



regenerate
outcomes

Soil carbon credits
that benefit rural
communities, nature
and the climate



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Regenerating British farmland – a solution to the climate and biodiversity crises

Who are Regenerate Outcomes?

Having successfully established a DEFRA-backed pilot project in 2021, Regenerate Outcomes is working with British farms to generate high-integrity soil carbon credits at scale. Regenerate Outcomes is part of the Regenerate Group, which is focused on deploying capital to climate solutions and regenerative food production systems. The group is supported by leading European institutional investors.

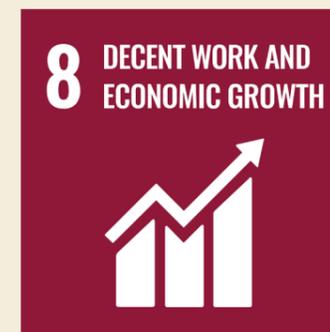
What are soil carbon credits?

A soil carbon credit represents one tonne of carbon dioxide equivalent removed from the atmosphere and stored in the soil as a result of regenerative farming practices. In addition to sequestering carbon from the atmosphere, these practices reduce the application of harmful farming inputs. Regenerate Outcomes produce carbon credits from monitoring soil carbon sequestration and reduced on-farm emissions.

What is regenerative agriculture?

Regenerative agriculture is a way of farming which improves soil health and ecosystem function. It is a management system which restores the natural water, carbon and nutrient cycles, delivering significant social and environmental outcomes.

The Regenerate Outcomes Farming Project meets seven of the UN Sustainable Development Goals



The project aims to regenerate 1,000,000 hectares of UK farmland over the next 30 years, sequestering carbon and reducing greenhouse emissions. It will also deliver a range of environmental and social co-benefits, while creating new, sustainable revenue for farms.



Why soil carbon credits?

1. Positive social impact

Farmers are often portrayed as the problem, not the solution to climate change. However, a regenerative farm delivers critical climate services to society and contributes to food security. Soil is one of the world's largest natural carbon sinks, holding more carbon than all plants, trees, and the atmosphere combined. On 100 hectares of farmland, a 0.1% increase in soil organic matter can lock away over 200 tonnes of carbon dioxide from the atmosphere. Regenerative agriculture is a scalable solution with many wins for society, nature and climate. Farming livelihoods face a number of economic headwinds from extreme weather events, rising input costs, and changing subsidy and tax legislation. Our carbon credits provide an added income to reward regenerative farmers for taking the difficult path - breaking from conventional norms and changing a management system to produce food with less carbon footprint.

2. Environmental benefits

- Improves soil health and performance
- Increases biodiversity above and below ground
- Enhances water retention and reduces runoff and soil erosion
- Sequesters carbon and helps mitigate climate change
- Improves resilience to droughts and floods
- Minimises pesticide and fertiliser applications, improving catchment water quality

3. Human health benefits

Food grown today with conventional agriculture is on average less nutritious than it was only a few decades ago. As soils have become impoverished through the use of fertilisers and pesticides, so the nutritional value of our food has decreased. Recent research has shown that regenerative agriculture has a role to play in combating this decline, as food grown under regenerative practices contains more micronutrients, vitamins and other beneficial plant compounds.

Why regenerative agriculture?

Agriculture accounts for 12%* of the UK's total greenhouse gas emissions. Intensive agriculture has polluted river systems, created monoculture landscapes devoid of biodiversity, and increased farmers' dependency on chemical inputs. Regenerative agriculture - farming with and not against nature - gives farmers the opportunity to free themselves from this system, regenerating the land, improving profitability and sequestering carbon while continuing to produce food.

However, transitioning to regenerative agriculture is not always easy. There are often cultural, financial, and knowledge barriers standing in the way.

Regenerate Outcomes helps farmers to successfully make this transition through an education and mentoring programme led by experienced regenerative farmers with expert knowledge of soil science. This educational support, combined with the financial incentives of earning carbon credits within the project, accelerates the pace of conversion from extractive to regenerative farming practices.

*12% (source: gov.uk)



The mentorship Regenerate Outcomes are offering is extremely attractive, alongside the opportunity to baseline, monitor and monetise our soil carbon.

– Joe Henry, Regenerate Outcomes member who farms beef and sheep in Northumberland



Why soil health matters

Healthy, biologically active soil underpins nutritious food production and a stable carbon cycle. Much British farmland now suffers from compacted, depleted soils that rely on petrochemical inputs which can harm water systems and the climate. Understanding soil health enables farmers to make better decisions for both their livelihoods and the environment.

Degraded soil

Soil becomes degraded when it is stripped of microbial life. Microbial communities play a key role in building 'aggregates', granules of soil particles bound together with biotic glues. Soil aggregates store carbon and allow rainwater to infiltrate slowly into the land, like marbles in a jar.



Soils which lack these microbial communities and aggregate structure:

- **Emit excessive greenhouse gases** such as carbon dioxide and nitrous oxide
- **Increase flooding** by failing to absorb and slow rainwater
- **Pollute rivers and lakes** with sediment, excessive nutrients and pesticides, degrading water quality and aquatic habitat
- **Reduce plant health**, creating reliance on petrochemical inputs to sustain growth and pest resistance
- **Limit ecosystem function** below and above ground
- **Produce nutrient deficient food** with significant negative impacts on human health

Degraded soil can cause an unforgiving management cycle for farmers. When soil fails to cycle carbon, water, and nutrients effectively, productivity relies on continuous application of short-term "quick-fix" inputs and practices. These inputs and practices often damage soil microbes and perpetuate long-term farm and ecosystem costs.



Healthy soil

The transition from degraded to healthy farmland soil converts these losses into gains for society. Dark, well aggregated soil with the aroma of forest floor, is difficult to create in a productive farming context. It requires ecological learning and guidance by experienced regenerative farmers.

Once achieved - with water, nutrient and carbon cycles restored - a positive cycle of outcomes begins, as the biologically functional soil:

- **Sequesters carbon dioxide** from the atmosphere and stores carbon in its many forms
- **Absorbs and stores rainwater**, reducing flooding and drought damage
- **Filters pollutants and prevents erosion**, keeping rivers and groundwater clean
- **Supports plant and animal growth and immune resistance** without the need for manufactured inputs
- **Provides habitat** for beneficial soil organisms which are the bedrock of the terrestrial ecosystem

Regenerate Outcomes supports farmers who are readily prepared to improve their soils through a long-term learning process.

Knowledge of soil health empowers farmers to escape dependency on harmful inputs and practices and creates a positive cycle of outcomes for both farm and society. Our purpose is to reward farmers who are willing to risk management change for the sake of improved soil health.

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The soils are now far better and we're growing plants and arable crops in a way that we know is actually improving the soil year on year, rather than taking things out all of the time. It's like building a bank account, you have to keep on investing over the years without withdrawing more than you are putting in. It's still production agriculture but we're doing it alongside the environment and working with it rather than imposing on it.

Regenerate Outcomes are offering a whole package of mentoring and education. It saves us the job of hunting for the right information because they can help guide us to what we need to know. You are pointed in the right direction for your farm from the very start.

The collaborative side of it means there is a group of farmers who you can bounce ideas off. It's less daunting than just setting out and doing it on your own. It's quite important to have that reassurance.

The fact they're working with Verra to certify the carbon credits to the highest standard also gives you confidence that the certification will remain strong in the future. There's no cutting corners or risk that they may lose their value at any stage.

Regenerate Outcomes member Stuart Johnson farms 540 acres with beef, sheep and arable near Hexham, Northumberland. Stuart is also a member of our mentoring team.

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Regenerate Outcomes has begun a research partnership with Oxford University focusing on the effects of farm management on soil microbiology. We are also part of a study of the cognitive and social barriers facing farmers who choose to explore regenerative farming and new nature markets. It is our aim to build upon these research foundations and contribute to the further study of soil health and social change in the farming sector.

Why choose soil carbon credits from Regenerate Outcomes?

1. Additionality

The project helps farmers to overcome the challenges of implementing a regenerative production system through a unique mentoring programme and the financial support provided by the carbon credits.

Farmers receive mentoring support from Understanding Ag, the world's leading regenerative agriculture mentoring agency, with a track record regenerating over 12 million hectares of farmland globally. Understanding Ag's advisors, all of whom are farmers with advanced knowledge of soil science, support farmers in creating tailored and adaptive land management plans to maximise productivity, soil health and carbon sequestration. No other UK soil carbon project currently provides this kind of mentoring service.

2. High-integrity project

Regenerate Outcomes is generating carbon credits through Verra, which is world-renowned for issuing carbon credits of the highest quality. Verra has been consistently awarded the Best Carbon Crediting Programme by Environmental Finance.

3. Independent third-party verification

Before credits are issued to buyers, an independent third party verifies that Regenerate Outcomes has generated the credits in accordance with Verra's VM0042 Methodology for Improved Agricultural Land Management

4. Carbon baseline rigour

Regenerate Outcomes partner with Agricarbon, experts in soil organic carbon measurement, to undertake soil organic carbon sampling across each farm. This is done at multiple depths up to 60cm to ensure a robust baseline, and re-measured at least every five years. Buyers can be confident that the credits they are purchasing have been created using a statistically robust and scientifically accredited sampling regime.

5. Permanence of emission removals

Farms sign up to a 40-year contract demonstrating their commitment to regenerative agriculture and desire to reduce emissions and sequester carbon for the long term.

Verra withholds a minimum 12% of any carbon credits generated as a non-permanence buffer. This is to mitigate the risk of a farm carrying out activities that reverse the carbon sequestration of the programme and ensures the permanence of the project's emission removals.

Tangible Impact

As a buyer of our soil carbon credits, you can:

- Visit participating farms and meet the farmers delivering the impact
- See regenerative practices in action and how they build long-term carbon stocks
- Understand exactly how your investment contributes to local environmental and social outcomes





You can't really have a problem with making changes to your farming system which help you make a bit more money, where you're happier and alongside that you've got a bit more wildlife as well. No-one can really stand up and say - well, that's a rubbish idea.

– Liz Genever, Regenerate Outcomes member who farms 130 hectares at Croft Farm, Uffington



Our mentoring partners

Regenerate Outcomes has partnered with Understanding Ag, a leading regenerative farming education agency, to provide mentoring services to farms.

Understanding Ag was founded in 2017 by Gabe Brown, Ray Archuleta, David Brandt, and Dr. Allen Williams.

The Understanding Ag network of farm mentors now spans over 12 million hectares of farmland across four continents. Each Understanding Ag mentor combines years of regenerative farming experience with an advanced understanding of soil, plant and animal science and farm education techniques.

Gabe Brown's famous story of repeated farming failures followed by extraordinary success over 20 years' of trial and error (as told in his book *From Dirt To Soil*) embodies the Understanding Ag approach which provides farmers with a clear roadmap of decision-making principles designed to limit failure and reach the highest regenerative potential for their farm.

It is a practical decision-making framework which farmers readily grasp and which can apply to any farm in any circumstance or growing region. Understanding Ag train farmers in the '6-3-4' - a set of principles, rules and processes which, when understood and applied in synchrony, restore soil and landscape health and sequester carbon.

The 6-3-4: A systematic approach to facilitate successful regenerative agriculture

The **six** principles of soil health

1. Context

Ensure management activities are appropriate to your farming context. Before you plan, consider the ecological history of your farm, your production goals and market opportunities and your desired work-life balance

2. Minimise disturbance

Minimise disturbance of the soil by overgrazing, tillage, or the use of chemicals. This helps to preserve soil biology

3. Living roots

Keep living roots in the soil throughout the seasons to support microbial life and build organic matter

4. Armour the soil

Ensure the soil is armoured by living vegetation or plant residue to prevent wind and water erosion and create a habitat for soil biology to thrive

5. Integrate livestock

Integrate livestock into cropping rotations to stimulate microbial activity in the soil and reduce the need for synthetic inputs

6. Biodiversity

Encourage diversity in plant, livestock and wildlife species and create new 'biological hotspots' to prime ecological recovery across the farm

The **three** rules of adaptive management

1. Compounding effects

Understand that each management decision creates positive or negative compounding effects on soil, plant, and livestock health, farm productivity and the wider ecosystem. Consider these effects in each management decision

2. Disruption

Understand that nature responds positively to planned disruptions. Treat nature like an athlete and disrupt routines from one year to the next

3. Diverse enterprise

Explore the full potential of your land and resources with diversity of produce and new ventures. Bring the customer to the farm gate and tell your farming story



If you want to make small changes, change the way you do things.

If you want to make big changes, change the way you see things.

– Don Campbell, Canadian farmer and Understanding Ag client

The **four** ecosystem processes

1. Energy flow

Plants capture solar energy and convert this energy into food for living organisms. This energy flow, beginning with photosynthesis, is critical to soil health which is the foundation to a thriving ecosystem

2. Mineral cycle

In return for the energy provided by plants, microbes scavenge nutrients from deep within the soil profile and pass these onto the plants to support the plant's growth and resistance against pests. Soil, plant, livestock and human health are dependent on this microbial transfer of nutrients

3. Water cycle

Microbes, the nutrient carriers, are mostly sub-aquatic organisms and depend on water to live. An efficient water cycle flowing around well formed soil aggregates is essential to channel energy and nutrients through the soil

4. Community dynamics

Each of the three processes described above is dependent on the food web, an infinitely complex and ever changing hierarchy of interactions between living organisms. Every species fulfils an ecological niche which is integral to the health of soil and the wider ecosystem



Kyle Richardville,
Understanding Ag mentor



“

The reason I've joined Regenerate Outcomes rather than any other project is really because of the training and the baselining in terms of soil and carbon. That's the absolute winner. There are plenty of people offering the chance to help you get carbon credits, but very few add on the training and baselining as well.

– **George Hosier**
Regenerate Outcomes member who farms beef and arable in Wiltshire. George is also a member of our mentoring team.

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Whole Farm Plan

The Whole Farm Plan helps farmers apply the 6-3-4 framework as a practical decision-making tool for regenerative agriculture. Each management decision can be tested against six principles, three rules and four ecosystem processes, providing clear direction from the outset.

Over time, this feedback loop becomes instinctive, with positive outcomes compounding for both the farm business and the natural environment. The simplicity of the 6-3-4 is supported by Understanding Ag's deep technical expertise across soil science, plant and animal health, crop and livestock systems, and farm economics.

While the 6-3-4 is universally applicable, Regenerate Outcomes and Understanding Ag tailor the mentoring service to the specific context of each participating farm. This is delivered through a personalised Whole Farm Plan, co-created by the farmer and Understanding Ag and forming a central element of the project.

The Plan is informed by farm onboarding data and an on-farm visit, translating the principles of soil health and adaptive stewardship into practical, farm-specific actions. The farmer and Understanding Ag then agree a final Whole Farm Plan.

Annual farm visits review progress against the Plan and provide guidance on the next steps in applying the 6-3-4.

Throughout the year, farmers benefit from Understanding Ag hosted field academies, technical webinars and ongoing one-to-one support

This mentoring is strengthened by farm-level data, enabling the Understanding Ag team to address specific technical challenges and support management changes that progressively align the farm with core soil health principles.

A key outcome of the 6-3-4 management framework is the restoration of soil carbon stocks. By supporting soil biology, encouraging deep and continuous root growth, and increasing plant diversity, the 6-3-4 enhances photosynthesis and strengthens the natural soil carbon cycle.

As photosynthetic activity increases, soil structure improves, protecting organic matter and enabling carbon to be stored more effectively throughout the soil profile.

In addition, the 6-3-4 helps farmers understand why and how to reduce or eliminate synthetic inputs that contribute to greenhouse gas emissions. The climate-positive impact of the framework is significant.

This is why Regenerate Outcomes has partnered with Understanding Ag to deliver maximum social, ecological and climate impact across the project.





Monitoring, Reporting and Verification

The project monitors, reports, and verifies carbon sequestration and greenhouse gas (GHG) emissions data for each farm in compliance with the Verified Carbon Standard (VCS).

Verra projects comply with a rigorous set of regulations to issue high integrity carbon credits known as Verified Carbon Units.

The specific Verra methodology applied to the Regenerate Outcomes project is VM0042: *Methodology for Improved Agricultural Land Management*

This methodology quantifies GHG reductions and soil organic carbon gains resulting from the adoption of regenerative farming practices.

These practices include, but are not limited to:

- reduced tillage or synthetic fertiliser use
- improved crop residue management
- companion or cover cropping
- adaptive rotational grazing

The 6-3-4 fully aligns with this methodology and motivates farmers to carry out these regenerative practices based on an improved understanding of the principles of soil health. This improved agroecological understanding ensures the continuity of regenerative farming practices, despite future policy or market volatility.

Logbooks

The project uses a set of logbooks which annually monitor farming practices and inputs across each field of each farm. These logbooks serve multiple functions.

Primarily, the logbooks provide the historical baseline information from which future project activities are assessed. To qualify for the VM0042 methodology a farm must uplift and maintain its regenerative activities by a certain amount from this baseline. The logbooks are the means by which this regenerative uplift is recorded and claimed by the farmer.

Whilst each farmer may navigate the 6-3-4 at a different pace, subject to the first principle of context, it is expected that over time the logbooks will reflect regenerative practices increasing in parallel to the education process.

The logbooks also track the GHG emissions for each farm, again using a historical baseline to claim reductions over time. In this way, the logbooks capture all data pertaining to farming practices and GHG emissions which is then modelled to estimate soil organic carbon changes and GHG fluxes within the project area (as detailed in the accompanying Project Design Document). The carbon model itself is subject to the rigorous validation, calibration and verification of model performance demanded by the Verra module VMD0053.

Laboratory soil organic carbon analysis

In addition to the carbon modelling, the project has partnered with Agricarbon, Europe's leading soil carbon surveyor, to collect and examine soil cores at 30cm and 60cm depths across land strata identified on each farm.

These cores are delivered directly from the farm to the Agricarbon laboratory in Dundee where the soil carbon stocks, organic matter levels, bulk density, and other data obtained from the cores are calculated according to a quality assured protocol.

The project therefore generates both modelled and laboratory-measured carbon credits. Over time this data will correlate carbon sequestration rates against specific regenerative farming practices and soil types providing further impetus to the transition to more sustainable farming practices in the UK.

Farm Progress Reports

Our mentoring team carries out annual progress reports for each farm which are an integral part of the monitoring process.

The audit is carried out on site each year to assess the farm's progress with the 6-3-4 and the Whole Farm Plan and validate the claims made in the logbooks. These audits are themselves reviewed by the Validation and Verification Body – an independent third party auditor.



Agricarbon carry out the project's soil organic carbon measurement



Annie Leeson,
co-founder of Agricarbon

Agricarbon has developed a cost-efficient and rapidly scalable method of measuring soil carbon stocks guided by recognised carbon market protocols. They use a growing fleet of rugged coring machines, which guarantee a high degree of accuracy in their soil sample analysis.

“The real driver for founding Agricarbon was to unlock as much value as possible from soil carbon for farmers to fund their transition to regenerative farming,” says Annie Leeson, co-founder of Agricarbon.

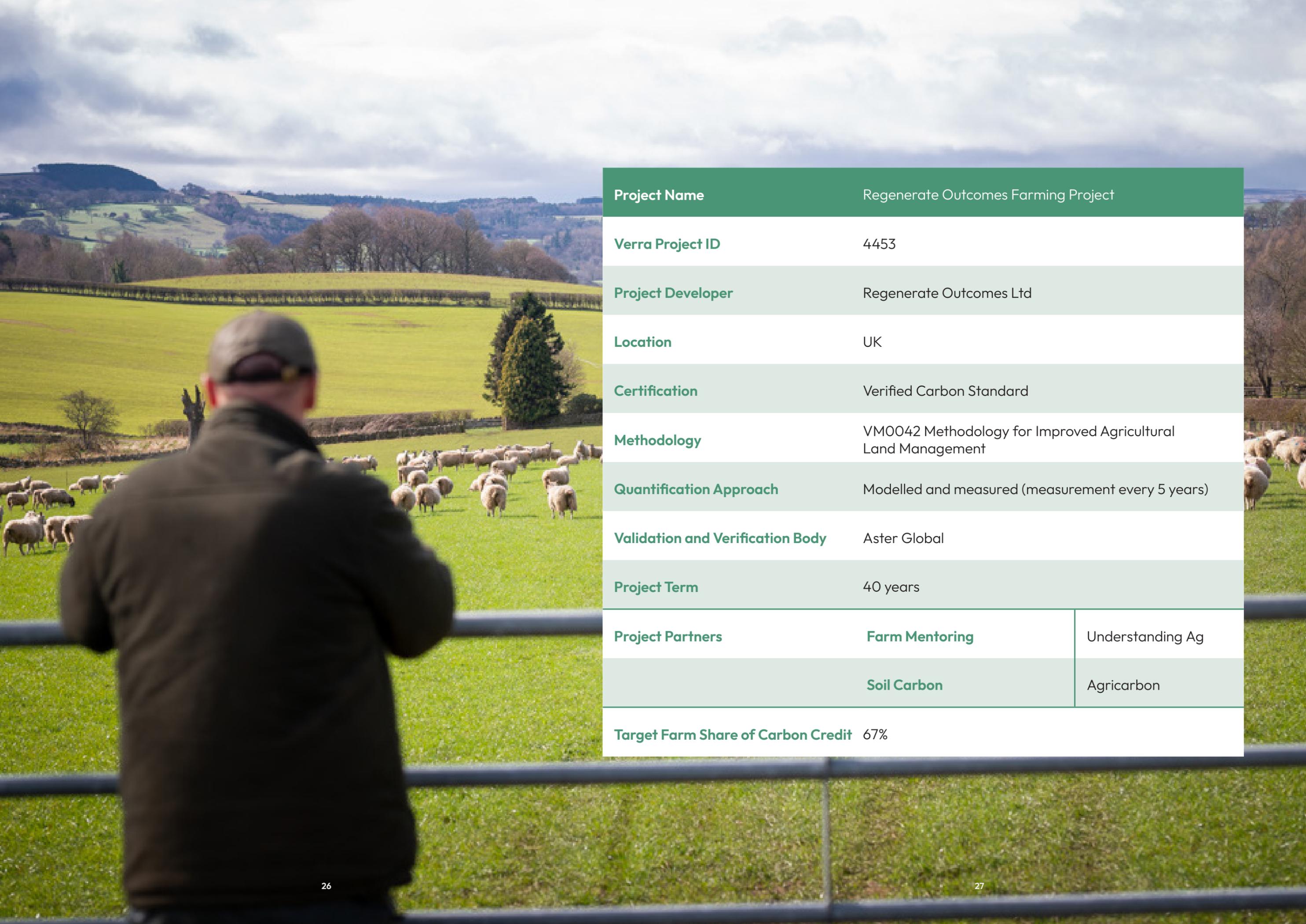
“To do this, we use a cost-effective way to capture reliable and trusted soil data. It’s absolutely vital for the carbon market that robust evidence validates that the soil carbon benefits are real and accurately quantifies how much carbon dioxide farmers are removing from the atmosphere.

“Our automation and robotics also bring greater accuracy to the analysis. Testing can be unpredictable and variable if it’s done by human beings across different laboratories. Typically, the margin of error you would expect would be about 20% across most labs. Agricarbon’s margin of error is far lower.

“Our automated soil processing technology also measures bulk density for every single sample. Measuring bulk density – which allows us to calculate how much soil you have got – is vital to converting the percentage of organic carbon in that soil into an accurate measure of the total tonnage of carbon, known as ‘soil carbon stock’.

“Agricarbon combines several important factors together: very high throughput at low cost, analysing enough samples, increased lab precision and measurement of bulk density for every sample.

“This foundation of data ensures reliable quantification of soil carbon changes and credibility of the carbon credits generated by Regenerate Outcomes.”



Project Name	Regenerate Outcomes Farming Project	
Verra Project ID	4453	
Project Developer	Regenerate Outcomes Ltd	
Location	UK	
Certification	Verified Carbon Standard	
Methodology	VM0042 Methodology for Improved Agricultural Land Management	
Quantification Approach	Modelled and measured (measurement every 5 years)	
Validation and Verification Body	Aster Global	
Project Term	40 years	
Project Partners	Farm Mentoring	Understanding Ag
	Soil Carbon	Agricarbon
Target Farm Share of Carbon Credit	67%	



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For more information,
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