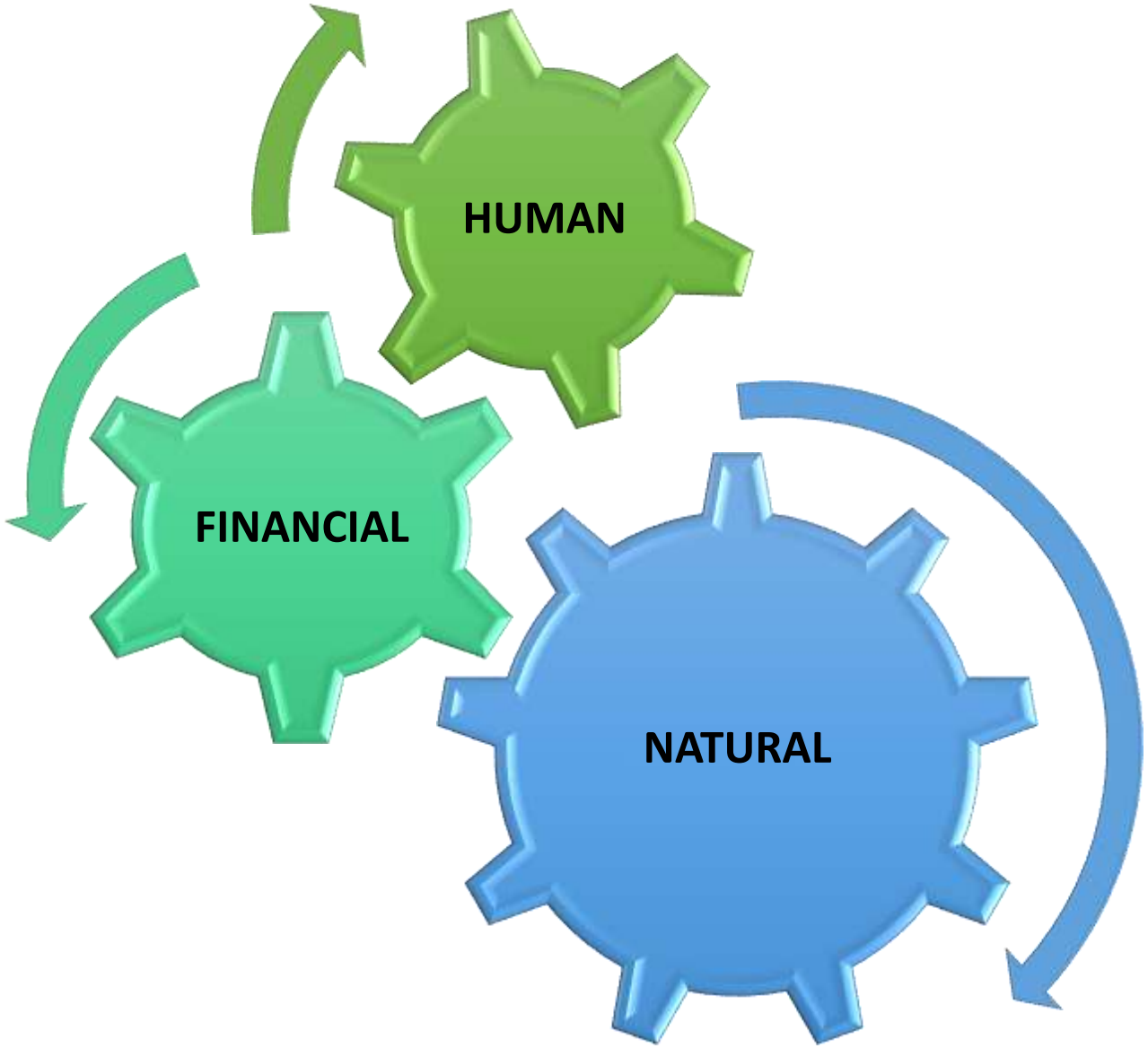
Our Journey…
Carbon and Sustainability

Felicity Turner

TURNER AGRIBUSINESS

Our values…



Key Drivers…

Reducing our impact on the planet

Healthy soil = increased production

You can’t manage what you don’t measure

The process…

Discovery

Plan

Implement

Review

Improve

What do we know?

- Fonterra
  - Climate-neutral growth to 2030 for pre-farmgate emissions from a 2015 base year
- Unilever **
  - Reducing the GHG impact of their products by 50% by 2030, compared to baseline of 2010
- Mondelez
  - Reduce absolute GHG from manufacturing 15%
  - 100% renewable energy
- Nestle **
  - Zero environmental impact in our operations
- JBS
  - Net-zero GHG by 2040 and zero deforestation across its global supply chain by 2035
- Heineken
  - Carbon neutral barley-malt supply chain
- Rabobank & NAB
  - Net zero financed emissions by 2050
  - Hold 50% of Australia agri-debt market
- Mars
  - Reduce GHG across our value chain 27% by 2025 and 67% by 2050 (from 2015 levels)
- Kellogg Company **
  - 65% reduction by 2050
  - 100% renewable energy
- Pfizer
  - 60 to 80% by 2050
- Wilmar international
  - 89.72% less GHG from 2013 to 2020
  - 100% renewable energy
- Olam
  - Reduce GHGs by 50% by 2030 both in our own operations and in our supply chain
  - By 2050, we aspire to be carbon positive in operations, requiring a 5% emissions reduction per year from 2031 – 2050

**committed to increasing plant-based protein

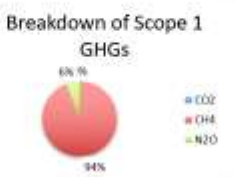
- Of the 100 largest economies 69 are companies and 31 are countries
- *Government policy may now be less influential than market forces*

Source: Company sustainability reports https://oxfamapps.org/fp2p/the-worlds-top-100-economies-31-countries-69-corporations/

Develop a plan…

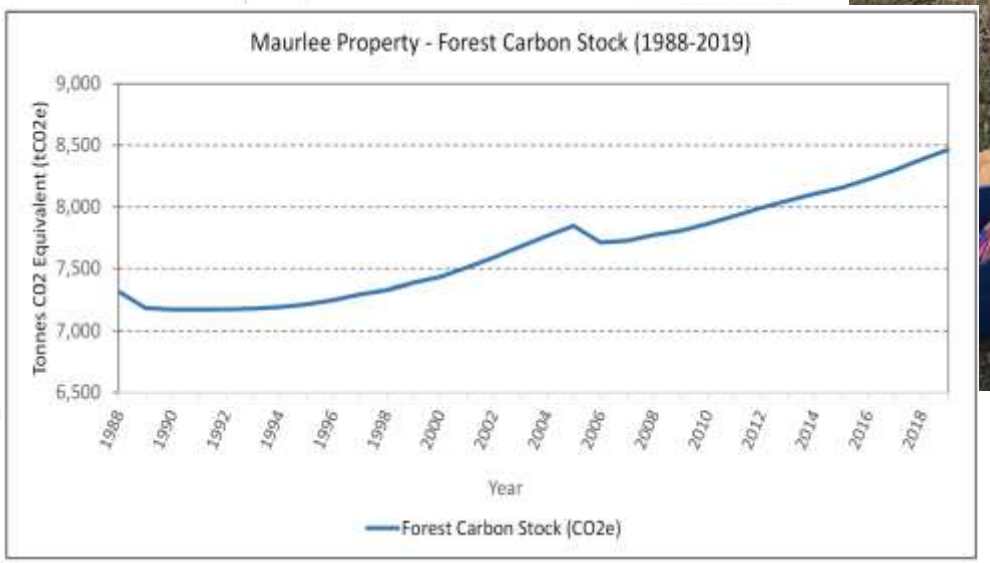
Beef & Sheep Greenhouse Accounting Tool

Outputs	beef t CO_2e/farm	sheep t CO2e/farm	total t CO2e/farm	Summary of Scope 1	t CO2e/farm
Scope 1 Emissions					
CO_2 - Fuel	0.00	0.00	0.00	CO_2	0.00
CO_2 - Lime	0.00	0.00	0.00	CH_4	735.21
CO_2 - Urea	0.00	0.00	0.00	N_2O	45.55
CH_4 - Fuel	0.00	0.00	0.00		
CH_4 - Enteric	0.00	699.20	699.20		
CH_4 - Manure Management	0.00	36.01	36.01		
CH_4 - Savannah Burning	0.00		0.00		
N_2O - Fertiliser	0.00	0.00	0.00		
N_2O - Urine and Dung	0.00	41.23	41.23		
N_2O - Atmospheric Deposition	0.00	4.33	4.33		
N_2O - Leaching and Runoff	0.00	0.00	0.00		
N_2O - Savannah Burning	0.00		0.00		
N_2O - Fuel	0.00	0.00	0.00		
Scope 1 Total	**0**	**781**	**781**		
Scope 2 Emissions					
Electricity	0.00	0.00	0		
Scope 2 Total	**0**	**0**	**0**		
Scope 3 Emissions					
Fertiliser	0.00	0.00	0.00		
Purchased mineral supplementation	0.00	0.00	0.00		
Purchased feed	0.00	0.00	0.00		
Herbicides/pesticides	0.00	0.00	0.00		
Electricity	0.00	0.00	0.00		
Fuel	0.00	0.00	0.00		
Lime	0.00	0.00	0.00		
Purchased livestock	0.00	624.01	624.01		
Livestock on agistment					
Scope 3 Total	**0**	**624**	**624**		
Carbon Sequestration					
Carbon sequestration in trees	0.00	0.00	0.00		
Net Farm Emissions	**0**	**1,405**	**1,405**		



	Cattle	Sheep	
Enteric methane	0.00	699.20	6
Manure	0.00	36.01	
Purchased mineral supp	0.00	0.00	
Purchased livestock	0.00	624.01	6
Urine and Dung	0.00	41.23	
Indirect N2O	0.00	4.33	
Fuel	0.00	0.00	
Savannah burning	0.00	0.00	
Electricity	0.00	0.00	
Other Pre-farm	0.00	0.00	

HOTSPOT ANALYSIS - SB-GAF V2.3



Implement the plan…

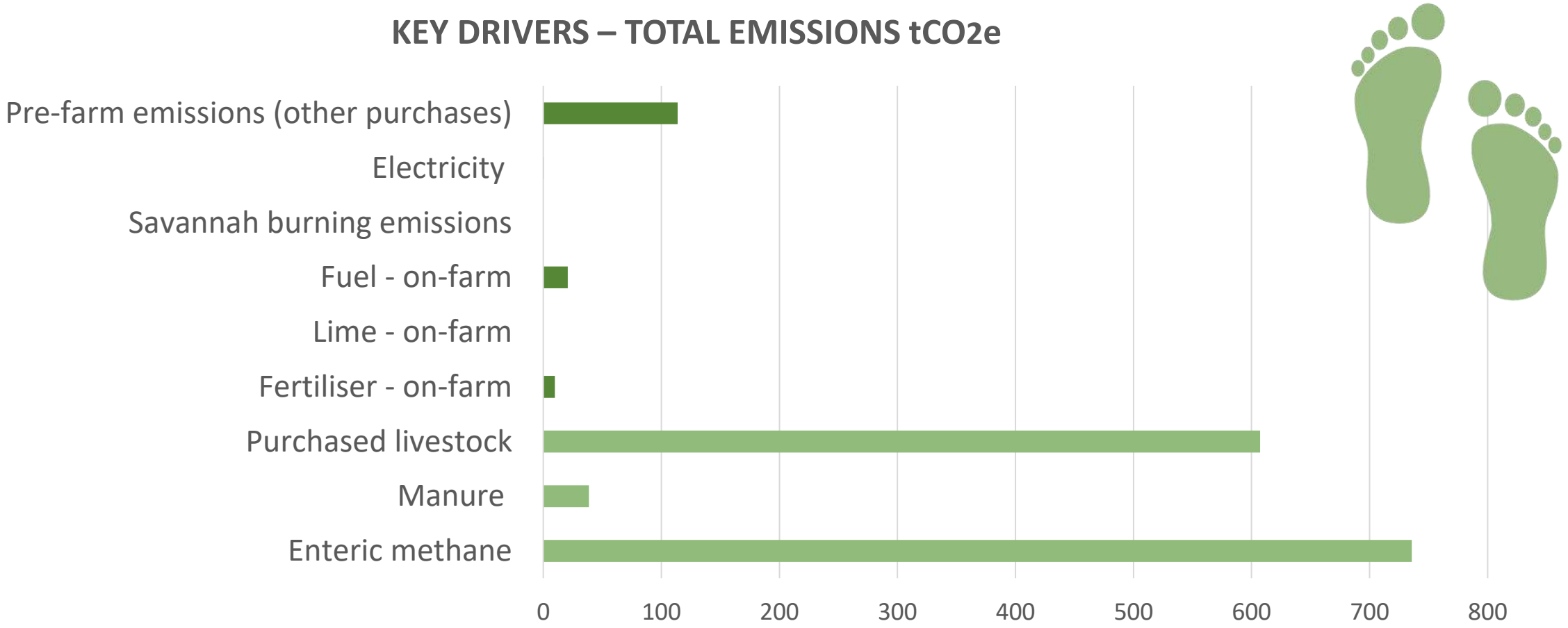
Our farm footprint	Tonnes CO_2e
On-Farm (Scope 1&2)	+ 864
Scope 3 (upstream & downstream	+ 721
Sequestration (plantings & veg)	- 75
BALANCE	**= 1510**

Emissions intensity

Meat 5.4 kgCO2e/kg LWT (6-10 ‘normal’)

Wool 19.6 kgCO2e/kg greasy (20-35 ‘normal’)

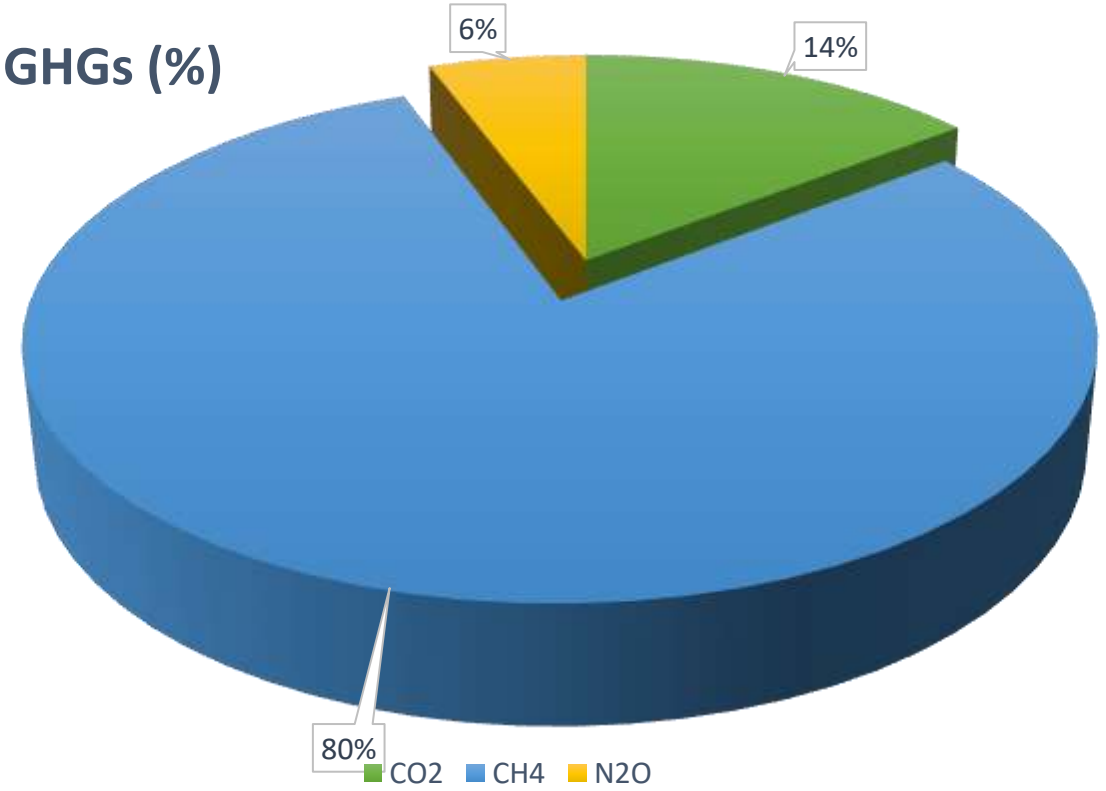
Implement the plan…



Implement the plan…

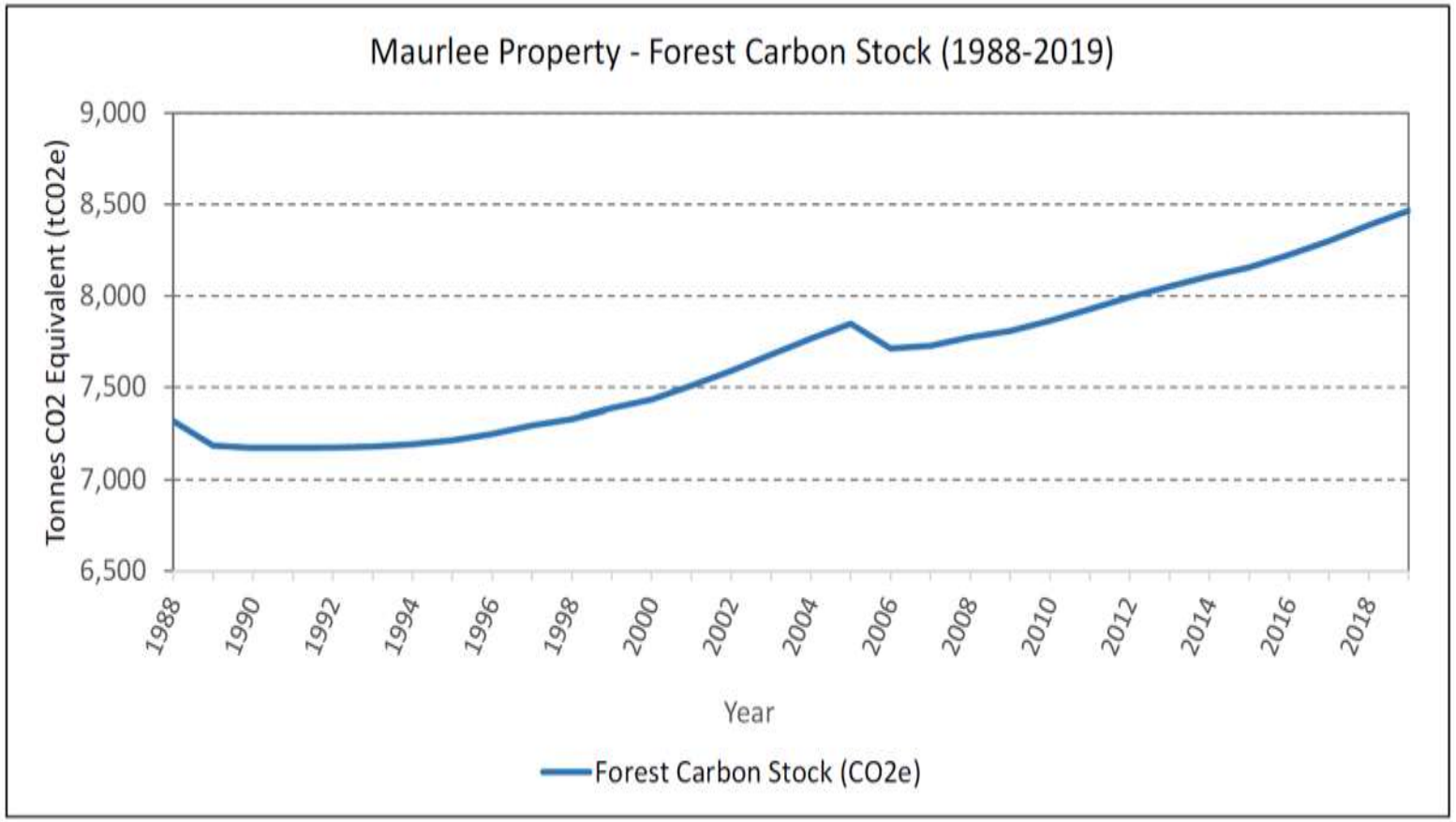
KEY EMISSION DRIVERS ON-FARM

Breakdown of Scope 1 GHGs (%)



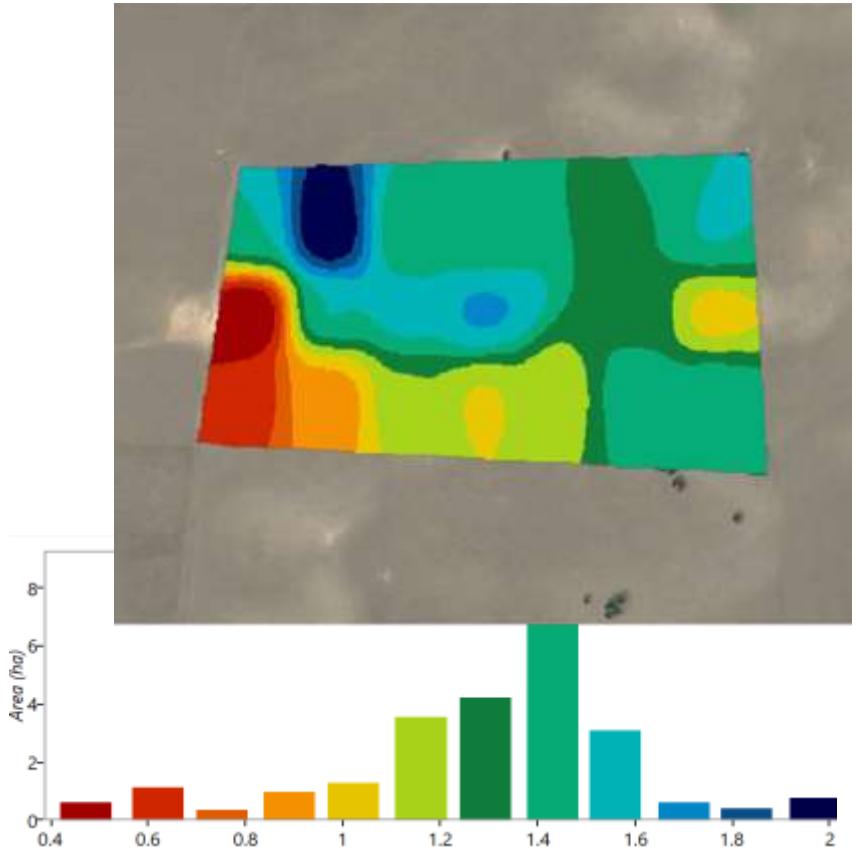
Implement the plan…

KEY SEQUESTRATION ON-FARM



Implement the plan…

BASELINE SOIL SAMPLING



Review the plan…

- Livestock management
  - Increase reproduction efficiencies
  - Turn off stock quicker at a higher liveweight
  - Grazing management
- Soil management
- Revegetation
  - Fast growing forest trees
  - Biodiversity plantings

Review the plan…

Fast changing environment…

Important to know where we are at and set goals within our business with what we think we can achieve

Develop a new plan (SMART)…

Improve

- Other opportunities
  - Accounting for nature – Sustainability Framework

Take Homes…

You can’t manage what you don’t measure

Start somewhere

Make a plan and follow it through

Acknowledgements

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