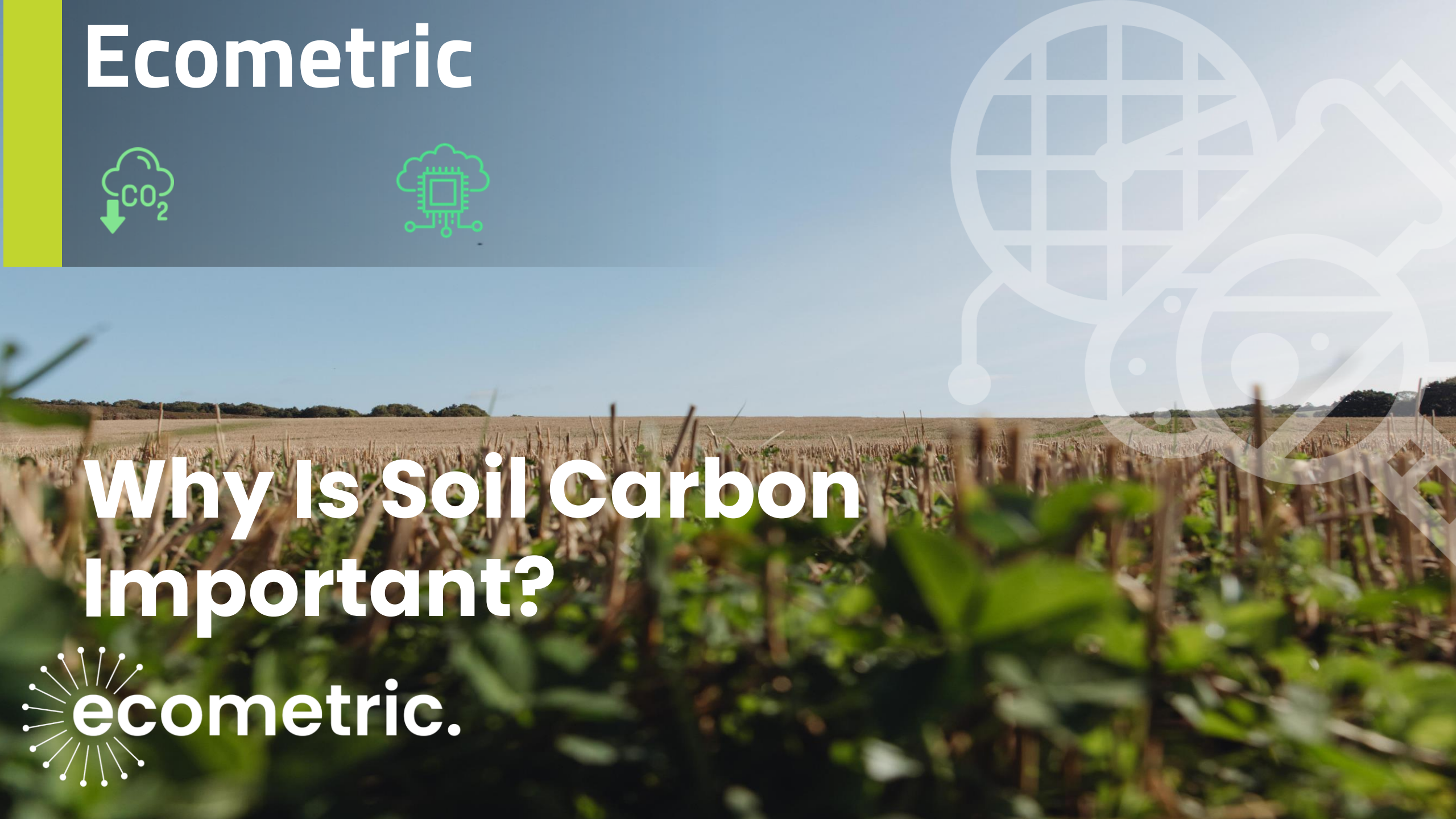
Ecometric



Why Is Soil Carbon Important?

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FAQs

- Why the (sudden) interest in Soil Organic Carbon?
- Can SOC really be measured and what determines accuracy?
- Can SOC be increased?
- Can SOC be monetised and what does a carbon trading system look like?
- What makes a good carbon trading system?
- Are the carbon markets the wild west and how are they developing?

- A brief look at the ecometric system, timelines and yields.

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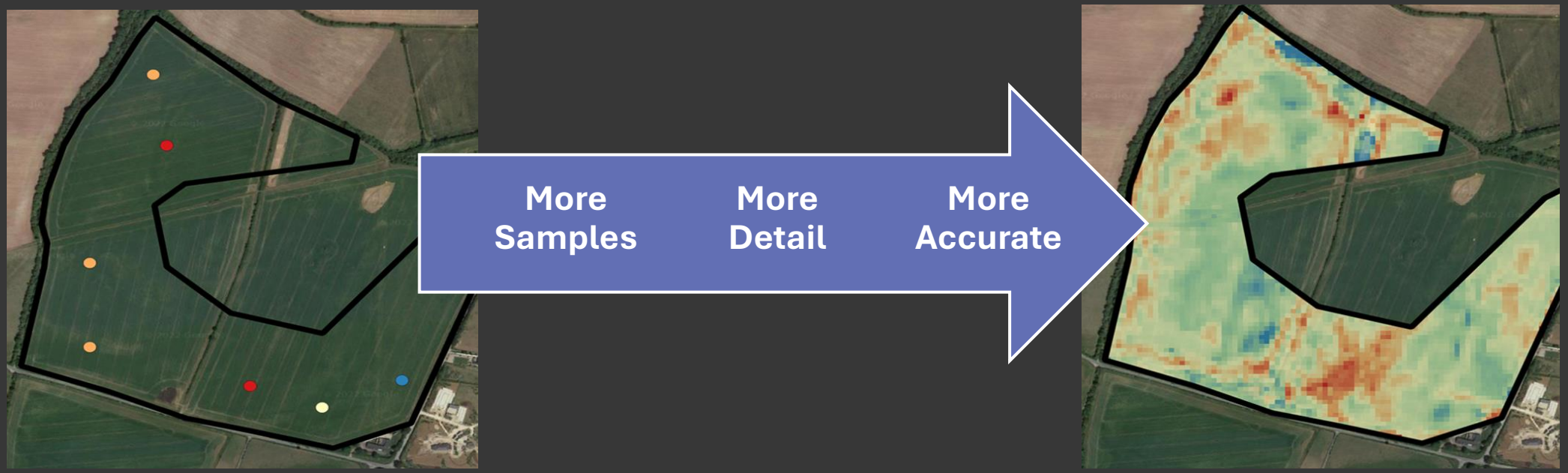
Why the Interest in SOC?

- Carbon cycle vs climate change
- A depleted resource not a commodity
- Directly related to productivity
- Increasing SOC is good for business, biodiversity and the climate
- Farm first, climate co-benefit

Can SOC (really) be measured?

- Very accurately at a single point in space
- Large spatial variability demands a sample-based approach
- Numbers + locations determine accuracy



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How can SOC be increased?

- Maximise live canopy and roots
  - Cash crop sequestration heavy-lifter
  - Cover, catch and companion crops to protect
- Maximise returned OM
  - Crop residue
  - Organic amendments
- Minimise cultivation
- Minimise bare soil

Change

SOC monitoring to quantify stock change.

Change is related to practice combinations to learn.

Knowledge share of high performer strategies.

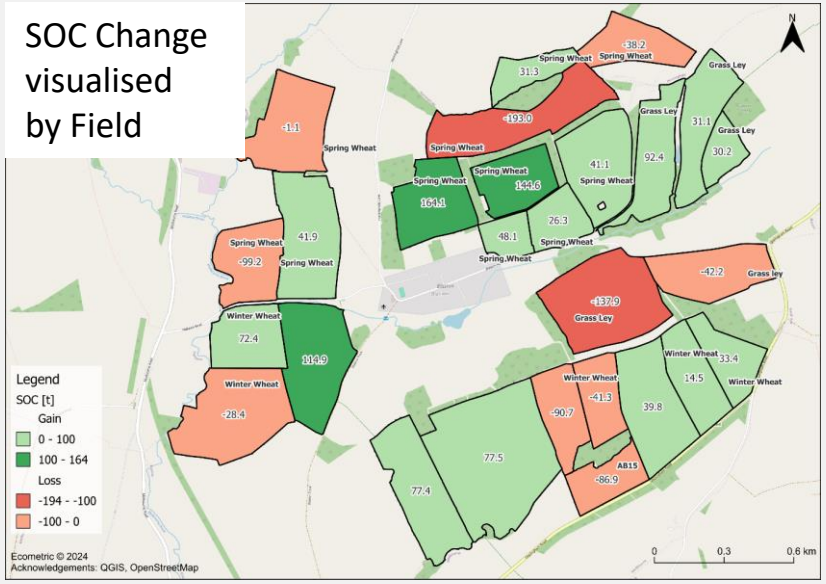
Performance related reward for Net-positive SOC gain through credit issue to incentivise CO2 removal.

False Colour Mapped SOC Quantities

Spatial variation

Often a 50% SOC value range between or even within fields. This variation must be captured by sampling to accurately quantify stocks.

SOC Change visualised by Field



Annual change

Carbon yield varies due to the complex interaction between soil, management and weather. A varied rotation protects against individual crop-type underperformance.

How can SOC be monetised and traded?

- Compensating for unabatable emissions
- Offsets / Insets / Contra
- Measure vs Model
- Cost
- Control
- RoI

- Measure it!
- Keep control!

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What makes a good carbon trading system?

- Governance system / Standard
- Quantification Methodology – peer reviewed
- Independent audit – Validation and Verification
- Transaction – Legal + Financial

- Entry cost will reveal the level of measurement
- Permanence responsibility will reveal the quality of the system (buyer assurance)

Are the carbon markets the wild west and how are they developing?

- Wide quality / accuracy range – reflected by price
- Insets have few if any of the checks and balances
- Over regulation at the top end
- Converging with compliance markets
- Evidence of buyers seeking quality removals
- Evidence of increasing demand and price

The System

Strategy

Baseline

Advice

Re-Measure

Report

Issue Credits

Contract

2 Monitoring cycles only

Renew or hold

10-year permanence commitment on sale of credits (Registry)

Results

Detailed maps and numerical data

Detailed GHG emissions

Agronomic oversight

Strategic advice

How it works...

01
Base Line:

Baseline Soil sampling.
DUMAS testing for SOC.
Measured bulk density.
Measured stone fraction.
12-band spectral sample.
AI analytics.
5-year management data.

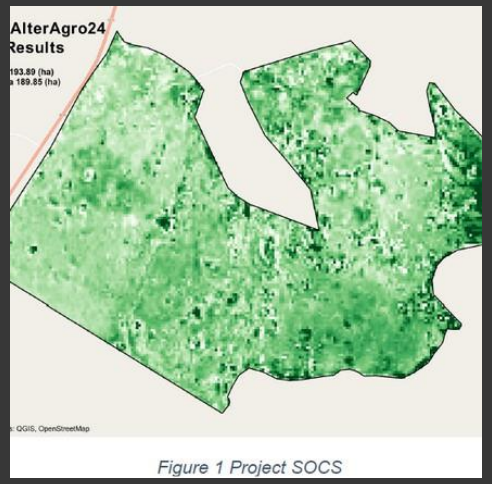
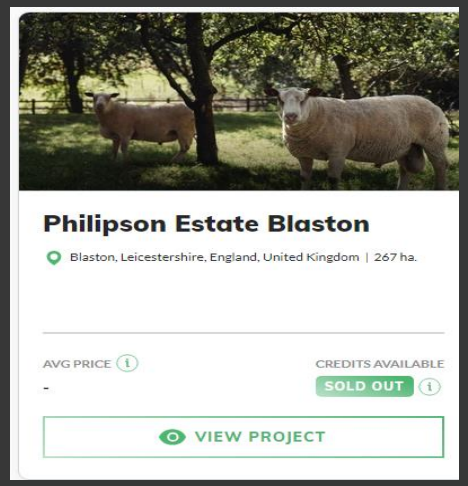


Figure 1 Project SOCS

02
SOC Change quantification:

Monitoring repeated annually.
SOC change calculated.
Carbon Balance = SOC change – GHG emissions.
1 Carbon Credit issued for each 1tCO2e positive balance.



03
Carbon Credits Issued:

Credits issued to the Project on the Regen Market.
Sell direct through the market platform or,
Through Patch Platform or,
Over the counter for pre-arranged.

Project Timeline

Year 0

Baseline SOC Quantification

Historic management record

Project Set-Up

+12-months

Re-measure SOC
Calculate GHG Emissions

Carbon Balance
=
SOC Change – GHG

+18 -21 months

Project reporting / validation / verification

Credit Issue

Your control on trading terms

Year 2-10

Monitoring annually

Potential for annual credit issue

Repeatable income stream

Average Project Carbon Yield

Regen Projects:

0.1% Gross increase in SOC. Approx 10tCO2e/ha at average bulk density.

GHG Emissions average 1.8-3tCO2e/ha

Carbon Balance average 7-8.2tCO2e/ha
Average value £32.50/tCO2e

Increasing resilience and productivity

Conventional Projects:

0.1% - 0.3% Gross decrease in SOC.
10-30tCO2e/ha loss at average bulk density.

Leaching / erosion / respiration

Deep inversion cultivation
Bare over winter soil
Removed crop residue
No organic manures

Declining resilience and productivity

Carbon Market Experience

3rd Year of trading, unique amongst competitors

Diverse Buyer Sectors

- Sport
- Real-estate
- Food brands
- Office management
- Private banking
- Insurance
- Automotive

Volumes & Prices

- 25,000tCO2e originated in 2023 (70% of projects increased SOC stocks)
- 100,000tCO2e projected in 2024 (75% of projects gaining so far)
- 3rd Year of trading (unique amongst competitors)
- £30 - £37.50/tCO2e price range to date

Questions?

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