



Final report

MLA-ACC: CN30 Co-Innovation Program 2021-24

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Table of contents

1.	Introduction	5
	Background	5
	Industry Benefit	5
2.	Project Objectives	6
	2.1 Overview.....	6
	2.2 Objectives	7
	2.3 Overall progress of the project.....	7
3.	Results	8
	3.1 Milestone 1	8
	3.1.1 Objectives.....	8
	3.1.2 Outcomes	8
	3.1.3 Other (outside of Outcomes and Objectives)	9
	3.2 Milestone 2	9
	3.2.1 Objectives.....	10
	3.2.2 Outcomes	10
	3.2.3 Other (outside of Outcomes and Objectives)	10
	3.3 Milestone 3	11
	3.3.1 Objectives.....	11
	3.3.2 Outcomes	12
	3.3.3 Other (outside of Outcomes and Objectives)	12
4.	Looking Ahead - Next Milestone Period	12
	4.1 Milestone 4	13
	4.1.1 Objectives.....	13
	4.1.2 Outcomes	14
	4.1.3 Other (outside of Outcomes and Objectives)	14
5.	Looking Ahead - Next Milestone Period	14
	5.1 Milestone 5	15

5.1.1	Objectives.....	15
5.1.2	Outcomes	16
5.1.3	Other (outside of Outcomes and Objectives)	16
6.	Looking Ahead - Next Milestone Period	16
6.1	Milestone 6	17
6.1.1	Objectives.....	17
6.1.2	Outcomes	18
6.1.3	Other (outside of Outcomes and Objectives)	18
7.	Looking Ahead - Next Milestone Period	18
7.1	Milestone 7	19
7.1.1	Objectives.....	19
7.1.2	Outcomes	20
7.1.3	Other (outside of Outcomes and Objectives)	20
8.	Looking Ahead - Next Milestone Period	20
8.1	Milestone 8	21
8.1.1	Objectives.....	21
8.1.2	Outcomes	22
8.1.3	Other (outside of Outcomes and Objectives)	22
9.	Looking Ahead - Next Milestone Period	22
9.1	Milestone 9	23
9.1.1	Objectives.....	23
9.1.2	Outcomes	24
9.1.3	Other (outside of Outcomes and Objectives)	24
10.	Looking Ahead - Next Milestone Period	24
10.1	Milestone 10	25
10.1.1	Objectives.....	25
10.1.2	Outcomes	26
10.1.3	Other (outside of Outcomes and Objectives)	26
11.	Looking Ahead - Next Milestone Period	26
11.1	Milestone 11	27

11.1.1 Objectives.....	27
11.1.2 Outcomes	28
11.1.3 Other (outside of Outcomes and Objectives)	28
12. Looking Ahead - Next Milestone Period	28
12.1 Milestone 12	29
12.1.1 Objectives.....	29
12.1.2 Outcomes	30
12.1.3 Other (outside of Outcomes and Objectives)	30

1. Introduction

Background

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 the partner COMPANY and the Australian red meat industry.

The Australian red meat and livestock industry has created an opportunity to turn today's challenges into tomorrow's opportunities through its Carbon Neutral by 2030 (CN30) Initiative. The CN30 target, alongside 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.

MLA is investing in technologies to support industry's transition to a carbon neutral position. 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 R&D to validate their environmental and economic benefits for industry and its stakeholders.

Aligned to these industry aspirations, the partner COMPANY and MLA agreed to complete a 3-year CN30 Collaborative Co-Innovation program. The exclusive focus of the program was to explore, pilot and scale GHG management interventions through the COMPANY value chain.

The program also included identification and development specific viable market opportunities that exhibit a willingness to pay for such sustainability credentials.

Specifically the 3 year collaborative program's 4 strategic focus areas included:

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

Key Findings from respective 3-monthly progress reports are presented in this Final Public Report.

Industry Benefit

As a result of MLA's support for this program, the following broader industry benefits have/can now be achieved from reporting this COMPANY's case study:

- Generic tools and approaches to building enterprise and supply chain innovation capability and achieving innovation outcomes that will be disseminated to the broader industry as agreed
- Better understanding of the critical issues impacting on the competitiveness of the industry that will be extended more broadly to other enterprises within the industry as agreed
- New technologies and new scientific knowledge (arising from projects within the Collaborative Co Innovation program) which will be commercialised and/or disseminated for the benefit of the broader industry as agreed.

2. Project Objectives

2.1 Overview

The scope of the CN30 innovation plan was to develop initiatives in the following key business areas:

1) Emission Avoidance:

- Animal genetics and husbandry practices to increase production efficiency and reduce methane emissions intensity (per kg of production)
- Livestock supplements that improve livestock productivity and lower enteric methane emissions
- Pastures, shrubs and legumes that improve livestock productivity and lower enteric methane emissions
- Equipment to capture and reuse methane from processing waste treatment
- Energy efficiency and renewable energy technology to reduce carbon dioxide emissions from use of fossil fuels
- Equipment to reduce nitrous oxide and methane emissions from manure management in lot feeding
- Savanna burning management methods to avoid emissions of nitrous oxide and methane resulting from “hot” burns.

2) Carbon Storage:

- Legumes, pastures, and shrubs that build feed base and carbon stocks above and within soils
- Trees and shrubs that improve carbon storage, animal health and biodiversity
- Methods to optimise carbon storage in dead woody biomass in grazing lands
- Methods to improve accounting of woody thickening in grazing lands
- Dung beetles to improve carbon storage, feed base production and livestock productivity

3) Integrated management systems:

- Technical and economic analysis of farming systems to determine appropriate combinations of emissions avoidance and carbon storage technologies and practices
- Incorporating emissions avoidance and carbon storage practices into existing extension and adoption programs
- Developing resources and tools to support adoption of emissions avoidance and carbon storage practices
- Linking outcomes from carbon farming projects into the National GHG Inventory (NGHGI)
- Developing new scientific methodologies to generate carbon credits
- Developing new measurement and reporting mechanisms to improve carbon accounting
- Investigating new accounting metrics for GHGs from livestock.
- Review / test third-party verification systems to validate carbon accounting.
- Identify, test and validate additional ways to capture value from achieving carbon neutrality i.e. – market access, brand equity, price premiums.

4) Leadership building

- Nurturing existing and developing new leaders within COMPANY to drive required organisational change.
- Aligning COMPANY activities with relevant industry strategies and frameworks, such as Red Meat 2030 and the Australian Beef and Sheep Sustainability Frameworks.

2.2 Objectives

1. Develop a CN30 Innovation Plan detailing the key focus areas.
2. Implementing first round of innovation initiatives in each of the key focus areas; namely.
 - Registering a herd management project so the business can commence accumulating ACCUs
 - Map farmland to understand land types to prioritise soil and natural resource abatement opportunities.
 - Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then.
3. Develop key performance indicators and measurement systems against baselines for all key focus areas.
4. Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following

KPIs:

- Revenue derived from environmental services and/or natural capital trading markets has increased year on year
- Increased utilisation of data and evidence to inform production led environmental outcomes.

2.3 Overall progress of the project at end of early milestones:

Project outcomes included;

- Joel Bentley assigned to the position of Group Manager of Sustainability 03/01/2022.
- Contract signed with Integrity Ag Environment for twelve months to assess baseline carbon emissions across the supply chain.
- Developed twelve month plan with Integrity Ag for the supply chain assessment.
- Beef Herd Management Project submitted to Clean Energy Regulator.

3. Results

3.1 Milestone 1

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.

3.1.1 Objectives

Work with Integrity Ag & Environment to get a Beef Herd Management Project (BHMP) submitted.

- Provided data worked with Steve and the team to complete abatement estimate for the BHMP.
- Provided and overview of COMPANY data for our pastoral properties. Individual data is a requirement for the project.
- Submitted appicate to the Clean Energy Regulator (CER).

3.1.2 Outcomes

- *Registering a herd management project so the business can commence accumulating ACCUs.*

In progress. Still waiting to hear from the CER whether COMPANY submission is successful.

- *Complete three emission baseline for the pastoral properties. This is a requirement for the BHMP, but it will also be apart of the overall baseline for supply chain.*

In progress. This work scheduled to start early April 2022.

- *Work with Integrity on a potential soil project at Opal Creek Feedlot utilising feedlot manure to put carbon back in the soil.*

In progress. We have applied for funding through the Pilot Soil Monitoring Incentives Program. Looking to do up 150 soil samples across the pastoral land of Opal Creek Feedlot. Opal Creek would like to improve the soils surrounding the feedlot to allow it to run more cattle.

3.1.3 Other (outside of Outcomes and Objectives)

- Assist with Oracle project across agribusiness.
- Train other team members on how to create BI reports.

3.2 Milestone 2 Key findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

3.2.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Complete BHMP three-year baseline. The baseline will be completed by using COMPANY's individual and mob-based cattle data. This will be roughly two to three months of work.
- Project plan for the Opal Creek soil project.

3.2.2 Outcomes

- BHMP baseline – in progress.
- Herd management project – in progress.
- Soil Project at Opal Creek – in progress.

3.2.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Train new team member (Lauren – P. PSH1159).

3.3 Milestone 3 Key Findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

3.3.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Complete BHMP three-year baseline. The baseline will be completed by using COMPANY's individual and mob-based cattle data. This will be roughly two to three months of work.
- Complete project plan for the Opal Creek soil project and review internally.
- Complete CN30 strategy on a page.
- Continue working with Integrity Ag & Environment on supply chain baseline.
- Start building carbon accounting ability.
- Attend the Australian Beef Sustainability Framework Annual Update.
- Investigating natural capital/biodiversity.
- Build BI report to help with BHMP reporting.

3.3.2 Outcomes

- BHMP is now registered with the ERF (see Appendix).
- BHMP baseline – in progress, was meant to begin previous milestone however due to priorities it was pushed back.
- Soil Feasibility Project at Opal Creek was completed. The business has not decided to go ahead due to significant baseline costs and uncertainty of returns.
- BI report was created using the properties Protrace data (individual cattle data) to assist with reporting required for the BHMP. The report looks at lifetime ADG from weaning to feedlot turnoff to seasonal ADG (see Appendix).
- Engaged CIBO Labs to understand their remote sensing technology, in particular ground cover analysis and food on offer. COMPANY now has three properties with CIBO Labs.

3.3.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Train new team member (Lauren – P. PSH1159).

4. Looking Ahead - Next Milestone Period

- Continue working on supply chain baseline.
- Work with operational teams to identify priority areas for sustainability.
- Complete BHMP baseline.
- Complete HIR feasibility across COMPANY properties.
- Look into Biodiversity/environmental accounts options.
- Looking at funding opportunities for carbon projects.

4.1 Milestone 4 Key Findings (end of year 1)

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

4.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Complete HIR feasibility.
- Complete BHMP three-year baseline. The baseline will be completed by using COMPANY's individual and mob-based cattle data. This will be roughly two to three months of work.
- Continue working with Integrity Ag & Environment on supply chain baseline.
- Start building carbon accounting ability.
- Attend the Australian Agriculture Sustainability Framework COP.
- COMPANY is a part of the Australian Agriculture Sustainability Framework pilot.
- Investigating natural capital/biodiversity.
- Build BI report to utilising supply chain data to report against emission intensity (EMI) of cattle turning off property to feedlot.
- Give the company an update on COMPANY CN30, this will be done on the company wide Monday meeting.

4.1.2 Outcomes

- Supply Chain baseline is now complete (see appendix). Full report not provided in this milestone. Provided in future milestone report.
- Emission reduction options completed for farm, feedlot and factory.
- HIR feasibility completed (see appendix). Present to board by next milestone to get direct around HIR reduction strategy.
- Give the company an update on the Monday morning meeting (see appendix).
- BHMP baseline – in progress, was meant to begin previous milestone however due to priorities it was pushed back.
- BI report was created using the properties and feedlot data (individual cattle data) to report on EMI (see Appendix).
- Continuing to build carbon accounting capabilities. There has been a big focus on utilising supply chain data to automate emission reporting.

4.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Train new team member (Lauren – P. PSH1159).

5. Looking Ahead - Next Milestone Period

- Present baseline and solutions to the board.
- Develop detailed short, medium- and long-term reduction strategy.
- Work with operational teams to identify priority areas for sustainability.
- Complete BHMP baseline.
- Look into Biodiversity/environmental accounts options.
- Looking at funding opportunities for carbon projects.
- Attend AASF pilot sessions.

5.1 Milestone 5 Key Findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

5.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Work with processing team to reduce water usage. Waste water accounts for 45% of processing carbon account.
- Improve organic waste utilisation.
- Improve organic waste quality.
- Look for alternative organic waste streams to reduce waste costs.
- Work with R&D team on potential waste to energy project at Cannon Hill.
- Continue building carbon accounting ability.
- Calculate monthly Scope 1 & 2 emissions for Cannon Hill.
- Benchmark reports for waste (organic and landfill) & electricity against industry.
- Investigating natural capital/biodiversity.
- Build BI report to utilising supply chain data to report against emission intensity (EMI) of cattle turned off from feedlots.
- Give the company an update on COMPANY CN30, this will be done on the company wide Monday meeting. Currently give an update monthly on the Monday meetings.
- Continue with the BHMP baseline.

- Working with an energy on renewable energy feasibility for Cannon Hill and Opal Creek feedlot.

5.1.2 Outcomes

- Now calculation Scope 1 & 2 emissions monthly for Cannon Hill (see appendix).
- Holding weekly water meetings with operational, QA, engineering and maintenance and sustainability.
- Have reduced water usage since beginning by at least 20% (see appendix for waster report).
- Report and monitor organic waste utilisation (see appendix).
- Working with Searles as a potential partnership to buy our organic waste.
- Created dashboards for Cannon Hill waste streams (see appendix)
- BHMP baseline – in progress, was meant to begin previous milestone however due to priorities it was pushed back.
- BI report for feedlot emissions is still in progress. Hopefully completed by next milestone.
- Continuing to build carbon accounting capabilities. There has been a big focus on utilising supply chain data to automate emission reporting.
- Getting close to signing off on a carbon vegetation project on Wellclose.
- Baseline and reduction options still hasn't been presented to the board. Hopefully next board meeting this can occur.

5.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Train new team member (Lauren – P. PSH1159).

6. Looking Ahead - Next Milestone Period

- Present baseline and solutions to the board.
- Develop detailed short, medium- and long-term reduction strategy.
- Work with operational teams to identify priority areas for sustainability.
- Complete BHMP baseline.
- Look into Biodiversity/environmental accounts options.
- Looking at funding opportunities for carbon projects.
- Work with our banks and insurers on what their expectations are on emission reductions.
- Continue to work with our customers on CN30.
- Automate Scope 1 & 2 emissions monthly using supply chain data.

6.1 Milestone 6 Key Findings

<p>Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include;</p> <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

6.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Work with processing team to reduce water usage. Wastewater accounts for 45% of processing carbon account.
- Work with Integrity Ag on HIR feasibility for Wellclose.
- Present HIR feasibility to the owners.
- Improve organic waste utilisation.
- Improve organic waste quality.
- Look for alternative organic waste streams to reduce waste costs.
- Work with R&D team on potential waste to energy project at Cannon Hill.
- Continue building carbon accounting ability.
- Calculate monthly Scope 1 & 2 emissions for Cannon Hill.
- Benchmark reports for waste (organic and landfill) & electricity against industry.
- Investigating natural capital/biodiversity.
- Build BI report to utilising supply chain data to report against emission intensity (EMI) of cattle turned off from feedlots.
- Working with an energy on renewable energy feasibility for Cannon Hill and Opal Creek feedlot.

- Look for alternatives for coal for the boilers.
- Set targets and KPI's for emission intensities, water use, waste etc..

6.1.2 Outcomes

- Feedlot cattle emissions now automated in Power BI. This utilises ration ingredient data, cattle data, and IPCC guidelines (see appendix).
- The feedlot report also tracks cost of abatement (see appendix).
- HIR feasibility updated and completed with Integrity Ag (see appendix).
- Presented the HIR feasibility to the owners. HIR project got approved, next milestone will be building the application for registration.
- Started a solar feasibility with Enervest for Cannon Hill.
- Looked into Biofuel as a replacement for coal for the boilers. Still work in progress but looks like a promising solution.
- Targets were presented to the CEO and COO's on emission intensities, water use, waste and renewable targets (see appendix).
- BHMP baseline now complete, we will receive ACCU's in the next financial year.
- Wellclose has been approved for a natural capital account.
- Worked with Southern Queensland Landscapes and Wellclose manager on scoping up a land rehydration project. Have gotten \$50k approved in the CAPEX budget for a project.
- Caught with our NAB bankers to update them on our CN30 plan.

6.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Train new team member (Lauren – P. PSH1159).

7. Looking Ahead - Next Milestone Period

- Get the HIR project registered.
- Submit first BHMP report to receive ACCU's
- Present baseline and solutions to the board.
- Continue to develop detailed short, medium- and long-term reduction strategy.
- Looking at funding opportunities for carbon projects.
- Work with our banks and insurers on what their expectations are on emission reductions.
- Continue to work with our customers on CN30.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

7.1 Milestone 7 Key Findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

7.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Get the Wellclose HIR project registered.
- Work with processing team to reduce water usage. Wastewater accounts for 33% of processing carbon account.
- Submit first BHMP report to receive ACCU's.
- Improve organic waste utilisation.
- Improve organic waste quality.
- Look for alternative organic waste streams to reduce waste costs.
- Continue building carbon accounting ability.
- Calculate monthly Scope 1 & 2 emissions for Cannon Hill.
- Working with an energy on renewable energy feasibility for Cannon Hill and Opal Creek feedlot.
- Update feedlot FY24 template for emission tracking.
- Work with Cibo Labs to get data on vegetation and ground cover changes.
- Build deforestation and ground cover Power BI report.

7.1.2 Outcomes

- Feedlot cattle emissions for FY24 now automated in Power BI. This utilises ration ingredient data, cattle data, and IPCC guidelines (see appendix).
- The feedlot report also tracks cost of abatement (see appendix).
- Did on ground survey with Integrity Ag for the Wellclose HIR project.
- HIR project did not go ahead after on ground surveys proved it would not yield enough ACCU's to justify overheads.
- Energy audit (processing) and 3-5year CAPEX and emission reduction proposal approved. Work begins early October.
- Built vegetation and deforestation BI report (see appendix).
- Built ground cover BI report (see appendix).
- BHMP baseline still hasn't be audited. Engaged with auditors, work to commence endo of October.
- Wellclose has been approved for a natural capital account. Work to commence early November.
- Supply chain scope 1 and 2 emissions now being reported monthly.
- Starting to train other people in team internally how to complete carbon accounting.

7.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Business acquisitions.
- Future herd structure modelling.

8. Looking Ahead - Next Milestone Period

- Submit first BHMP report to receive ACCU's
- Present baseline and solutions to the board.
- Continue to develop detailed short, medium- and long-term reduction strategy.
- Commence work with NRG-One on energy audit for processing.
- Continue to work with our customers on CN30.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.
- Investigate opportunities for processing's organic waste.

8.1 Milestone 8 Key Finding (end of Year 2)

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

8.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- NRG-One on energy audit for processing commencement.
- Improve organic waste utilisation.
- Improve organic waste quality.
- Look for alternative organic waste streams to reduce waste costs.
- Continue building carbon accounting ability.
- Work with Cibo Labs to get data on vegetation and ground cover changes.
- Begin pasture budgeting across the property group.
- Get remote sensing land condition project approved (Cibo Labs).
- Drought resilience project commencement at Wellclose.
- Digestor project at Cannon Hill feasibility.
- CO2 capture feasibility Cannon Hill.

8.1.2 Outcomes

- Fortnightly meetings now setup with operations to improve organic waste utilisation.
- Cibo Labs land condition project approved to go across properties. Barkly Downs already completed (see appendix).
- Drought resilience project began to capture water runoff on Wellclose. Next milestone will have pictures and more details to share.
- NRG-One on energy audit for processing began, finished late January 2024.
- BHMP baseline still hasn't be audited. The regulator has put a pause on all BHMP.
- Digestor project feasibility commenced, completed late January.
- CO2 project feasibility commenced, completed late January.

8.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Business acquisitions.
- Future herd structure modelling.

9. Looking Ahead - Next Milestone Period

- Complete digester feasibility.
- Complete CO2 capture feasibility.
- Continue to develop detailed short, medium- and long-term reduction strategy.
- Continue to work with our customers on CN30.
- Begin land management project.
- Document and report on the drought reliance project.
- Complete pasture budgets for all properties.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

9.1 Milestone 9 Key Findings

<p>Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include;</p> <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

9.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Work with NRG-One on energy audit.
- Go back as far as possible for carbon accounting.
- Drought resilience project at Wellclose.
- Align carbon accounting to financials (cattle numbers) for properties.
- Work with Cibo Labs to get data on vegetation and ground cover changes.
- Develop report for historical TSDM using Cibo Labs data.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

9.1.2 Outcomes

- Worked closely with NRG-One on audit, hopefully finished end of March.
- Started building a 3-5 year CAPEX plan for energy for processing.
- TSDM report now built in BI using Cibo Labs data. (see appendix).
- Drought resilience project to capture water runoff on Wellclose. Started documenting changes after rainfall events. Have seen massive response (see appendix).
- Have aligned properties carbon accounting to match cattle numbers in financials (see appendix).
- Have now got over 20 years of emission data for processing in a BI report (see appendix).

9.1.3 Other (outside of Outcomes and Objectives)

- Continue to assist with Oracle project across agribusiness.
- Business acquisitions.
- Future herd structure modelling.

10. Looking Ahead - Next Milestone Period

- Continue to develop detailed short, medium- and long-term reduction strategy.
- Continue to work with our customers on CN30.
- Soil carbon measurements on the Wellclose water project.
- Document and report on the drought reliance project.
- Finalise emissions reporting to align with mandatory reporting requirements due in July.
- Present findings from NRG-One and prioritise projects.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

10.1 Milestone 10 Key Findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

10.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Present findings from NRG-One and prioritise projects.
- Build 3 to 5 CAPEX plan for energy at Cannon Hill.
- Benchmark TSDM monthly for property group.
- Link water meter data to production data (processing).
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.
- Develop category X report by paddock in preparation for deforestation strategy.

10.1.2 Outcomes

- NRG One audit completed. Completed a CAPEX strategy for energy (see appendix).
- Started building a 3–5-year CAPEX plan for energy for processing.
- TSDM benchmark report built (see appendix).
- Started being involved in feed additive trials at Brisbane Valley feedlot.
- Majority of milestone 10 work was finalising the energy audit and energy CAPEX strategy.
- Developed category x report by property and paddock for deforestation strategy.

10.1.3 Other (outside of Outcomes and Objectives)

- Business acquisitions.
- Future herd structure modelling.

11. Looking Ahead - Next Milestone Period

- Continue to develop detailed short, medium- and long-term reduction strategy.
- Continue to work with our customers on CN30.
- Soil carbon measurements on the Wellclose water project.
- Document and report on the drought reliance project.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

11.1 Milestone 11 Key Findings

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farmland to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

11.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Natural Capital account for Wellclose, two ecological sites.
- Finalise FY24 carbon accounts.
- Work with Cibo Labs on regrowth height in category X country in preparation for deforestation strategy.
- Revisit Opal Creek solar project.

11.1.2 Outcomes

- Natural Capital account complete for Wellclose. Report will be in next milestone report. Have not got the final copy back from Integrity Ag.
- Built a BI report showing regrowth by paddock and how much of the area has reach an AUS or FAO forest (see appendix).
- Opal Creek solar project financial model has been updated and is being considered again at the next board meeting. Opal Creek is run diesel generators, solar would reduce significant emissions for the site (see appendix).

11.1.3 Other (outside of Outcomes and Objectives)

- Business acquisitions.
- Future herd structure modelling.
- Budget reforecasts

12. Looking Ahead - Next Milestone Period

- Present the Wellclose natural capital account to the group.
- Continue to develop detailed short, medium- and long-term reduction strategy.
- Continue to work with our customers on CN30.
- Soil carbon measurements on the Wellclose water project.
- Continue automating Scope 1 & 2 emissions monthly using supply chain data.

12.1 Milestone 12 Key Findings (end of Year 3)

Develop and implement Collaborative Co Innovation Program, including submitting the following items to the Steering Group, priorities for year 1 include; <ul style="list-style-type: none"> • Develop a CN30 Innovation Plan detailing the key focus areas; • Implementing first round of innovation initiatives in each of the key focus areas; namely; <ul style="list-style-type: none"> ○ Registering a herd management project so the business can commence accumulating ACCUs ○ Map farm land to understand land types to prioritise soil and natural resource abatement opportunities ○ Map baseline end to end for the COMPANY supply chain to understand footprint and abatement priorities, then; • Develop key performance indicators and measurement systems against baselines for all key focus areas; • Review the key focus area KPIs in consultation with the CN30 team and identify additional data requirements which will be required to report against the following KPIs: <ul style="list-style-type: none"> ○ revenue derived from environmental services and/or natural capital trading markets has increased year-on-year ○ Increased utilisation of data and evidence to inform production-led environmental outcomes 	In Progress
Annual improvement in net GHG emissions position	In progress – baseline being established
Develop a communication plan for the project.	In progress.
Collaborative Co Innovation Program development and implementation.	In progress.
Submit Quarterly Report to MLA for review and approval using MLA template.	Completed.

12.1.1 Objectives

Objectives intended to be focussed on during this milestone period are:

- Natural Capital account for Wellclose, two ecological sites.
- Start work on getting the Beef Herd Project ready for submission.
- Present COMPANY Sustainability strategy and update to Rabo and NAB.
- Start mapping out a potential project for on farm feed additives.

12.1.2 Outcomes

- Natural Capital account complete for Wellclose (see appendix).
- Finalise FY24 carbon accounts (see appendix for properties example).
- Presented COMPANY sustainability strategy to Rabo and NAB (see appendix).
- Early stages of working up an on-farm feed additive trial, closely working with the COMPANY R&D team.

12.1.3 Other (outside of Outcomes and Objectives)

- Business acquisitions.
- Future herd structure modelling

In closing, a successful innovation strategy was designed and delivered by the Co-Innovation Manager embedded in the partner Company. Participation as part of wider MLA Co-Innovation program was also undertaken, including attendance at sessions led by Hargraves coordinated by MLA, and providing content for MLA communications of the program as requested.