed by a prolonged dry season. Secondly, the introduction of deep-rooted perennial legumes into the native system should increase organic carbon at depth, in addition to fixing atmospheric nitrogen to the soil for the native grasses to utilise, increasing their productivity. Thirdly, the project is using eddy co-variant flux towers to constantly monitor atmospheric CO2 concentrations which will be used to verify the DayCent soil carbon model.

The forward abatement estimate for the project is 22,000 t CO2e of the 25-year project.

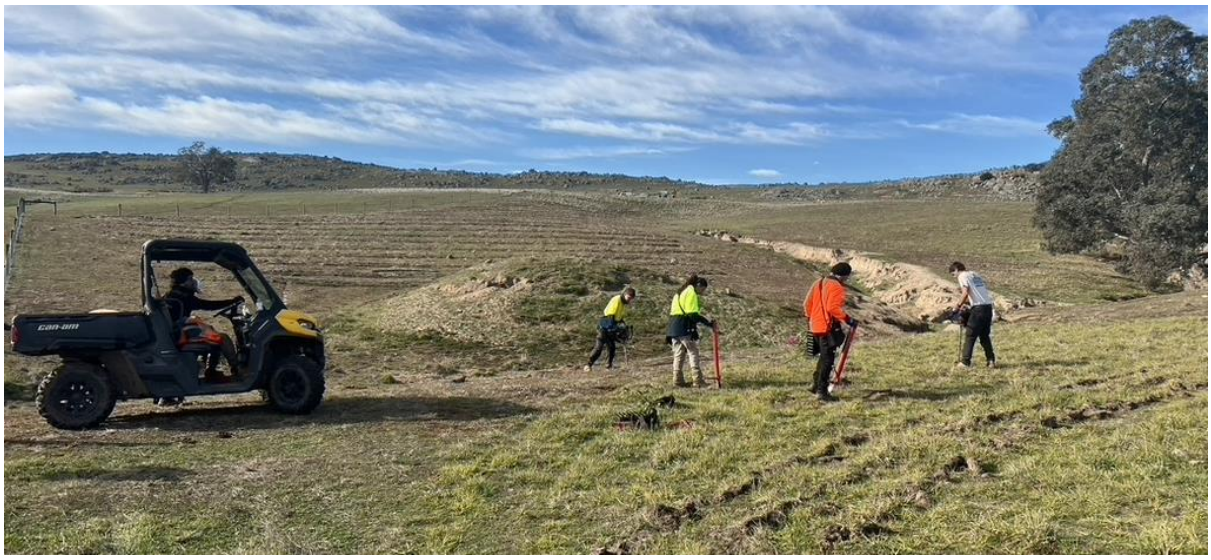
Figure 7 Eddy co-variant flux tower at the Gregory Downs soil carbon project

2.5.2 ACCU Scheme Vegetation Projects

2.5.2.1 Environmental Plantings Project – Beckworth Court Station

A 58-hectare project at Beckworth Court Station was registered under the Ag Stewardship Carbon + Biodiversity Pilot, which aims to establish mixed plantings for biodiversity and carbon sequestration, registered as an ERF project. The project comprises five planting areas with species that are typical of the pre-clearing vegetation of the region. The project involved planting approximately 40,000 trees and shrubs, modelled to sequester 10,900 t CO2e in the 25-year crediting period.

Figure 8 Beckworth Court environmental plantings



Paraway registered 135 hectares under the ERV pilot program at Beckworth Court in VIC, receiving funding to protect and enhance the remnant vegetation in timbered country and riparian areas, through fencing, weed and pest control and native vegetation planting.

Despite the recent extremely bad seasonal conditions and kangaroo impact in Victoria, the project is showing some positive progress, with patched of redgum regrowth being observed.

Figure 9 Redgum regrowth within an Enhancing Remnant Vegetation project area

2.5.3 ACCU Scheme Beef Cattle Herd Management Method

The Beef Cattle Herd Method (BCHM) is a methodology under the Emissions Reduction Fund that allows beef producers to earn Australian Carbon Credit Units (ACCUs) for reducing the emissions of their herds.

Paraway commenced its first project under the ERF Beef Cattle Herd Method in 2016. The project comprised 10 herds, five each from NSW and QLD.

To date over 300,000 ACCUs have been credited for the project.

The project was managed by a service provider until 2022, when Paraway took over management of the project for the final three years. In 2020, Paraway commenced a second project which included two Queensland herds and four NSW herds.

By taking on the project management, Paraway gained valuable insights into the mechanics of calculating, reporting and applying for ACCUs, which were previously managed by a Carbon Service Provider.

Paraway's experience managing the projects has demonstrated that method achieves what it is supposed to; incentivise emissions intensity reductions through changes to management practices. However, there have been issues with the method and the administration and reporting that could be improved to create an opportunity for widespread participation.

A number of factors were identified:

- The calculator proved to be labour intensive to populate, with baseline year data required to be input every year.
- Errors identified in the calculator and reported the Clean Energy Regulator resulted in the regulator suspending submission of annual reports for two years until the errors in the calculator were resolved.
- Following the CER recommencing report submissions, the Emissions Reduction Assurance Committee (ERAC) suspended the method, without consulting project proponents, or industry, stating concerns about whether the method continued to meet the Offsets Integrity Standards. The method suspension prevented any new projects from being registered, but existing projects could continue.
- The current seven-year crediting period is in many cases too short to fully recognise the emissions reduction potential of a new activity. Additionally, depending on the cost of the management change, seven years may be insufficient time to get a return on the investment.
- Anecdotally, many smaller scale producers have been under the belief (or have been told) that they do not have the scale to participate in the method, which to date only has large scale corporate participants.

Despite the shortcomings of the method, it has incentivised focus on adopting new practices to improve herd productivity and reduce emissions intensity. If the method is approved in 2025 to be remade (as required under the Act.) and enhancements to the method are implemented, the BCHM presents a real opportunity to drive change in the beef industry.

3 Conclusion

Paraway's participation in the co-innovation program has enabled Paraway to focus resources and investment into trialling and assessing the many options available for emissions accounting, monitoring using technology, abatement, storage and to communicate what has been learned along the way with the agricultural industry and supporting industries.

Finding solutions to very complex issues (such as working with natural systems) is rarely through spontaneous revolutionary change. It is through the cumulative small gains in knowledge about what works and what doesn't, about what can be implemented now, or needs more work. These gains can, on their own add up to something significant, but they can lead to a step change or complete paradigm shift.