

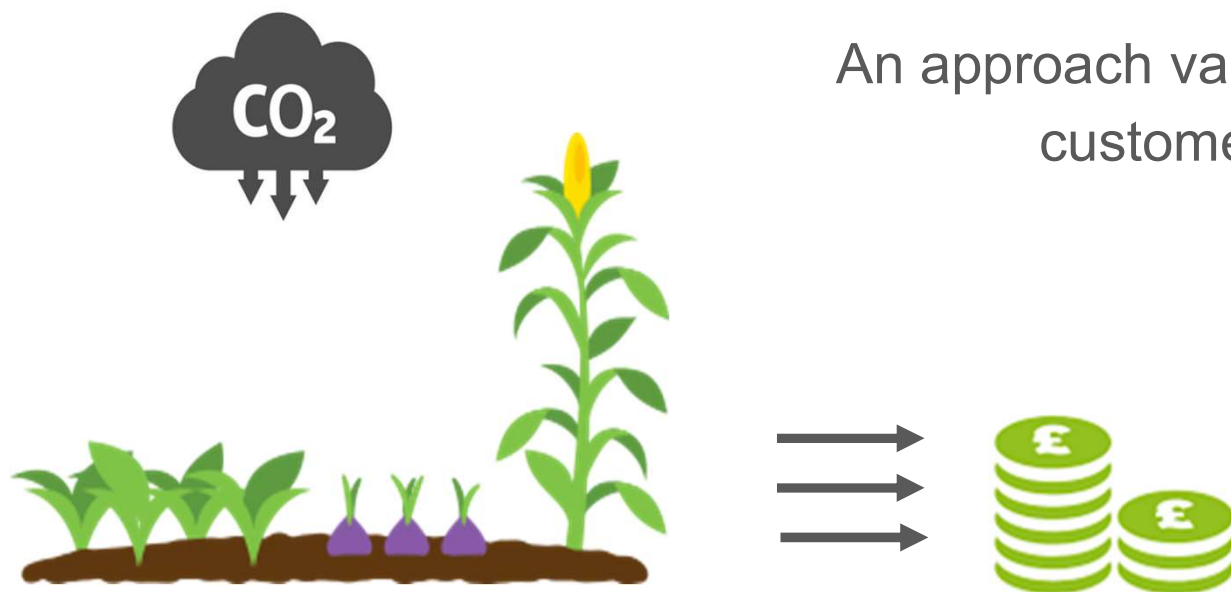
An approach to Soil Organic Carbon in Landscape Recovery



THE NORTH EAST COTSWOLD
FARMER CLUSTER CIC

THE SOIL CARBON MARKET

- UK soil carbon market value estimate up to £750m pa
- Market is nascent. It needs:
 - confidence in methods & data collection
 - cost-effective ground truthing
 - credible science to cut through greenwashing



THE SOLUTION: SEEK CONFIDENCE BY BUILDING DATA



Novel data collection

- Cost effective ground truthing
- Internationally validated science
- Nuance for soil variance & consider food production



Monetised via Defra's ELMs



Consider options for farm & carbon



CO₂ capture & savings modelled with big data



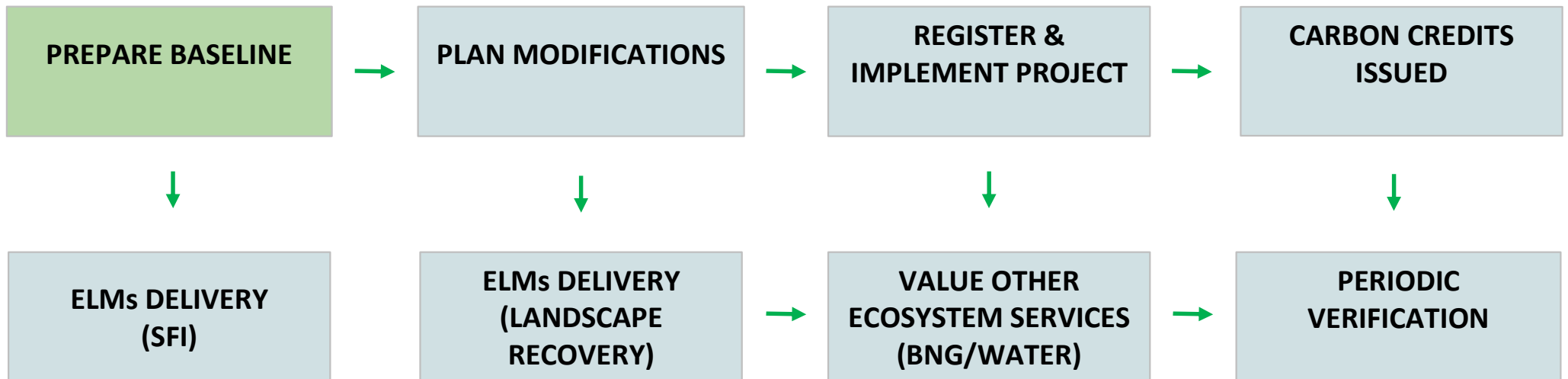
Monetised via aggregated farm project



Repeat sampling for verification & machine learning



A Roadmap to measuring carbon in the North East Cotswold Farmer Cluster





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MEASURING

WHAT

Organic Matter?

Total or Organic Carbon?

Bulk Density & Carbon Pools?

HOW

Models & satellites?

Analysed in the lab?

Sensors in the field?

WHERE

Different soils & landuse?

In topsoil or deeper?

Emissions & Soils?



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ROTHAMSTED
RESEARCH



STRUTT AND PARKER FARMS

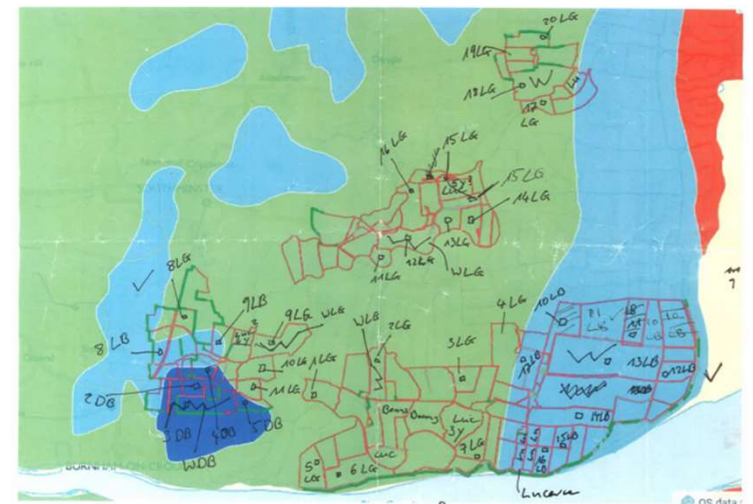


CARBON | QUESTER

The Essex Trial

- 2,000ha trial site to test hyperspectral technology
- Soil carbon content depends on the category of soil type x land use; sampling is 'stratified' for statistical rigour.
- 160 Samples are analysed in a laboratory and calibrate sensor.
- Future sampling carried out with cost-effective sensor technology.

STRATA ● DB ● LB ● LG





THE NORTH EAST COTSWOLD
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ROTHAMSTED
RESEARCH

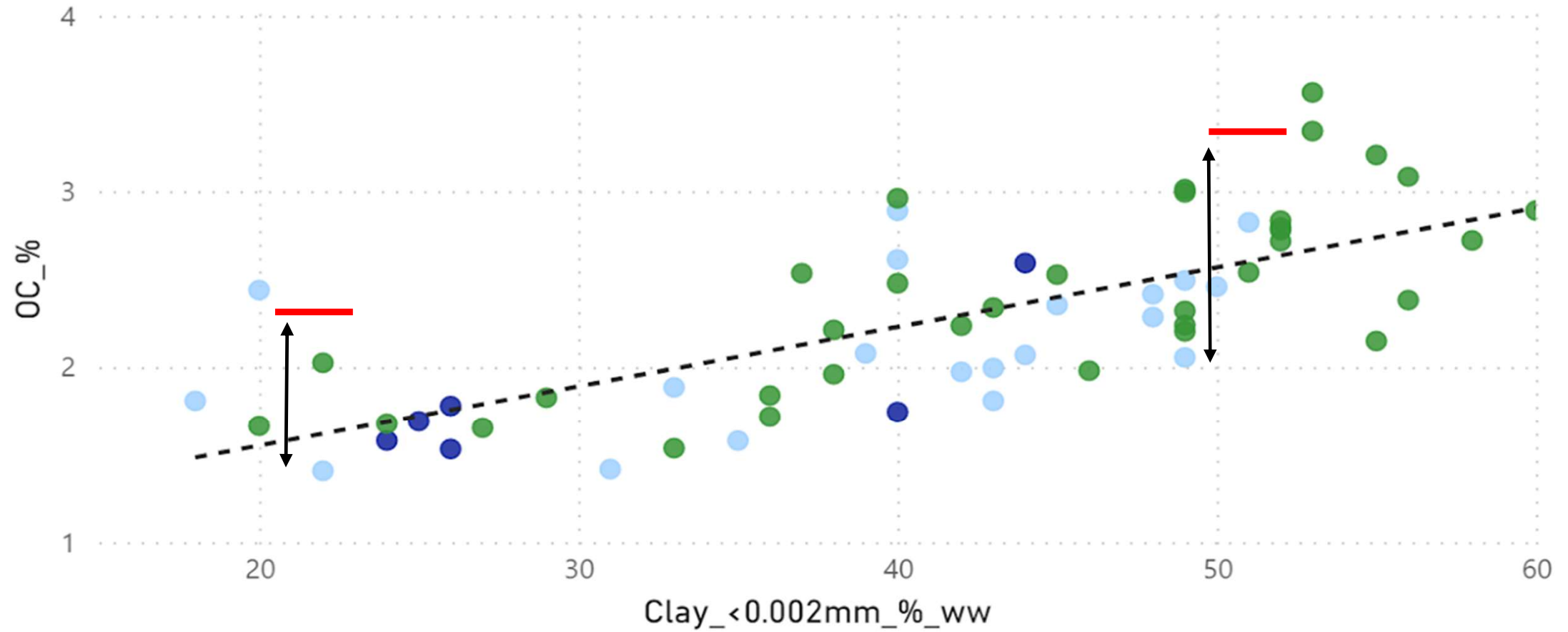


STRUTT AND PARKER FARMS



CARBON | QUESTER

STRATA ● DB ● LB ● LG





THE NORTH EAST COTSWOLD
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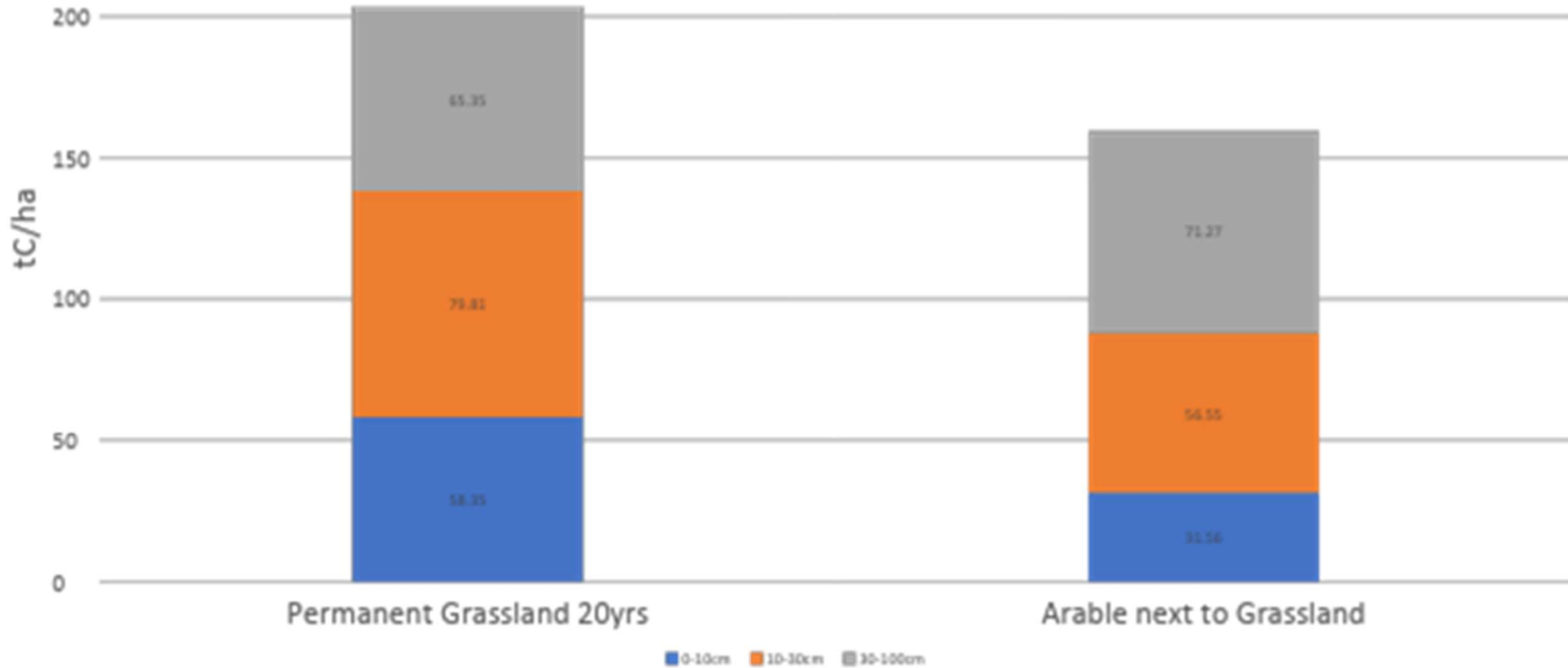
ROTHAMSTED
RESEARCH



STRUTT AND PARKER FARMS



CARBON | QUESTER

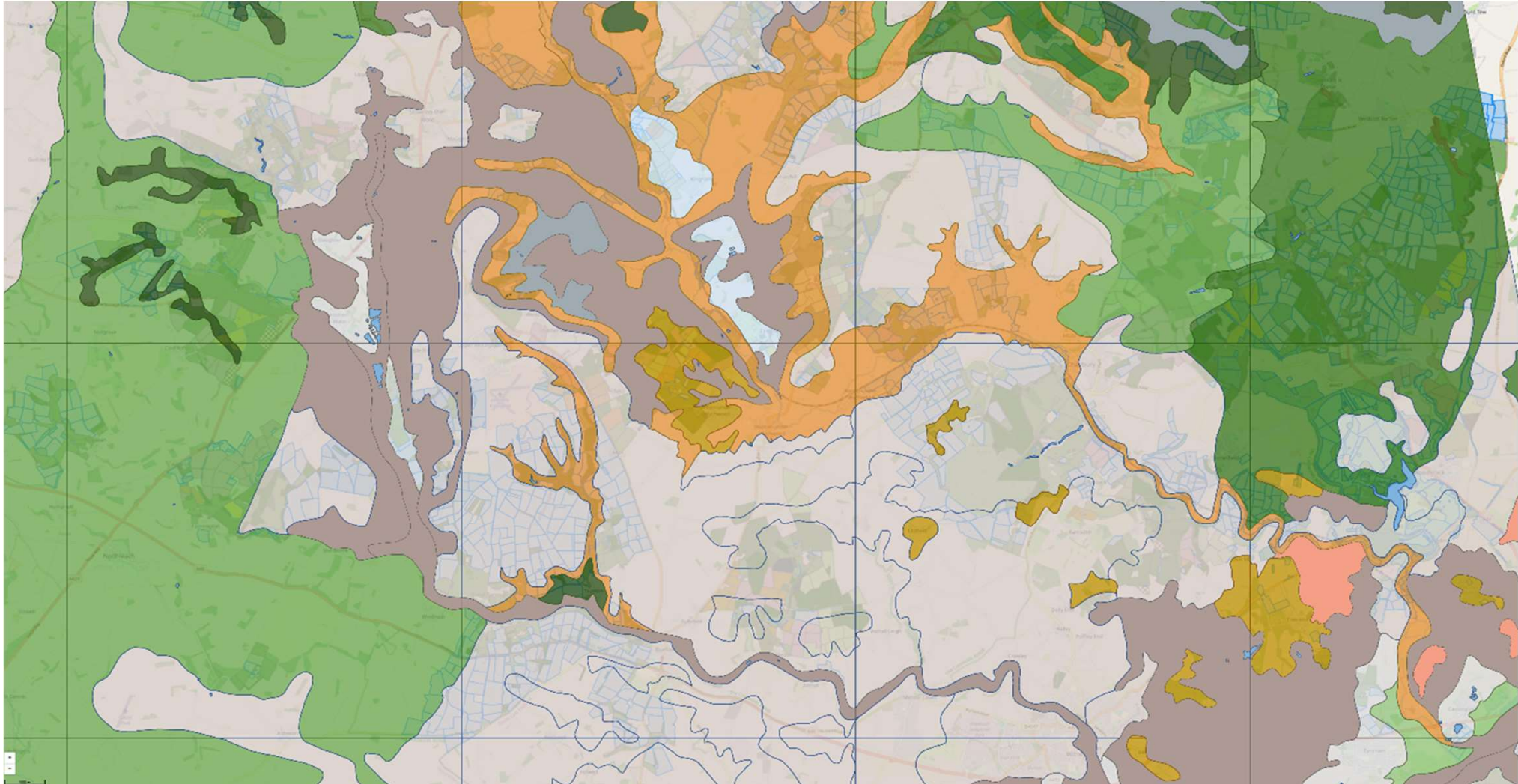




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CARBON | QUESTER

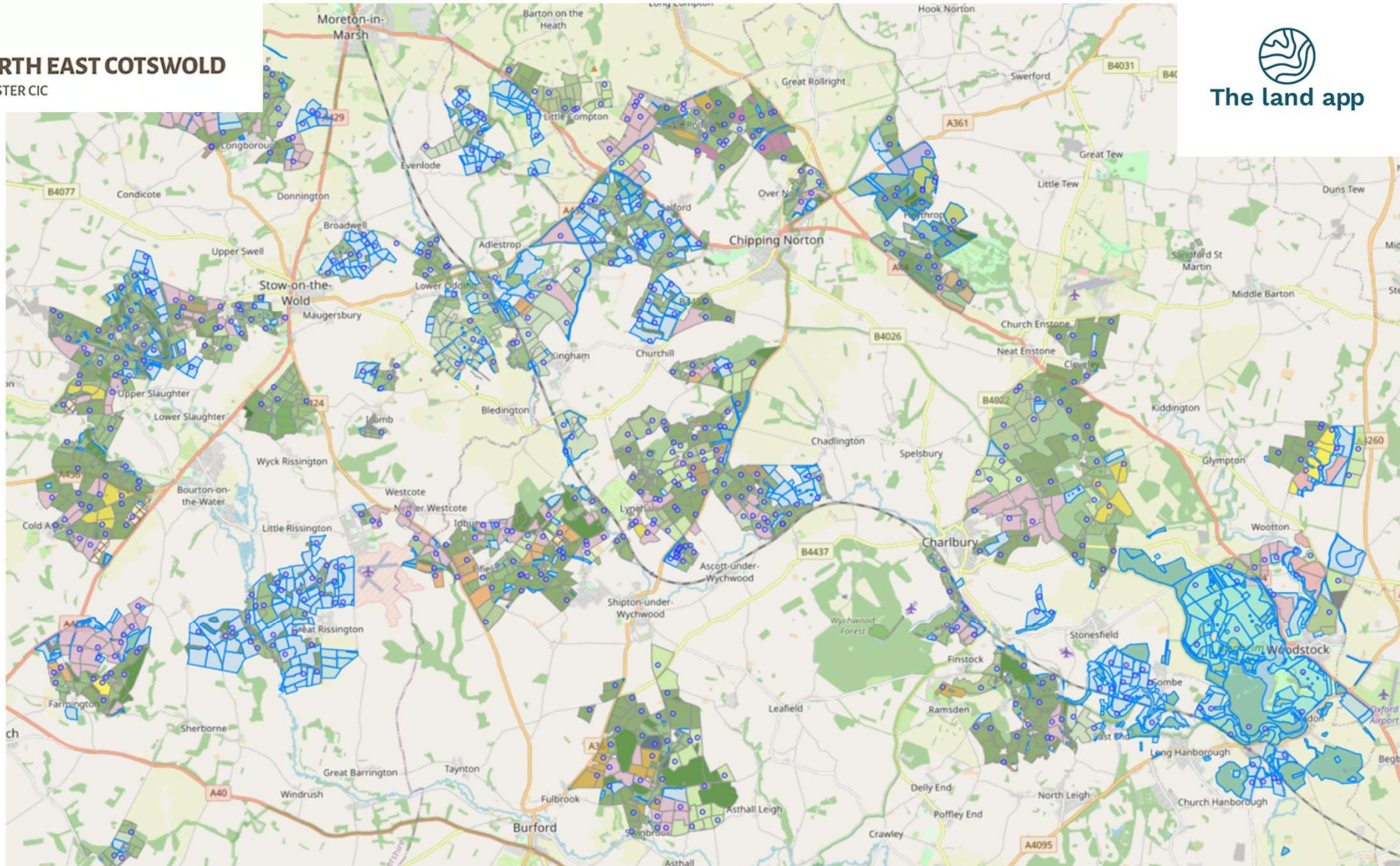




THE NORTH EAST COTSWOLD
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The land app



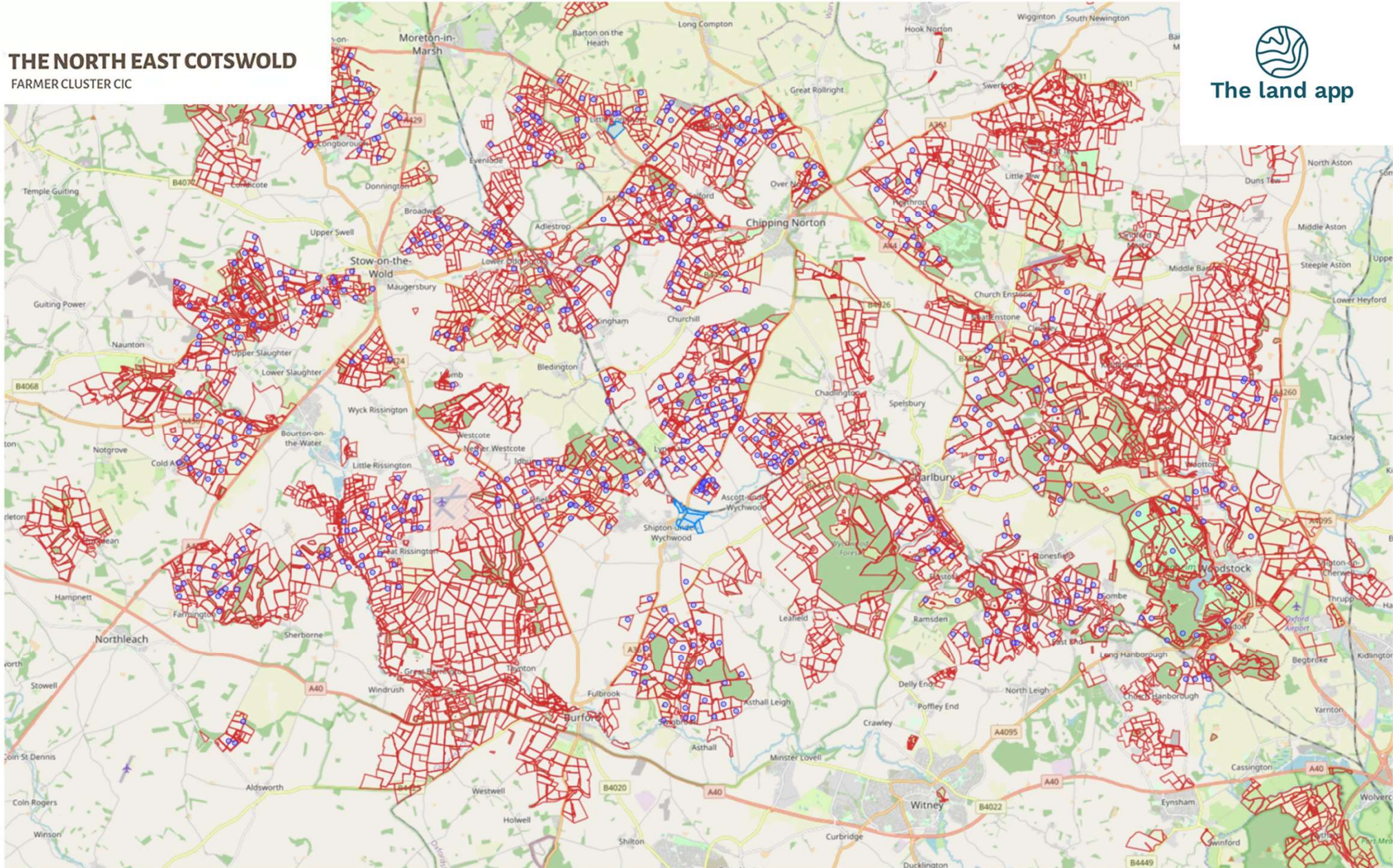
38 farms across 15,277 hectares in the NE Cotswolds currently undergoing soil carbon baselining.



THE NORTH EAST COTSWOLD FARMER CLUSTER CIC

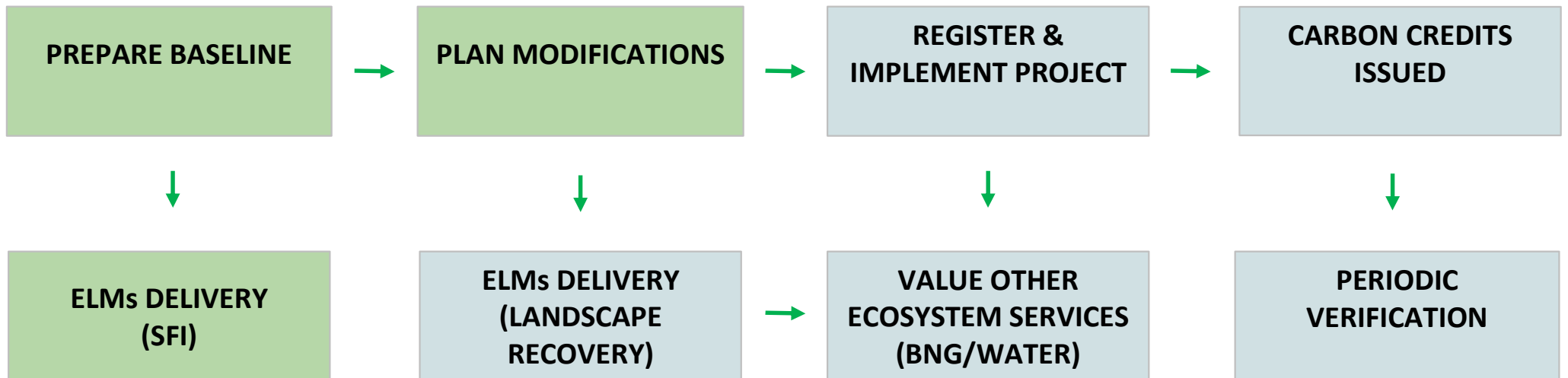


The land app



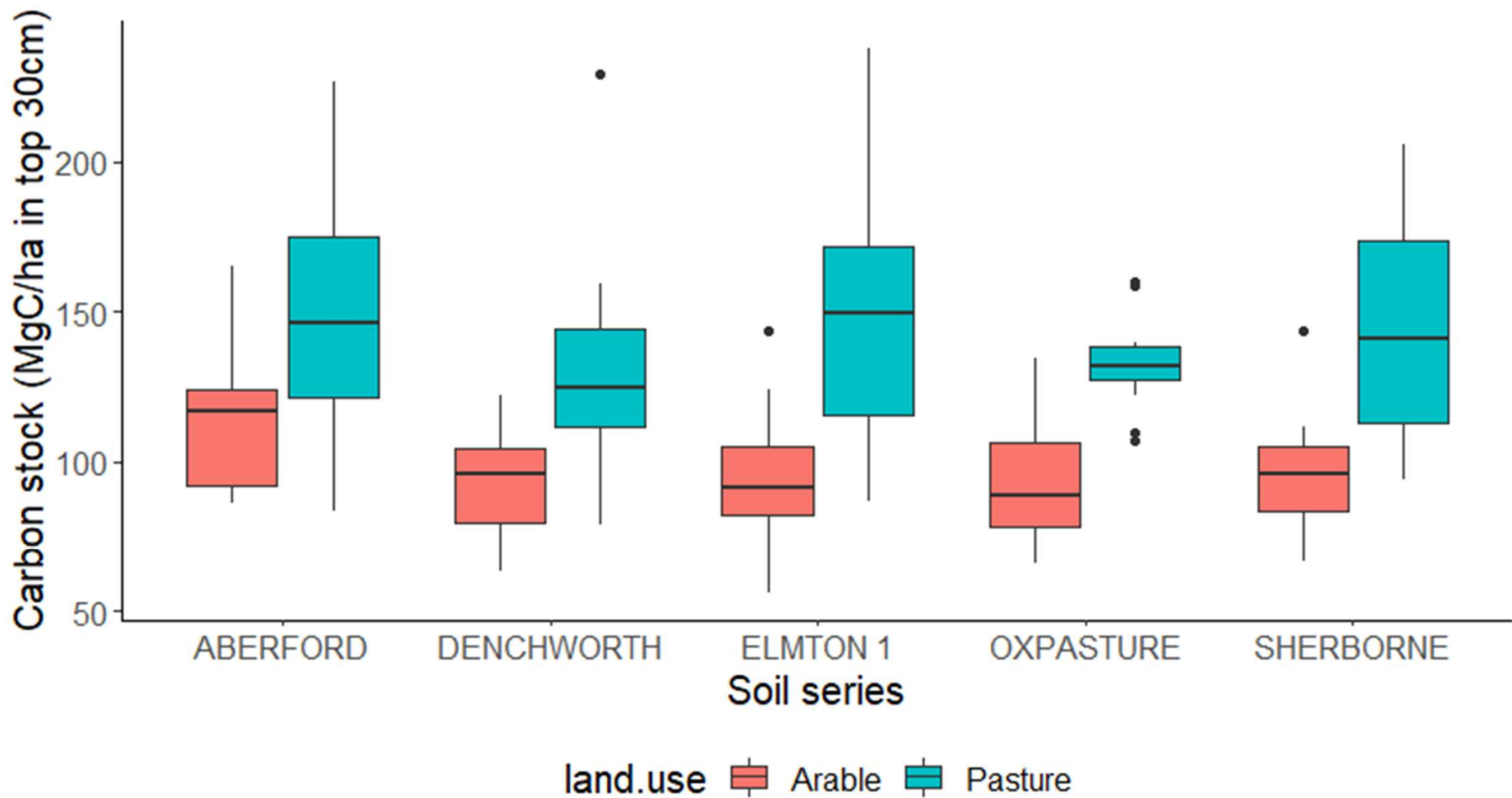


Planning the modifications



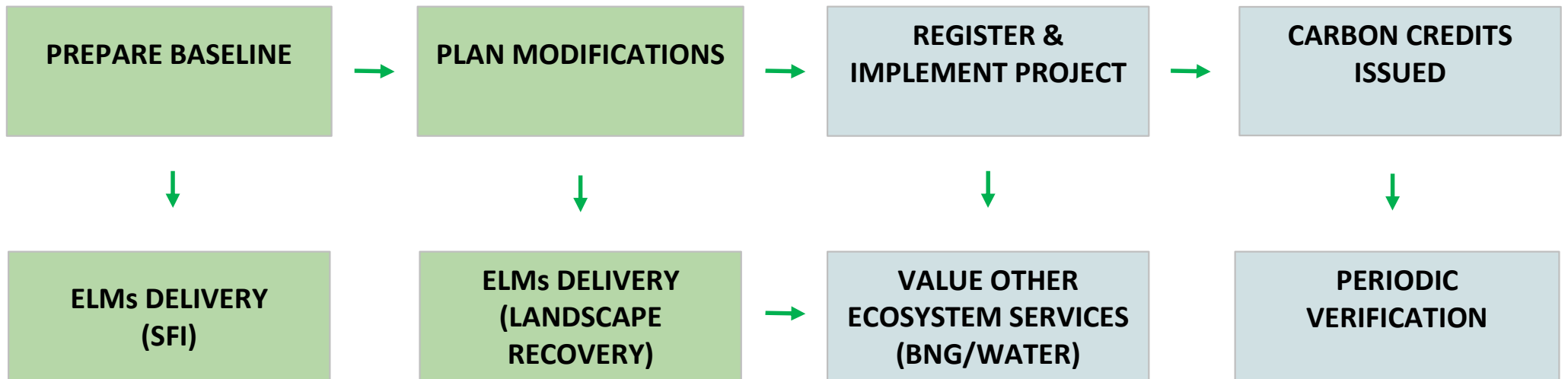


THE NORTH EAST COTSWOLD
FARMER CLUSTER CIC



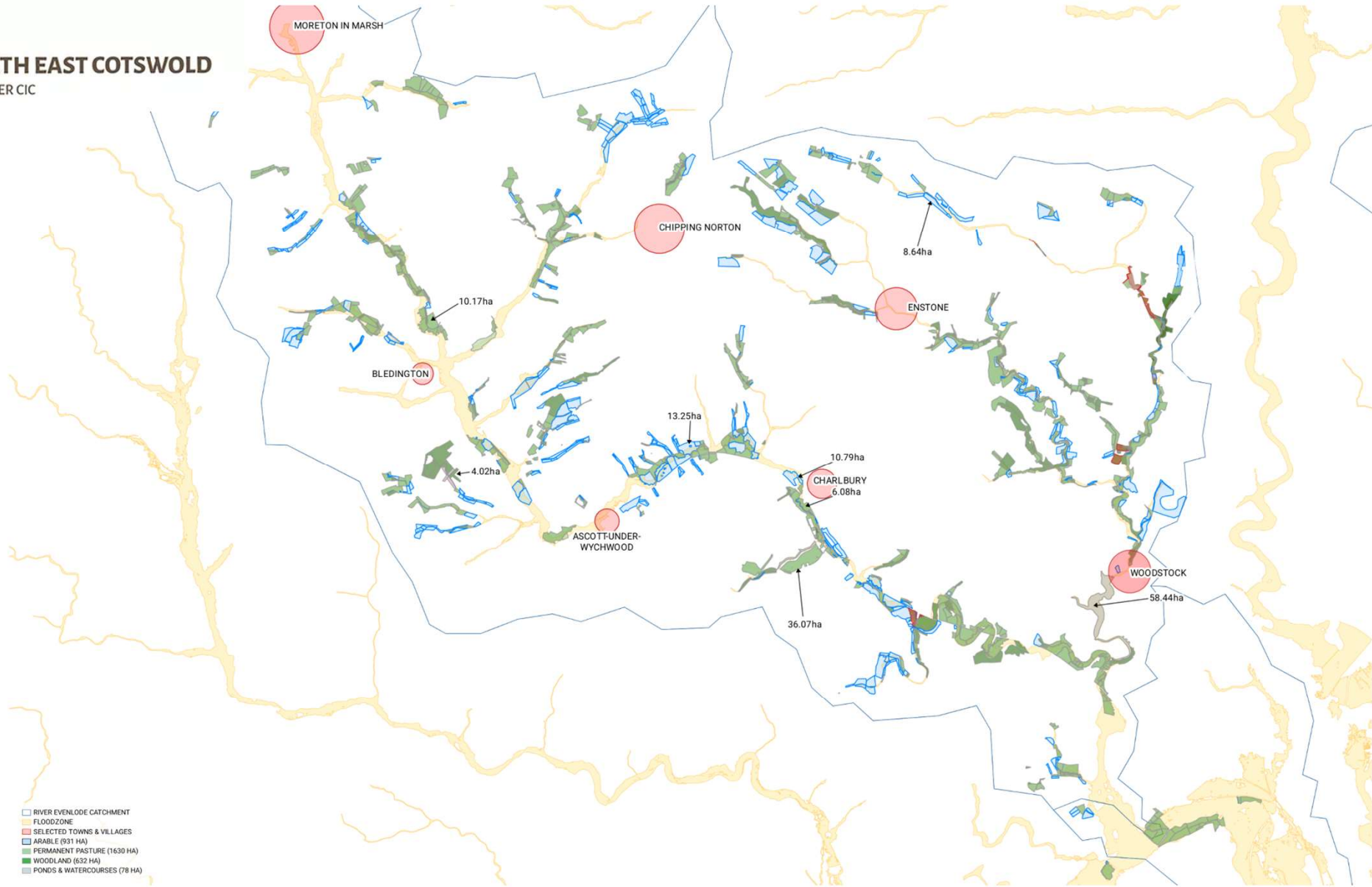


Planning the modifications





THE NORTH EAST COTSWOLD FARMER CLUSTER CIC



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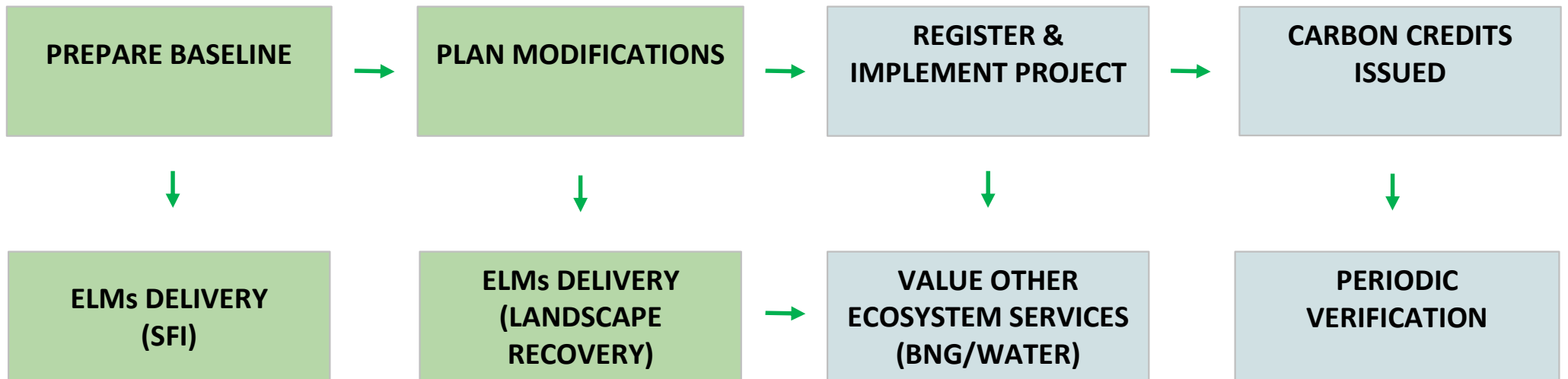
NEFC LANDSCAPE RECOVERY PILOT PROJECT (SIZES
INDICATED ON A SELECTION OF PARCELS)

2 km
Scale 1:93858 (at A3)

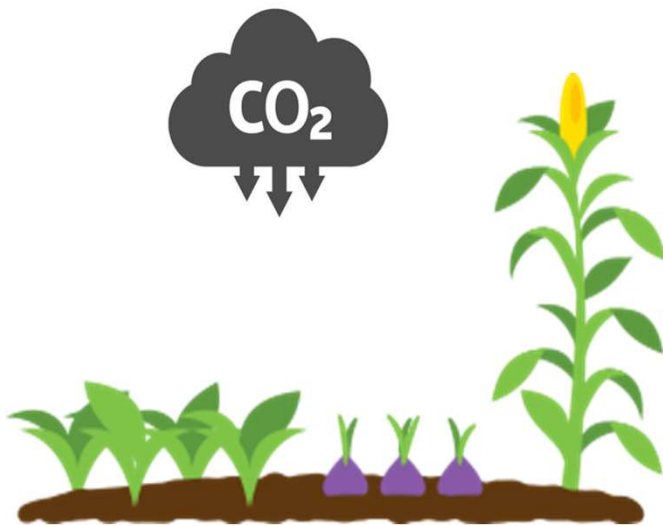




Planning the modifications



- NECFC proposing 3,200ha of landuse change in Landscape Recovery. Hypothetically, that's £23m at £50/t over 20 years.
- BUT the market is nascent. It needs:
 - confidence in methods & data collection
 - cost-effective ground truthing
 - credible science to cut through greenwashing



An approach validated by key
customers & partners



THE SOLUTION: SEEK CONFIDENCE BY BUILDING DATA



Novel data collection

- Cost effective ground truthing
- Novel science, internationally validated
- Nuanced for soil variance & considers food production



Monetised via Defra's ELMs



Consider options for farm & carbon



CO₂ capture & savings modelled with big data



Monetised via carbon trading platform



Repeat sampling for verification & machine learning





Planning the modifications

