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### **Foreword**

## A call to action

We are at a pivotal moment for UK agriculture, where the intersection of farming, nature and finance will shape the future of our food system, rural communities and wider economy for decades to come.

As the largest financial partner to UK agriculture, Lloyds Banking Group serves over 46,000 farming businesses. Our role is to enable the growth and transition of farm businesses, working alongside farmers to turn robust data into practical solutions that build resilient farms that deliver long-term returns.

Since launching our 'Grounded in evidence' report last year, we have dramatically scaled our analysis of farming's environmental footprint in the UK. We have used geospatial data to identify nature-related impacts and opportunities and sharpen our understanding of these dependencies across our agriculture portfolio. Crucially, with this data, we can prioritise support to farms most at risk, scale existing solutions and pinpoint cases where innovative products can drive resilience and growth.

This report, 'Farming with nature', represents a milestone in assessing how farming can thrive while restoring nature. It emphasises the importance of partnerships that actively support farmers' commitments to nature restoration and protection, while demonstrating how this can drive a stepchange in the wider sector's profitability, prosperity and sustainability.

Utilising the Earth Blox platform, we have combined cutting-edge geospatial data with farm level experience to create a pilot spanning 5.1 million hectares of farmland - equivalent to roughly 30% of the UK's total 16.8 million hectares of utilised agricultural area<sup>1</sup>.

With our unique combination of sources and scale, this is one of the most extensive views yet of how farmed landscapes interact with nature and where the biggest opportunities lie.



**Andrew Walton** 

Chief Sustainability Officer, Lloyds Banking Group



1 Department for Environment, Food & Rural Affairs (2025). Agricultural Land Use in the United Kingdom at 1 June 2024. Total utilised agricultural area (UAA) is 16.8 million hectares. The total croppable area is 6.2 million hectares in 2024 and accounts for over a third (37%) of UAA. Online, available at: <a href="https://www.gov.uk/government/statistics/agricultural-land-use-in-the-united-kingdom/agricultural-land-use-in-united-kingdom-at-1-june-2023">https://www.gov.uk/government/statistics/agricultural-land-use-in-the-united-kingdom/agricultural-land-use-in-united-kingdom-at-1-june-2023</a>

### **Executive summary**

The future of our food system and our natural environment are inextricably linked. The agricultural sector is going through a huge transformation globally and a clear approach to nature is needed as part of these changes. Conventional systems are increasingly vulnerable to impacts of a changing climate, exposing businesses to volatility in global markets, climate shocks, and supply chain disruptions.



In this report we demonstrate that sustainable farming is not only environmentally imperative, but commercially viable when supported by robust data, targeted finance and joined-up policy action. It highlights how targeted support, and finance can drive both resilience and profitability for the sector.

It's well understood that intensive farming practices have resulted in immense biodiversity loss in the UK since intensive methods were adopted after the Second World War. This biodiversity loss presents a risk to our longterm food security and the health of the rural economy. If we don't take collective action, we risk being locked into the continued degradation of biodiversity for the next decade or more. Inaction risks long-term economic decline across the sector and beyond, while also missing the real opportunities farmers can reap from changing to more sustainable systems. The future of a prosperous UK agriculture sector therefore lies in aligning farming practices with nature restoration and protection, ensuring long-term food security, rural prosperity, and environmental sustainability.

To turn the tide, we need to leverage technology for deeper insight and increase financial support across UK agriculture.

This report is designed as the largest study of its kind to help farmers and rural businesses understand where targeted interventions and practices changes can have the greatest impact. To do this, we have mapped 5.1 million hectares of UK farmland – using earth observation data – to understand how farming businesses interact with nature, pinpointing where nature impacts are high and resilience is low.

These insights help us to identify opportunities, mitigate risks, and provide actionable, timely guidance for farmers to build resilience in their businesses. We know that when farmers are presented with trusted data, clear advice and a financial return, uptake follows. But progress requires a coordinated effort between farmers, supply chain partners, policymakers, and financial services to achieve nature recovery alongside commercial resilience for the farming sector.



The transition to sustainable agriculture demands consistent policy frameworks, blended finance models, and support for new income streams. Alongside sharing this new insight with industry, we are increasing our direct support for farming clients with our new Agriculture Transition Finance product that will launch before the end of the year. This reflects our deep commitment to working on new solutions that support farming businesses as they transition.

As the largest financial partner to UK agriculture, Lloyds Banking Group is helping Britain prosper by supporting farmers to build resilient businesses that deliver for nature and strengthen the rural economy.



# The business case for sustainable farming at a national and regional level

By combining multi-source geospatial intelligence from Earth Blox with over 685 on-farm environmental assessments through our Soil Association Exchange partnership, we have built a comprehensive map of the opportunities that exist to improve nature's co-existence with farming.

With more than 5.1 million hectares analysed, the findings provide a new level of insight, which can enable farmers to align farm-level action with the UK's environmental and economic goals.

Our analysis identifies specific geographic areas where practices, such as cover cropping, tree planting and water management can deliver the greatest environmental benefits. As such, it offers an important new tool in delivering on the ambition of improving farm profitability and boosting resilience.

The result is a suite of valuable insights which can be used to pinpoint where farmers, the supply chain and policymakers should prioritise collaboration. This can accelerate progress by highlighting the most valuable actions in specific locations, and how multiple actions can be combined to deliver the greatest environmental and economic return.





**Earth Blox** 

# Bringing nature into focus



To compile data for this report, Lloyds has worked with Earth Blox, using its geospatial platform to produce a TNFD-aligned Proof of Concept pilot for its Agriculture and Commercial and Residential Real Estate portfolio.

The geospatial mapping data helps us to understand how our clients work with the natural environment and how their activities both impact and depend

Mapping our agricultural clients using Earth Blox geospatial data across 5.1 million hectares allows us to identify where farming activities connect with nature. By combining geospatial, environmental data, and publicly available information on land and crop classification, we identify whether farms operate near areas with potentially elevated nature risks, such as areas of physical water stress or areas of importance for biodiversity.

Crucially, the data highlights both the dependencies and impacts of Lloyds' customers on nature. It tracks pressures like fertiliser use and water demand that impacts the ability of nature to deliver vital ecosystem services and reveals the extent to which individual farms rely on assets such as soil health, water supply and pollination, with varying degrees of regional dependence.

This will enable Lloyds to understand the risks their customers face in the ongoing provision of ecosystem services, particularly in regions vulnerable to water scarcity, flooding, or other environmental stresses. Because nature impact evolves over time, the platform allows for ongoing assessment to ensure insights stay relevant, like monitoring drought risk through regularly updated government datasets. These insights are helping us identify opportunities, mitigate risks, and provide actionable, timely guidance for farmers to build resilience.

Farming practices vary widely across the country, with the most common systems in each region reflecting their different landscapes, climate and soil types.

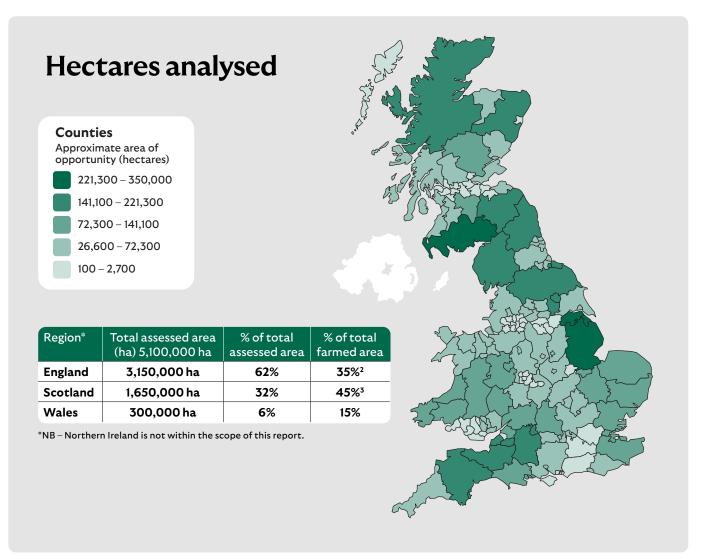


Comparably,
Scotland's
farming
is weighted
towards grassland
and rough grazing,
particularly in upland
areas, with arable and
high value root crops
in the lowlands.



It is important to consider these regional differences, which reflect the agricultural and economic picture of our communities and will inform what is most practical and profitable for farmers.

A regional perspective is therefore critical in uncovering opportunities for nature restoration and sustainable practices.



<sup>2</sup> England total farmed area (UAA): 8,700,000 ha – Agricultural land use in England at 1 June 2024, UK Government, available online at: <a href="https://www.gov.uk/government/statistics/agricultural-land-use-in-england/agricultural-land-use-in-england-at-1-june-2024">https://www.gov.uk/government/statistics/agricultural-land-use-in-england/agricultural-land-use-in-england-at-1-june-2024</a>

<sup>3 &#</sup>x27;The largest single land use in Scotland is agriculture, (for cropland and grassland), at 5.35 million ha, or approximately 69% of the total land area. However, 49% of that is rough grassland, (with a Land Capability for Agriculture category of 6), and many areas are actually inactive. Indeed only around 70% of the agricultural area is claimed under the Basic Payment Scheme (BPS) and Greening support mechanisms, amounting to approximately 3.74 million ha of land.' Just transition in land use and agriculture: a discussion paper, Scottish Government, available online at: <a href="https://www.gov.scot/publications/transition-land-use-agriculture-discussion-paper/pages/8/">https://www.gov.scot/publications/transition-land-use-agriculture-discussion-paper/pages/8/</a>

### Interface with sensitive areas



Approximately **60**% of farming clients are within or near to protected areas.



Almost 20% of farm businesses are within Key Biodiversity Areas (KBAs), representing 7% of farmed land.

### Key environmental pressures facing farmers



Water management

Our insight shows near universal flood risk, while many farms in central and eastern England display high water scarcity, a challenge which is particularly acute in these regions relative to others.



Soil degradation

The data highlights widespread soil degradation, with key regional nuances. Scotland holds the highest soil organic carbon according to the data, while East Anglia records the lowest.



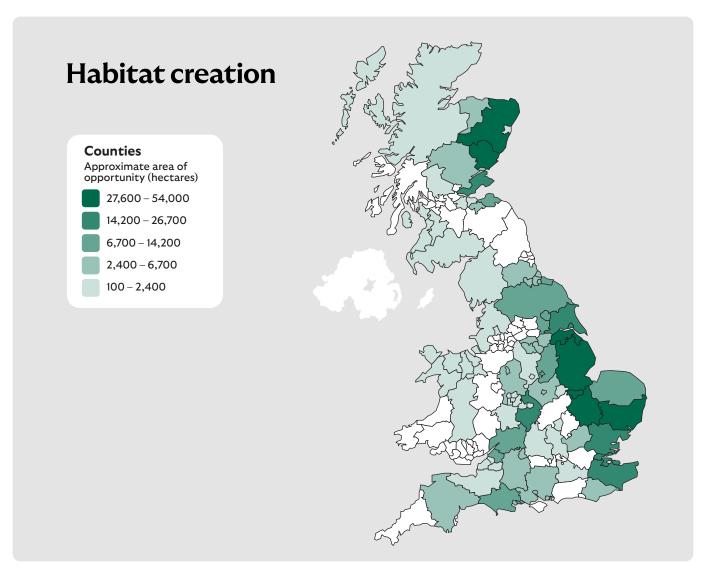
**Above Ground Biomass** 

Across the UK, carbon sequestration (the removal of carbon from the atmosphere) is limited, including in above ground biomass (trees and hedgerows).



Mapping the scale of the UK opportunity for strengthening nature with farming in relation to key practices

Approximately 1.2 million hectares with high potential for habitat creation, enhancing biodiversity and ecosystem services.





Region identified for greatest benefit

• East Anglia (5% total farm area coverage)



### **Main drivers**

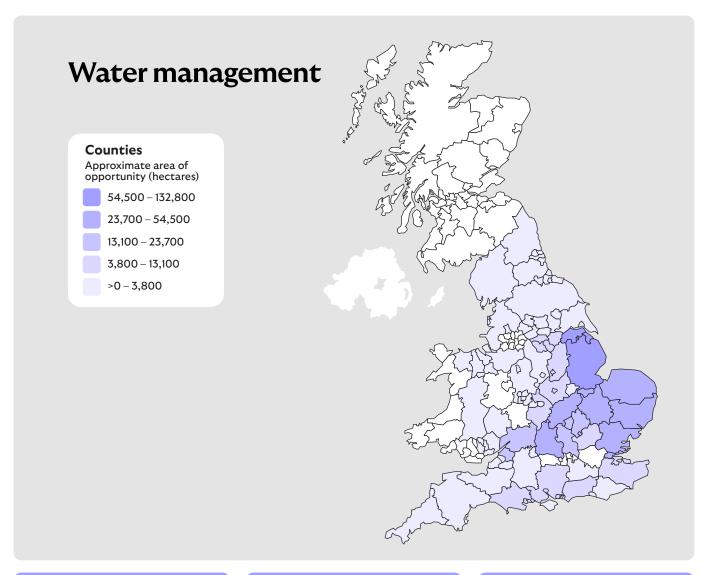
Areas with low biomass recorded and evidence of high dependency on pollination services.



### **Benefits**

 Focusing on maintaining or restoring existing habitats and enhancing wildlife will bring economic and environmental benefits. These include attracting pollinators, acting as carbon stores or boosting beneficial species.

Around 700,000 hectares of farmland in drought-prone regions, reliant on mains and groundwater, could benefit from greater water management including reservoir building, rainwater harvesting and improving water retention in soils to improve business resilience and output.





### Region identified for greatest benefit

 East Anglia (7% of total farm area coverage), followed by the North and Midlands (3% coverage each)



#### **Main drivers**

 High water use intensity, particularly on arable farms, and low water availability.



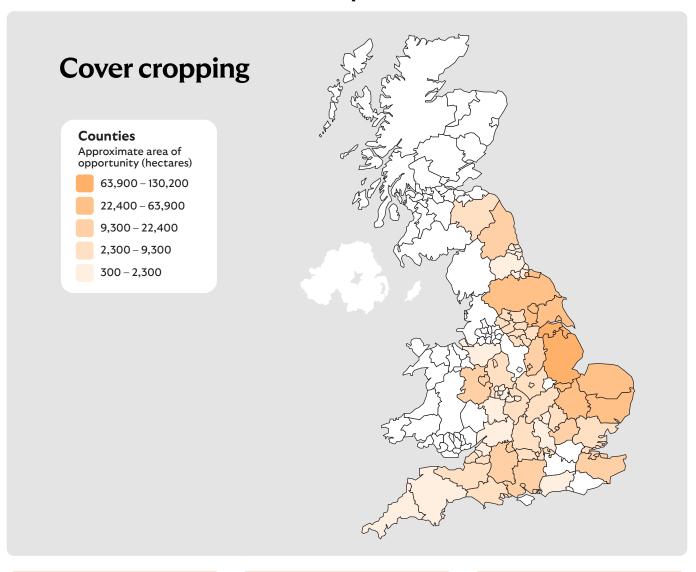
### **Benefits**

 Increased resilience in times of drought, alongside resource efficiency for both farm businesses and wider communities.

"We've got a 90,000-litre subterranean tank and that feeds all the cattle and pigs, certainly through the winter. With a cow drinking 60 litres of water a day, it's a huge offset."

Daniel Roberts, Moor Farm, Baschurch, Shropshire

Approximately 10% (over 500,000 hectares) of the assessed area was identified for the introduction of, or increases in, cover cropping, with benefits for soil health, fertility and reduced input costs.





### Region identified for greatest benefit

 East Anglia (5% of total farm area coverage)



### **Main drivers**

 High pesticide usage, low soil organic carbon, and pressures on protected areas.

"We're always putting something in the ground – cover crops after harvest, companion crops with our cereals and herbal leys in rotation – to keep our soils alive, build fertility and reduce our reliance on inputs. It's about being more self-sufficient, looking after the land and making the numbers stack up for the future."

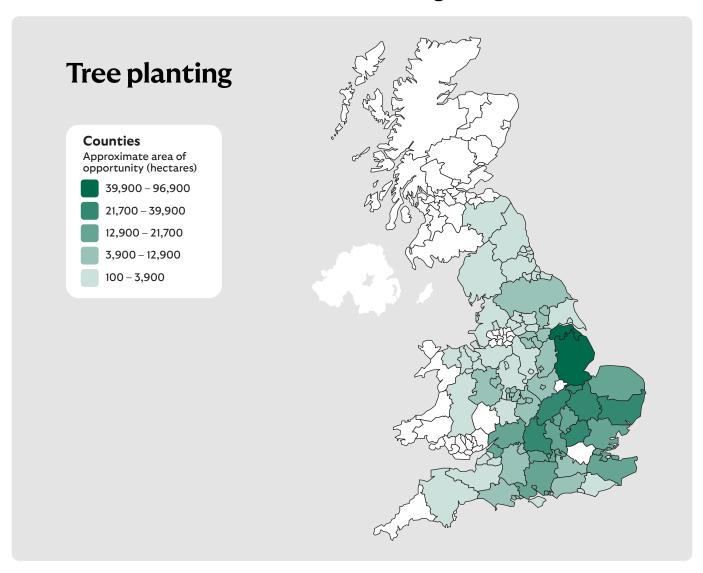
Hugh Forsyth, Tubbs End Farms Ltd, Warwickshire



### **Benefits**

 Planted to provide ground cover between harvesting one commodity crop and planting the next, cover crops protect the soil and enhance nutrients and soil organic matter, improving its structure and water retention, while reducing reliance on fertilisers and pesticide.

600,000 hectares are identified for tree and hedge planting, supporting climate resilience, livestock welfare and flood mitigation.





### Region identified for greatest benefit

 East Anglia (2% of total farm area coverage), additional focus on farms in the South and East (climate change projections show these areas face the greatest risk of heat stress and drought, impacting livestock and farmer wellbeing).



### **Main drivers**

 Assessed areas with high dependency on flood mitigation services and local climate regulation, this data showed it was heightened by high pesticide use and low soil organic carbon in arable farms.



### **Benefits**

 Whether in hedges, on unproductive farmland, or through agroforestry, tree planting supports carbon sequestration, reduces flood risk and soil erosion, improves water retention, alleviates livestock heat stress and improves biodiversity.

"By planting over 200 metres of new hedges and more than 50 trees in a rough corner of the field, I've turned unproductive land into an agroforestry plot that supports biodiversity, provides new habitats and is now more profitable [through grants] than the wheat growing on the other side of the hedge"

Michael Strother, J M Strother and Son, Northumberland

### Regional picture

While this national view is valuable, looking closely at regional environmental pressures gives us more actionable insight on how certain practices can best fit local conditions to drive the greatest levels of resilience.

### East Anglia

East Anglia makes up 14% of total farm area assessed and is a clear priority given its high concentration of arable farms. Agriculture here shows trends of high fertiliser and pesticide use, low soil organic carbon, and the worst national soil pH.

Cover cropping could deliver the greatest benefits to both farm productivity and reduce pressures on protected areas, while tree and hedge planting (identified across 2% of the total farm area) could help increase carbon sequestration, address water scarcity, and reduce flood risks.

East Anglia also records the lowest water availability and highest arable water use intensity (7% of total farm area), making water management, reservoir building and rainwater harvesting highly relevant for easing demand on mains and groundwater.

### **Scotland**

Making up 32% of the total assessed area, the best soil organic carbon storage of the farmland mapped is in Scotland (followed by parts of Wales). Farms here are generally less dependent on water flow regulation and supply services than those in England and Wales. Crop rotation is commonly practised and has clear environmental and agronomic benefits.

Of the total farmland mapped for high nitrogen, phosphate, and potash application (above 18kg/ha), the East Coast of Scotland is among the regions most suited to benefit from crop rotation (at 2% of total farm area coverage). Many farms fall within Nitrate Vulnerable Zones (NVZs). Nutrient management planning and precision spraying are therefore opportunities to address poor soil pH and fertiliser hotspots linked to low water quality.



### Regional picture

### **Wales**

Wales accounts for 6% of total farm area assessed. It is a particularly agriculture-heavy region and over 90% of all land in the country is dedicated to farming (compared to around 70% in England and Scotland), with the majority used for rearing sheep and cattle. The country has 8.7 million sheep and lambs, with over 1 million cattle; 71% of the land is classed as 'less favourable' and grazed and 7% is lowland.

Rotational and mob grazing, overlapping with improvements in slurry management, could improve soil fertility, organic matter and water quality, especially in areas where fertiliser use and dependency on water purification service is high and where farms are within nitrate vulnerable zones or protected areas, (over 23,000 ha; 7% of farm area assessed).

### **The North**

This region represents 20% of the mapped farm area. A greater use of herbal leys (mixtures of herbs, grasses and legumes) sown into pasture to boost soil health and structure, provide forage for livestock and create new habitats for biodiversity, is the key recommended action here. By doing this they can attract beneficial insects for pollination and natural pest management and are particularly relevant for this region's low pollinator plant diversity.

The region also records some areas with high pesticide use, overlapping more broadly with its low pollinator diversity. This reinforces the case for integrated pest management; beneficial insects may be bolstered by the adoption of herbal leys. Like much of the UK, rainwater management is relevant, with approximately 3% of total farm area coverage identified as having some of the lowest water availability but with high usage intensity.

### The Midlands

The Midlands accounts for 13% of the total farm area analysed. Rainwater harvesting, reducing reliance on mains and groundwater, is a strategic opportunity for around 3% of farmland across this region. The East Midlands is among one of the main regions showing high dependency on soil and sediment retention services, combined with low soil organic carbon.

Adoption of min/zero tillage could therefore deliver benefits here by improving soil stability and reduced sediment loss into waterways. High pesticide use, combined with dependency on biological control services across some Midlands postcodes, also means there is an opportunity for more integrated pest management, reducing reliance on chemical inputs.

### **The South West**

The South West accounts for around 13% of total farm area mapped for priority interventions. It records the best soil pH nationally, in a predominantly dairy and cattle farming region. Slurry management is especially relevant where dairy and cattle farms are in Key Biodiversity Areas and protected areas coupled with high dependency on water purification and sediment retention services.

Combined with investments in slurry management, adopting min/zero tillage could also reduce sediment loss in runoff-prone arable land or regions with sloping pasture. With its increasing risk of drought and heat stress, the South West would benefit from more tree and hedge planting, providing valuable shade for livestock, while improving water retention, biodiversity and carbon storage.

"Generally, we don't use pesticides at all any more since planting environmental strips because they seem to harbour beneficial insects which eat unwanted insects in the combinable crops."

Nick Phillips, Kilkenny Farm, Cirencester, Gloucestershire



### Case study

# Sustainable practices to safeguard the farm for future generations

Nick Phillips, Kilkenny Farm, Cirencester, Gloucestershire

Nick Phillips runs S.J. Phillips & Sons (Kemble) Limited at Kilkenny Farm near Cirencester and is integrating sustainable farming practices into his business to safeguard its future for his three sons.

The 1,200-hectare enterprise includes a 140-cow Stabiliser suckler herd, 890ha of combinable crops, and just over 80ha of land enrolled in Countryside Stewardship Mid-Tier and Sustainable Farming Incentive (SFI) schemes.

The business also boasts a wedding venue in a converted threshing barn, as well as various renewable energy projects including a ground source heat pump, a biomass system, and a solar array on the grain store.

Nick regards himself as a custodian of the land and says: "I want to enjoy it for what it is and hand it over to my sons in a better state than I received it."











To achieve this, he is working to integrate practices which enable him to farm in harmony with nature. This includes planting herbal leys for the cattle to graze as part of his stewardship agreements, alongside sowing unproductive areas of arable ground with wild bird seed mixes, and establishing wild-flower enhanced field margins to encourage pollinators, and he believes this has benefited his main arable enterprise.





"Generally, we don't use insecticides at all anymore since planting the environmental strips because they seem to harbour beneficial insects which eat the unwanted insects in the combinable crops," explains Nick. "I would say that by not using insecticides, we're probably saving around £20 an acre a year in costs."

He is also enjoying savings on his water costs thanks to a rainwater harvesting system, which provides both drinking water for the cattle and water for the sprayer on the arable enterprise.

"Lloyds has helped with the overall family business strategy planning to help me achieve my ultimate goal – to farm in a sustainable way whereby there's room for nature, food production and profitability."

Nick Phillips, Kilkenny Farm

### Case study

# Regen practices and sustainability driving profitability

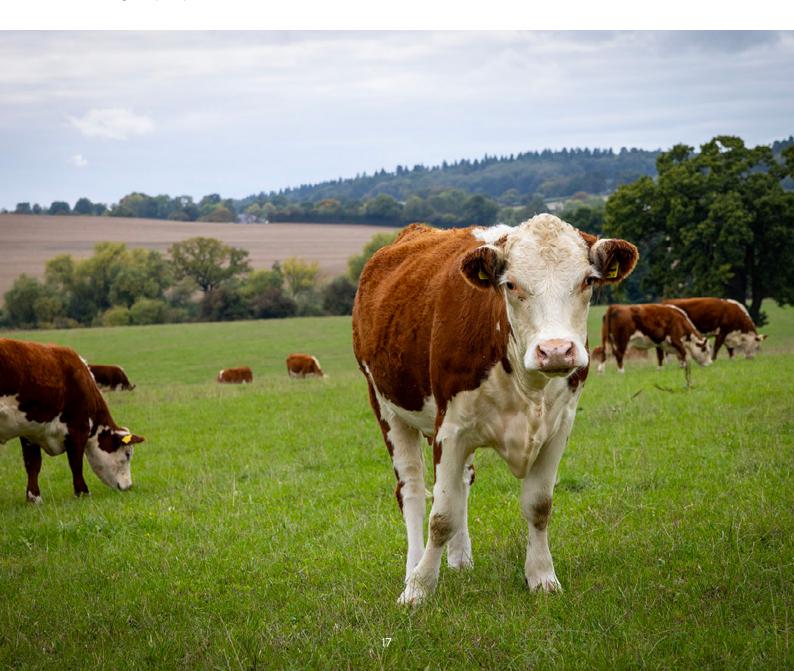
### Daniel Roberts, Moor Farm, Baschurch, Shropshire

Daniel Roberts is integrating regenerative practices onto his farm to create a sustainable and profitable business. Together with his wife Melissa and her parents Mike and Hazel Timmis, Daniel runs the 154-hectare Moor Farm near Shrewsbury.

The farm comprises a broad portfolio of enterprises including the 60-cow Shraden herd of pedigree Herefords, a successful farm shop and café, a 2,000-tonne grain drying and storage facility, a 4ha international grade polo pitch, and 36ha of arable land.

Daniel says 2018 marked the start of the family's regenerative farming journey and a change in focus at Moor Farm.

"That year we won the Royal Welsh and Three Counties shows and sold a heifer for a record-breaking 7,500 guineas," he says. "While, on the face of it, it was the most successful year we'd ever had, we actually made a £3,000 loss on the cattle and we thought 'this doesn't make sense, something's got to change'."





Inspired by prominent regenerative agriculturalist, Gabe Brown, the family set about overhauling the business – starting with the cattle.

"We had always wanted to go fully grass-based and be more regenerative, so we decided to cut out our ad-lib feed bill, which immediately saved £30,000."

Daniel Roberts, Moor Farm

"We started strip grazing and, in hot, dry years like 2025, we still have quite a lot of grass for the cows to work through, which wouldn't be the case if we weren't using this system."

Daniel says support from Lloyds has been instrumental in helping the business develop and evolve over the years.

Investments made with the environment in mind include the creation of a rainwater harvesting system comprising a 90,000-metre subterranean tank, which provides drinking water for the livestock, and a 100kW roof-mounted solar array which powers the farm shop and café.

Daniel says the family is also making use of grant funding and subsidy support schemes as part of their regenerative farming journey and the farm has been involved in a Soil Association Exchange baselining audit, funded by Lloyds.



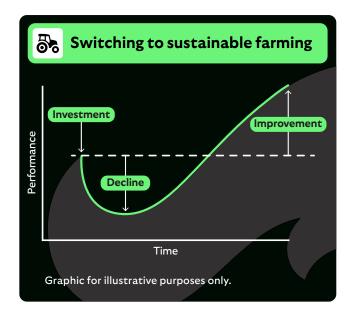
# Supporting farmers by turning insight into growth

Switching to sustainable farming is an undertaking for any farming business and it's well understood that the cost of changing practices remains a barrier for the industry.

For instance, the Grounded in Evidence report showed that early reductions in cereal yields could be as high as 25% as farms adapt their practices to more regenerative systems<sup>4</sup>. These dips are often seen in practices such as cover cropping or crop rotations, which require a shift in traditional farming methods.

However, these losses are typically short-lived and lead to longer-term benefits. Importantly, profitability improves over time as soil health increases and input costs decrease, but getting there presents risk. While there are undoubtedly hurdles to embracing a more sustainable way of farming, with the right support, they can be overcome.

To support agriculture and food production, while enabling farmers and landowners to spot the opportunities for transition, Lloyds has commissioned Savills to undertake a project to highlight the most rewarding farming practices that can help businesses meet economic and environmental goals. We have drawn on these findings and analysed the margins for different farming scenarios following the implementation of recommended practices.





4 Lloyds Banking Group, 'Grounded in Evidence' p.10, available at <a href="https://www.lloydsbankinggroup.com/assets/pdfs/who-we-are/financing-a-green-future/grounded-in-evidence-a-way-forward-for-british-farms.pdf">https://www.lloydsbankinggroup.com/assets/pdfs/who-we-are/financing-a-green-future/grounded-in-evidence-a-way-forward-for-british-farms.pdf</a>

### Regenerative or sustainable farming

## Which is best for nature?

While there is no universally accepted definition of regenerative farming, both regenerative and sustainable farming work towards long-term environmental health and can include various practices such as enhancing soil health and minimising disturbance, boosting biodiversity, reducing chemical inputs and integrating livestock. Regenerative farming typically goes a step further by actively restoring and enhancing ecosystems through a more holistic approach.

There are six key principles which underpin sustainable and regenerative farming practices in the field:

Minimise soil disturbance

Achieved by reducing or eliminating tillage and avoiding excessive chemical use. It protects soil structure, prevents erosion and preserves microbial and fungal networks.

2 Keep soil covered

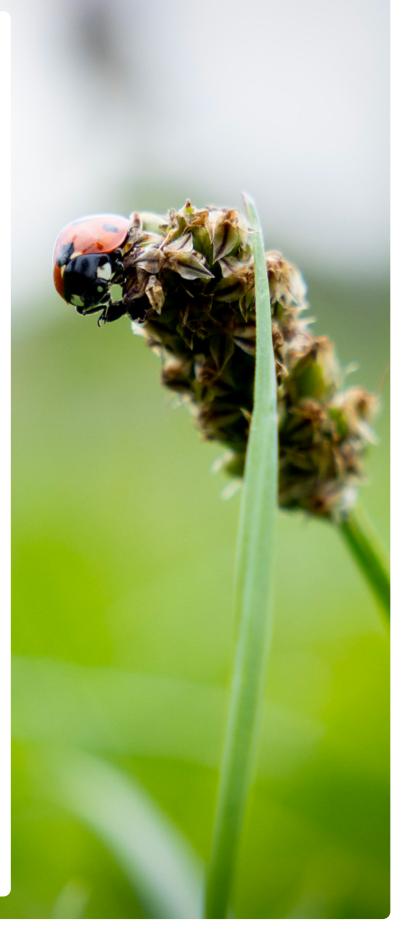
Using cover crops, crop residues and mulches to shield the soil from wind, water erosion and extreme temperatures while feeding soil organisms.

- Maintain living roots year-round
  Growing cover crops or perennials so living roots are always in the ground.
- Foster biodiversity

  Planting diverse crops, integrating livestock and encouraging beneficial insects.
- 5 Integrate animals

  Managed grazing and livestock integration mimic natural ecosystems. Adds fertility, cycles nutrients and enhances land productivity.
- Contextual and adaptive management

  Adapting practices to the local environment, climate, and community needs.



### Arable farming model

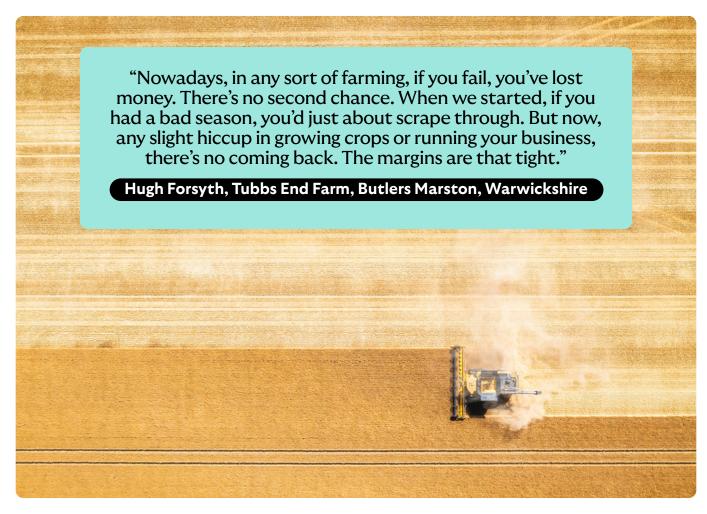
# The business case for combining transition practices

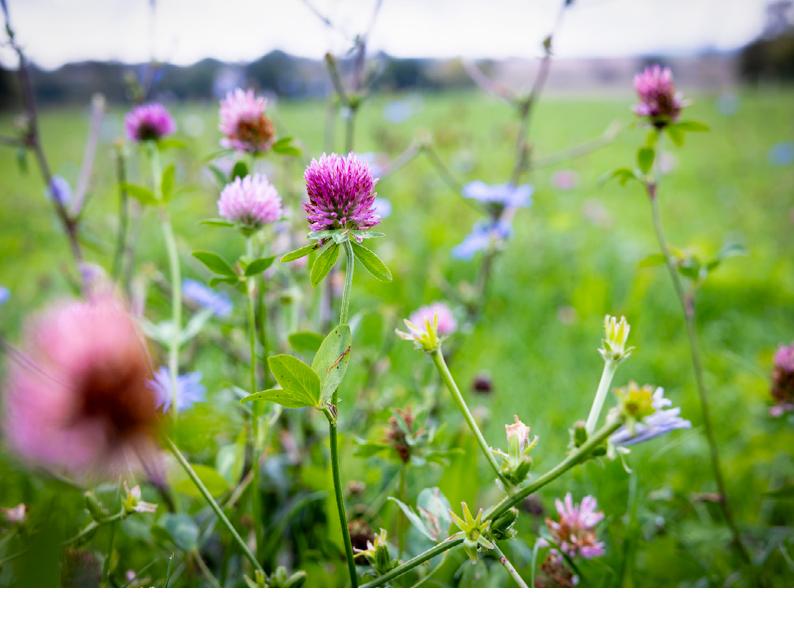
Analysis of a 400-hectare arable system demonstrates the power of blending the right sustainable practices. By introducing cover crops, legume fallows and more diverse rotations, the model shows significant financial, environmental and social benefits – the triple bottom line in action.

On the financial side, reduced fertiliser, pesticide and fuel use deliver savings of over £61,000 per year, equating to c.£150 per hectare. While some additional contracting and establishment costs are incurred, the net effect is positive and shows that farming with nature can also strengthen profitability. Environmentally, the changes enhance soil health, organic matter and biodiversity, while lowering nutrient loss and emissions.

This case illustrates the wider opportunity that by layering sustainable practices, farmers can achieve measurable gains for nature and climate resilience, while reinforcing long-term business viability. It is a pilot for how sustainable farming delivers returns on all fronts for an arable business.







At Lloyds we are committed to supporting farmers as they navigate the near-term challenges with switching to more sustainable practices. In our 2024 Grounded in Evidence report, we called on government to back a standardised methodology for measuring farms' environmental impact; develop a decarbonisation and nature strategy for agriculture; and collaborate with industry to overcome the barriers faced by farmers, including unblocking the financial flows needed to deliver change.

We remain committed to those calls and to playing our own part in helping to deliver progress, including through both sharing our insights and contributing our own action. This report provides further evidence of the opportunities available and aims to accelerate action.

Each move to a more sustainable farming system starts with identifying which principles will work best on a particular farm. While for some, cover cropping and a change in crops planted might be the best route, for others it might be introducing livestock, or a greater focus on what inputs, chemical or otherwise, are used. Often, it's about embracing the concept of land sharing, not sparing, where mutually beneficial practices sit alongside one another without the need to take land out of production.

While changing to a more sustainable farming system has many challenges, the opportunity to pursue the transition in a way that retains land productivity and business profitability makes it a crucial investment.

A farmer is best placed to decide how they will manage their business, but key industry partners need to support them. We are working across industry to empower our farming clients to understand their available options and potential benefits. We are drawing on the extensive network and expertise of our Agricultural Relationship Managers, funding environmental baseline assessments and rural consultancy through our partnership with Soil Association Exchange and co-creating new blended funding models.

We are also expanding our suite of products and our new Agriculture Transition Finance product reflects our commitment to working on new solutions for the sector and sits alongside existing products that can provide farmers with the support and confidence they need to navigate a shift to more sustainable farming systems.

### Case study

# History and tradition are not barriers to sustainable changes

Michael Strother, J M Strother and Son, Wooler, Northumberland

The Strother family has farmed in Wooler, north east England, for four generations, and is focused on creating a balanced, sustainable farm that improves both profitability and environmental stewardship.

Having worked in agriculture from a young age, Michael Strother inherited the challenge of managing a marginal farm with thin soils and rocky terrain. He has been able to make the farm more resilient through a concerted mix of diversified enterprises, including beef and arable production, as well as a focus on sustainability.

Michael says: "Historically, the push has always been towards extreme animals and pushing the ground to its maximum, with bigger machines and bigger capacity. But I'm not sure that's sustainable anymore. The key now is figuring out how we can work smarter and make sure we have a backup plan."

Over the past decade, Michael has actively pursued regenerative farming practices. Beginning with a shift towards holistic grazing, diverse crop rotations and the adoption of herbal leys, the farm's regenerative efforts have led to improved soil health, greater biodiversity and improved financial stability.

This focus on soil health is amplified by Michael's application to the Soil Association Exchange Market, a carbon emissions reduction pilot initiative funded by Lloyds and other companies, which allows farmers to earn income for reducing carbon emissions.

Part of the farmer steering group that helped shape the scheme from the ground up, Michael is enthusiastic about the potential of the programme.

The integration of agroforestry, through land-sharing with the Forestry Commission, is another key step in the farm's journey. Using mid-tier and higher-tier stewardship schemes, Sustainable Farming Incentive (SFI), capital grants for hedges, and county funding, Michael has transformed a previously unproductive field, planting over 200 metres of hedge and more than 50 trees. This is enhancing biodiversity and creating new income streams for the farm through sustainable land use.





"Farmers want to do things for the environment, like planting herbal leys, but very often the set-up costs are prohibitive. If they can enrol on a scheme and it helps with those costs, both their bottom line and the environment will benefit."

Michael Strother, J M Strother and Son







Case study

# Scone Estates' Woodland Creation Project

Scone Estates, a 7,500ha family-run estate in Perthshire, has integrated sustainability into its long-term business strategy through a 275ha woodland creation project. Known for its historic significance and diverse land use, the estate combines in-hand and tenanted farming, forestry, and tourism. Scone blended private capital with a £500,000 loan from Bank of Scotland's Clean Growth Finance Initiative (CGFI) with the Scottish Forestry Grant Scheme (FGS) to fund the project, enabling the restoration of storm-damaged tree cover and providing a future site for public access and recreation that will enhance biodiversity, and sequester carbon. This mixed funding approach helped overcome the challenge of high upfront costs while waiting for grant payments and supported local jobs through the use of local contractors for planting, fencing, and mounting.



# Unlocking growth through aligning finance and policy

As this report shows, we understand the challenges facing farmers in the UK. Finance and policy, alongside trusted advice and guidance, will determine the pace and scale of transition across UK agriculture.

We have long believed that with the right investment signals, long-term certainty and evidence-led partnerships, farm businesses can improve productivity, protect nature and unlock new income streams.

## Financing a resilient future

Lloyds Banking Group recognises the importance of tailored finance in supporting the agricultural sector, as evidenced by our popular Clean Growth Finance Initiative. We are expanding our own product suite to provide more direct support to farming clients with a new Agriculture Transition Finance product that will launch before the end of the year. This reflects our deep commitment to working on new solutions that support farming businesses as they transition. Our landmark partnership with Soil Association Exchange has also created the UK's most comprehensive environmental baseline of farm performance, now covering 850 farms. This insight is being used to unlock new forms of finance that reward sustainability, starting with the Exchange Market pilot.

Through this initiative, farmers are financially rewarded for adopting action plans that reduce emissions and improve biodiversity, such as direct drilling or reduced tillage, cover cropping, and nutrient management with 50% of the annual payment made upfront to support change adoption. Verified through the Soil Association Exchange platform, these actions are funded by a coalition of businesses within shared supply chains.

Importantly, the Exchange Market operates as a carbon insetting fund, meaning farmers are paid to reduce emissions within their supply chains without the sale of carbon credits. This collaborative funding model, of which Lloyds is a convening partner, involves businesses, including large retailers and landowners, and is an example of stakeholders with common goals pooling funds to support farmers to meet sustainability goals.

Through our work with our partners and clients, we have seen how trusted data, clear advice and financial support drives uptake. This model shows how farmers, banks, food businesses and landowners can co-invest in a functioning environmental economy, where value is fairly distributed and risk is shared. We now need nature to be valued more broadly by the supply chain in the same regard as emissions and carbon.

Our network of relationship managers, and Soil Association Exchange consultancy, can help translate regional insights into tailored advice and actions for clients on the ground, supporting farmers to prioritise the best actions in their region.







# Five pioneering farms

These five case studies, supported by Savills Food and Farming Consultants, illustrate how farm businesses are transitioning to sustainable and regenerative practices. Though their journeys are as diverse as the regions and farming systems they represent, together they highlight the sector's opportunities and challenges. Aligned with our policy asks, they demonstrate the importance of collaboration – following a blended approach to public and private sector finance and highlight the need for a robust common methodology to measure impact.



### 1 Poultry

**Actions** Diversified crop rotation, integrated pest

management, reduced tillage, use of organic manures, increased environmental

stewardship schemes

Benefits Improved soil health, increased

biodiversity, reduced carbon footprint, reduced inputs, machinery savings, less

financial volatility



This large scale poultry farming business (part of a wider group also producing combinable crops) operates an indoor broiler system adhering to the Better Chicken Commitment (BCC) across multiple units in England, producing 35 million birds per year on 45-day cycles. Where possible wheat, grown from its own arable enterprise, is integrated into the poultry ration. In a circular approach, the use of nitrogen-rich litter is returned as organic fertiliser for the arable farm.

The arable enterprise has adopted a number of regenerative practices, including direct drilling, incorporating cover crops ahead of spring cereals and companion cropping within certain rotations. Costs for this have been self-funded, except for the purchase of a strip tillage drill which was grant funded by the LEADER scheme.

The business has entered into a Countryside Stewardship Scheme and SFI however the payments from these schemes are a very small part of overall income and the key driver is to be more sustainable. Due to its relationship with poultry integrators and retailers, the business undertakes a number of audits including carbon foot printing. Soil health has improved, and artificial fertiliser use has decreased as a result of the practice shifts, meanwhile the introduction of renewable energy systems and efficiency measures has improved the carbon footprint, though it's hard to directly link these changes to regenerative farming.

### 2 Pigs

Actions Diversified crop rotation, integrated

pest management, reduced tillage, use of organic manures, livestock integration, increased environmental

stewardship schemes

Benefits Improved soil health, reduced inputs, less

financial volatility



This family-owned farm operates a 1,100-head breeding sow unit. Around 20 years ago it was recognised that the existing arable crops were suffering from declining yields and soil fertility due to the sandy soil type and therefore outdoor reared pigs were introduced on the farm.

Now, predominantly a breeding sow unit, the pigs rotate around the farm along with a rotation of spring barley, maize, onions and turf. The livestock side of the business is run in-hand with arable cropping let to third parties. Breeding sows are outwintered with all progenies sold via contract with Pilgrims Europe.

Since the introduction of pigs, fertility within the arable rotation has improved resulting in lower artificial inputs thanks to the organic matter provided by the pig manure. The crops are also established using minimum till where possible.

All costs associated with the transition have been selffunded and the farm entered into a SFI scheme for field margins and removing field corners from production. This generates circa £10,000 per year. Previously the farm was in a higher-level stewardship scheme. Stability has also been brought to the farm from the income associated with the Pilgrims Europe contract.

### 3 Dairy

**Actions** Diversified crop rotation, herbal leys, companion cropping, integrated pest management, livestock integration, use of organic manures

Benefits Improved soil health, increased biodiversity, improved gross margins, reduced machinery fleet, increased cattle numbers, reduced gross margin costs, increased sales of surplus forage, less financial volatility



This owner-occupied dairy farm spans 490 hectares of heavy clay soils. Originally an arable unit with a yearround calving system and 170 milking cows, it transitioned two years ago to a grass-based, New Zealand-style spring calving system. Cows are grazed outdoors on herbal leys for nine months of the year.

A £2 million investment was made to build a new parlour, install cow tracks and plant herbal leys and low-input pasture. This was partly funded by SFI, generating £120,000 annually, with the rest financed through bank loans and delayed seed supplier payments.

The farm increased stock to a 650-head herd and while milk yields dropped from 9,500 to 5,000 litres per cow, costs also fell from £3,774 to £1,349 per cow due to the outdoor grazing. The farm also reduced machinery and equipment, lowering future repair costs, while reduced synthetic fertiliser, herbicide, insecticide and pesticide use have resulted in savings.

In some years, the farm sells surplus forage to local sheep graziers or other cattle units, which generated £32,345 in 2024. However, as yield is weather-dependent, it impacts the surplus/deficit position. In 2024 gross margin increased by nearly 50%, rising from £370,050 in 2023 to £542,972.

### 4 Livestock

Actions Diversified crop rotation, integrated pest management, herbal leys, livestock integration, mob grazing, use of organic manures

Benefits Improved soil health, increased biodiversity, reduced carbon footprint, reduced inputs, machinery savings, reduced feed and bedding costs, increased stewardship revenue, herd numbers maintained, improved gross margins, less financial volatility

This 120-hectare owner-occupied farm on clay loams, previously ran a conventional set stocking system with Red Devon cattle. The herd, sold as stores, spent six months housed over winter before grazing permanent pasture, with fertiliser applications to maintain grass growth.

In 2022, the business transitioned to organic farming, removing synthetic fertilisers, herbicides and insecticides from its operations. To support the change, its Countryside Stewardship (CS) agreement, previously worth £4,000 a year, was revised to include organic conversion options. These 'conversion' payments, which started in 2023, increased support to £20,000 per year over a five-year term.

As part of the new agreement and accompanying capital works, the farm redesigned its grazing strategy and water infrastructure. The 1-4 hectare fields were split into 1-1.5 hectare paddocks using electric fencing and solar energisers, with additional water troughs installed. This enabled a mob grazing system using two to three day moves in 30-40 day rotations. Surplus grass was cut for winter feed, with hay cutting options in place on fields with greater species diversity to ensure seed replacement. The incentive now is to make hay rather than silage.

The herd was also restructured in response to fertility issues and bovine TB risk, shifting from selling stores to finishing cattle and removing less productive females. In the first year, the new strategy extended the grazing season by a few weeks while maintaining winter forage. By year two, with more confidence and research, the window had lengthened by two months either side of winter, cutting feed and bedding costs. However, concerns remain that extended outdoor grazing could damage the farm's pasture, which is vulnerable to compaction in wet conditions due to heavy clay soils.

Herd expansion has been discouraged by recent drought conditions, which reduced spring grass growth and limiting summer grazing. Even so, rotational mob grazing has improved resilience, sustaining production at levels that would not have been possible under the old system.

The 500% increase in CS revenue initially offset lower cattle sales and transition adjustments. With stronger beef prices and finished cattle now coming through, the farm is more financially stable. With profitability reliant on CS payments, the importance of blended publicprivate sector funding to deliver both environmental as well as economic outcomes is clear.

### 5 Arable

Actions

Reduced tillage, zero tillage, diversified crop rotations, leaving crop residues, cover and companion cropping, integrated pest management, livestock integration, mob grazing, herbal leys

Benefits Improved soil health, reduced carbon footprint, reduced inputs, machinery savings, increased stewardship revenue, improved gross margins, less financial volatility

This arable business carries out all operations in-hand, with additional contracting offered to neighbouring farms. Soils vary from sand to clay loams.

The retirement of the farm manager triggered a review of the system, which relied on heavy cultivations and a short cereal-based rotations. Concerned about long-term soil health and resilience, the new manager introduced minimum tillage, cover crops (ahead of spring cereals) and companion crops and more diverse four- to five-year rotations incorporating legumes, peas and beans, supported by CS agreements.

This required significant investment of £214,000 in new equipment, including a Vaderstad cross cutter, bio drill and Horsch Avatar drill. Heavier tractors and the plough were sold in favour of lighter machinery, with all costs self-funded.

Five years on, the farm receives £325,000 annually from CS and SFI payments, though profitability remains heavily dependent on these schemes, both of which expire by 2026 - again highlighting the need for blended public-private sector funding and dedicated transitional funding support. Environmental options include the removal of insecticides, buffer strips, flower-rich margins, grassy corners, winter bird food, and legume fallows. The generation of carbon credits also brings an additional £30,000 of income per year.

Soil health metrics are being monitored to compare against historic data as the transition progresses. Gross margins for winter wheat have risen from £910/ha to £928/ha over three years, with yields averaging 8.7t /ha and showing less volatility. The introduction of Wild Farmed wheat, delivering a gross margin of £873/ha with lower variable costs than conventional wheat (£387/ha versus £812/ha), has also provided guaranteed contracted returns.

Oilseed rape has been retained in the system alongside the use of buckwheat as a companion crop and now delivers an average margin of £670/ha thanks to reduced insecticide costs and improved yields. Overall, gross margins across the business have increased by 62% per acre since the transition.

## Policy clarity

Finance provides momentum, but policy can play a critical role in determining the direction of travel for both providers and users of finance. For farm businesses to commit to long-term environmental and productivity improvements, they need confidence that policy will remain consistent and that they can count on the contribution it makes to stay the course.

Lloyds is calling for a joined-up framework that creates stability for farmers and investors alike, embedding sustainable finance into the Environmental Improvement Plan (EIP), the Land Use Framework (LUF) and the proposed 25-Year Farming Roadmap.

"Grants and stewardship schemes have been a big driver for us because we know that once we establish a measure, such as a wildflower area, there's a clear margin and guaranteed income for the duration of the scheme."

Nick Phillips, Kilkenny Farm

The Government's commitment to a long-term roadmap is very welcome and provides a landmark opportunity to encourage supply chain partners to align their support for food production, environmental recovery and economic resilience.

At the same time, common data standards are vital to reduce confusion, build trust in data use among farm businesses, and unlock its potential to help chart a path to a more resilient future. Too often, the burden of generating data from different providers who use inconsistent metrics discourages farmers from doing so. A single national approach to measuring a farm's holistic footprint, building on the lessons learned and value demonstrated by the use of services such as Soil Association Exchange, can simplify access to blending both public schemes and private finance.

Policy also has a role in facilitating new income streams that can provide farmers with additional returns alongside food production. Alongside well-established opportunities in areas like energy generation, there is potential for farmers who wish to do so to benefit from supply chain schemes such as Exchange Market and voluntary carbon and nature markets, receiving reward for enhancing biodiversity and providing water-related services. These new third-income models can provide vital returns but at present, they are not only unfamiliar, but do not enjoy widespread trust. To realise the opportunities they can offer, the UK needs robust standards, long-term signals and fair risk-sharing to enable them to scale up.

Finally, we encourage government to use public finance more strategically to de-risk investment and better unlock long-term growth in farm businesses and rural communities. Revised public programmes should provide the certainty needed for farmers to make long-term investments in the transition. Greater use of blended finance – combining public funds with private capital – could meanwhile provide a means to target finite public funding where it can enable long-term returns and encourage matching private finance for Britain's farmers.

It is promising to note positive steps are already underway to develop the UK's policy landscape and embrace public-private partnerships across government. The Farming Roadmap, EIP and LUF together could create an optimal environment for this type of finance, helping to direct investment where it's most needed. Lloyds is working with our public and private partners to support the design and delivery of these tools. Collaboration is crucial if we are to accelerate the shift toward sustainable farming, ensuring that financial risk is mitigated, and the transition is financially viable for farmers.

To help achieve these goals and grasp the opportunities they can unlock, Lloyds has developed four UK policy asks to address key barriers farmers face in their transition to sustainable farming.

# Our key policy asks

### 1. 25-Year Farming Roadmap

Develop the Roadmap to create an enduring, long-term plan linking productivity, food security and nature recovery, providing stability for farm businesses and investors by acting as a single point of reference on the transition.

#### 2. Common data standard

Adopt a single, trusted methodology for measuring farm environmental impact, building confidence and simplifying access to stacking both public schemes and private finance.

### 3. Support for third-income models

Enable market-based income from carbon, biodiversity and water services through clear rules, trusted verification and long-term policy backing.

### 4. Blended finance to de-risk investment

Use public finance innovatively to unlock private capital and support multi-year change by sharing risk and scaling investment in sustainable farm practices.



# Central and local government working together

With these elements in place, there is a role beyond central government and devolved administrations for local government to get involved, making sure local actors - who may be best placed to advocate for regional needs and grant allocation – could help contribute to national goals. Lloyds can help play a role alongside both central and local government on making sure that happens; the regional insights provided in this report have been produced with collaboration with local and regional actors specifically in mind.

Projects such as the Sustainable Markets Initiative's (SMI) Routes to Regen and the government's Projects for Nature are early examples of this shift. But for real impact, policy must accelerate delivery, enabling scalable models like Exchange Market to operate across regions and sectors.

## Building a resilient future

As the largest lender to UK agriculture, Lloyds is investing in the systems that will lay foundations for the sector's future through partnerships, pilots, and financial products that deliver both environmental and economic value.

This includes products like the Clean Growth Finance Initiative, which offers zero per cent arrangement fees for term lending or a margin discount for asset finance for projects that improve energy efficiency, water use and emissions reduction, as well as new financial tools designed to bridge the 'yield dip' often experienced during practice change.

The greatest opportunity lies in collaboration, bringing together policy, finance and the food supply chain – and beyond - to accelerate this transition.

Connected sectors such as water companies, transport and land developers are already working with farmers, and will continue to do so, to implement nature-based solutions that restore biodiversity, reduce flood risk or improve water quality. This shared support for nature recovery will ensure a farming sector that is not only sustainable, but one that is helping Britain prosper by being economically strong, collaborative, globally competitive, and future-proof.



# The roadmap for resilient and sustainable agriculture



As this report shows, there are many opportunities to farm in a more sustainable and nature-focused way and there is a strong business case when you pair the right mindset with the right practices.

Importantly, many of the case studies highlighted were enabled by SFI and other grant funding, reinforcing the joint role of public and private finance.

We understand that the challenge of becoming more sustainable is significant for many farmers and landowners and that is why, we are committed to helping our customers make that journey successfully.

We implicitly understand farming is a long-term commitment and that is why, with our Agriculture Transition Finance, we are keen to support farmers and landowners in their journey from one farming system to another.

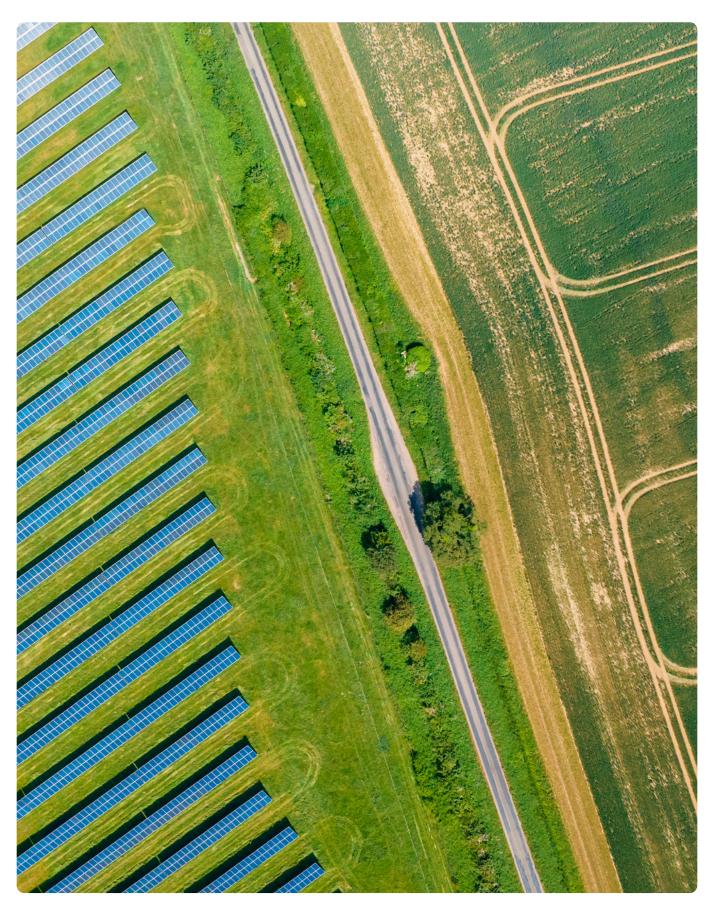
Whether it is improving the financial performance and resilience of a business or providing more opportunities for nature to flourish following a change in practices, the benefits for the agricultural industry and rural ecosystem are significant.

This commitment to the rural economy is why Lloyds Banking Group, as the largest financial partner to UK agriculture serving over 46,000 farming businesses, wants to support farmers and landowners in their transition to a more sustainable future.

A thriving agricultural industry is the bedrock of the rural economy and sits at the heart of the UK's wider resilience and growth.

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Registered Office The Mound, Edinburgh EH1 1YZ Registered in Scotland no. SC095000

Lloyds Banking Group plc 33 Old Broad Street, London EC2N 1HZ +44 (0)20 7626 1500 www.lloydsbanking group.com