Appendices to the Green Alliance briefing 'Should the 25-year Farming Roadmap support regenerative agriculture?', November 2025

Appendix 1
Alignment of the Environment Act targets with the four versions of regenerative agriculture, including written explanations

Key: Green = supports goal; yellow = mixed impact/risks involved; red = hinders goal; =no impact.

Relevant Environment Act goal grey	Version 1: Farmer-led, incrementalist	Version 2: Mixed farming traditionalist	Version 3: Tech optimist	Version 4: Community led, transformational
1. To halt the decline in species abundance by 2030	Aims to improve nature but incremental practice change may be too slow	More diverse, mixed farming and reduced pesticides benefits farmland wildlife, but unlikely to benefit wildlife not adapted to farmland	Increased use of tech can target species protection, potentially by increasing yields and creating more space for nature	Systemic shifts to more diverse farms with a focus on nature could strongly aid farmland biodiversity, and broader land use change through could also support off-farm wildlife
2. To ensure that species abundance in 2042 is greater than in 2022 and at least 10% greater than 2030	The actions of this version are unlikely to result in restoring species abundance	Mixed farming can support the creation of habitats over time, although this is likely to focus on farmland species with unclear contributions to wider wildlife	The actions of this version are unlikely to result in restoring species abundance	Focus on landscape-level change which could result in large scale nature restoration with benefits for wildlife both on and off farms
3. Improve the Red List Index for England for species extinction	The actions of this version are unlikely to result in restoring	Potential for reduced pesticide use and habitat creation to help threatened species	The actions of this version are unlikely to result in restoring	Prioritisation of ecosystem restoration may deliver benefits but further

risk by 2042, compared to 2022 levels	species abundance		species abundance	research needed to know impacts on endangered species
4. To restore or create in excess of 500,000 hectares of a range of wildlife rich habitats outside protected sites by 2042, compared to 2022 levels.	Unlikely to result in land use change which hinders available land for restoration	Limited habitat creation is included in this version, however as this goal also includes field margins, there may be some scope for contribution from this version	Limited habitat creation is included in this version, however as this goal also includes field margins, there may be some scope for contribution from this version.	Land redistribution from this version free up space for nature restoration
7. Agriculture target: reduce nitrogen (N), phosphorus (P), and sediment pollution from agriculture into the water environment by at least 40% by 2038, compared to a 2018 baseline.	Reducing fertiliser use can support, but reliance on manure management presents a risk	Increased use of manure as fertiliser risks higher nutrient runoff.	Precision techniques can cut nutrient losses, but need for large reduction to do so.	Red line on synthetic fertiliser, pesticides and nutrient controls support reduced pollution.
10. Increase total tree and woodland cover from 14.5% of land area now to 16.5% by 2050	Unlikely to result in land use change which hinders available land for woodland	Limited habitat creation	Limited habitat creation	Land redistribution from this version free up space for nature restoration
11. Reduce residual waste	Food system largely unchanged	Potential positive impact from shorter supply chains	Using data to drive supply	Systemic changes reduce waste across

(excluding major mineral wastes) kg per capita by 50% by 2042 from 2019 levels.		with more localised systems but unclear	chain practices can reduce food waste	the supply chain

Appendix 2:
Alignment of the CBDP actions with the four versions of regenerative agriculture, including written explanations

Key: Green = supports goal; yellow = mixed impact/risks involved; red = hinders goal; =no impact.

Relevant CBDP targets grey	**Version 1: Farmer-led, incrementalist**	**Version 2: Mixed farming traditionalist**	**Version 3: Tech optimist**	**Version 4: Community led, transformational**
151: Use of conventional breeding practices (not genomics or gene editing) to breed cattle that have reduced emissions.	Potential to use conventional breeding practices, but no red lines on GE or GM varieties	While conventional breeding used, it is not done for reducing emissions but focussed on heritage breeds	Potential to use conventional breeding practices, but would also use of GM or GE	While conventional breeding used, not done for reducing emissions
154: Reducing emissions from cattle by improving animal health, delivered through tackling endemic disease.	Animal health not explicitly discussed in this version	High animal welfare is considered important in this version, however the version also suggests increase ruminant livestock on arable systems which, if resulting in more livestock, would increase emissions overall	High animal health standards for housed systems	High animal welfare is embraced
155: Reducing emissions from sheep by improving animal health, delivered through tackling endemic diseases.	Animal health is not explicitly discussed in this version	High animal welfare is considered important	High animal health standards for housed systems	High animal welfare is embraced

156: Using genetic testing (genomic tools) to develop improved livestock breeding goals and deliver permanent low emission traits.	GE/GM are not a red line for this version so could potentially be used	GE/GM not mentioned	Use of GE and GM for breeding could integrate this	GE/GM are red lines for this version
159: Analyse manure prior to application to match crop requirements.	Manure practices are not mentioned in this version	While animal manure used instead of artificial fertiliser, no mention of analysis prior to application	Technology and data monitoring is integrated into farming systems which allows for precision farming techniques	Manure practices are not mentioned in this version
160: Integrating grass/herbal leys in rotation in arable systems.	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture
161: Avoiding use of Nitrogen in excess through the development of an agronomist led nutrient management plan.	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture
162: Improved crop health through improved pest and disease control practices.	Not mentioned in this version which is similar to today	No use of artificial pesticides without alternative could impact crop health	Use of technology and data for farming could help reduce disease and pests	No use of artificial pesticides without alternative could impact crop health
164: Biological fixation of nitrogen on grassland using grass-legume mixtures.	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture
166: Use of plant biostimulants to promote growth and reduce emissions	Minimal use of artificial fertiliser means this is unlikely to be supported	Minimal use of artificial fertiliser means this is unlikely to be supported	Use of technology and embracing new innovation means this version likely to support this action	Red line on use of fertiliser means not possible to include biostimulants

167: Use of nitrification inhibitors (chemical additives to fertilisers) to reduce nitrous oxide emissions	Minimal use of artificial fertiliser means this is unlikely to be supported	Minimal use of artificial fertiliser means this is unlikely to be supported	Use of technology and embracing new innovation means this version likely to support this action	Red line on use of fertiliser means not possible to include chemical additives
168: Reversing, reducing and preventing surface and subsoil soil compaction.	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture
170: Precision Farming (arable/grassland) using machine guidance and other technologies to control and adjust fertiliser application.	Not included in the version	While animal manure used instead of artificial fertiliser, no mention of analysis prior to application	Technology and data monitoring is integrated into farming systems which allows for precision farming techniques	While animal manure used instead of artificial fertiliser, no mention of analysis prior to application
172: Cultivating common crop varieties that have better nutrient uptake.	Not included in the version	Traditional and heritage varieties are favoured but not clear if nutrient uptake is a consideration	Using GE and GM for breeding varieties is encouraged	Traditional and heritage varieties are favoured but not clear if nutrient uptake is a consideration
173: Growing cover crops with rotation to maintain soil cover during fallow periods	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture	Core to all versions as one of the main principles of regenerative agriculture
175: Agroforestry. A combination of levers aiming to increase silvo-arable agroforestry to 10% of all arable land by 2050.	Tree planting and agroforestry not explicitly included	Nature more included into agricultural systems, but unclear if this includes agroforestry	Tree planting and agroforestry not explicitly included	Large-scale and landscape level land use change
176: Increase tree canopy and woodland cover to 16.5% of total	Unlikely to result in land use change which hinders	Limited habitat creation outside of farmland	Limited habitat creation outside of farmland	Land redistribution from this version free up space for

land areas in England by 2050	available land for woodland			nature restoration
178: Peat Restoration (Blended Finance 2022-2050)	As land use follows similar patters as today, it is not clear that this version will include actions to restore peat	The higher cattle and sheep grazing could mean reducing grazing density to a point where you can get the peat in a good condition will be difficult	Currently unclear how the actions in this version could impact peat restoration	Land redistribution from this version free up space for nature restoration

Appendix 3: What policy already exists to support regenerative agriculture and where are the gaps?

Policy can broadly be split into two areas: those shaping actions on the farm, and those influencing the wider food system beyond the farm gate, including supply chain standards and retailer or processor requirements.

On farm policy

1. Environmental Land Management Schemes

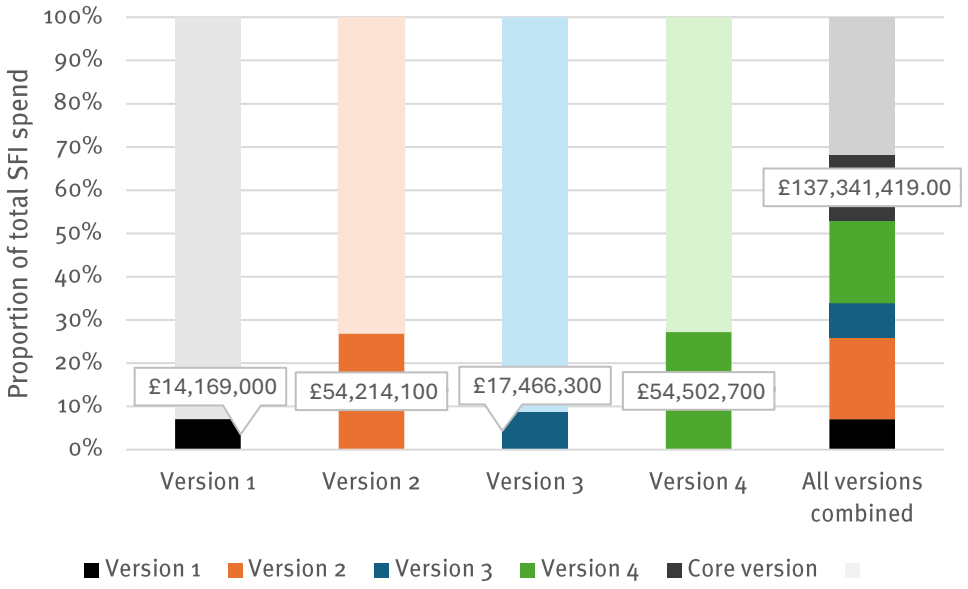
ELMS are England's farming programme to replace the EU's Common Agricultural Policy and Basic Payment Schemes, paying farmers to deliver public goods on their land.[1] The schemes cover three components: Sustainable Farming Incentives, Higher Tier and Landscape recovery.

a. Sustainable Farming Incentive (SFI)

SFI is designed for all types of farms, paying farmers for adopting individual environmentally sustainable practices that can be integrated into everyday farm management. Although SFI does not explicitly reference "regenerative agriculture", many of its funded actions reflect the core principles, such as soil health, effectively encouraging farmers to adopt regenerative practices. The actions under the last round of SFI payments (closed in June 2025 after becoming fully subscribed) for example, included herbal lays (CSAM3), managing grassland with low nutrient input (CLIG3).

We assessed how many of these SFI align with the core principles of regenerative agriculture and the different future versions. From this, we calculated how much money was spent on actions supporting the different versions of regenerative agriculture in the last round of SFI payments. [2] The chart below shows these as proportions of total SFI funding. Overall, nearly 70 per cent of current SFI spending supports actions consistent with regenerative agriculture, across its different interpretations.

The proportion of total SFI spend dedicated towards actions within each of the four versions of regenerative agriculture as well as the core principles



Across the versions, less SFI funding has gone toward actions associated with Version 1 (gradual, farmer led), although this version still demonstrates alignment with SFI's flexible approach by allowing farmers to choose the practices that best suit their context. There is also less funding towards Version 3 (tech-led, AI optimistic) as tech innovation is not well supported under current SFI actions. We found Version 2 (traditional, mixed farming) and Version 4 (systemic, community-led) to have the most SFI funding towards the associated actions, particularly evident in relation to grazing on moorland which had a high uptake in the last round of SFI payments but also related to the landscape-level shifts and promotion of livestock grazing across these two versions. However, while this was not something specifically mentioned in Version 3 (tech-led, AI optimistic), within this version, it could still be undertaken if data showed it to be optimal.

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SFI can support core regenerative principles in agriculture like low input farming or improving soil health. It can also encourage flexibility and farmer-led action through its non-descriptive design. It provides broad access for all farm types, making entry achievable.	SFI is not as useful in supporting tech driven innovation for farming practices or driving transformations in land use change. It doesn't explicitly recognise a regenerative agriculture agenda. Short term payments might create uncertainty for farmers taking long term changes in their practices.

b. Higher tier and Landscape Recovery

Two key components of ELMS, Higher Tier Countryside Stewardship and Landscape Recovery, offer more ambitious support for farmers and land managers delivering long-term and larger scale environmental outcomes. Higher Tier Countryside Stewardship provides funding for more complex or high-value environmental actions on sensitive or designated land. This includes bespoke agreements for habitat restoration, peatland recovery, and species protection, often requiring expert advice and planning.

Landscape Recovery is aimed at large-scale, long-term environmental projects. It supports groups of farmers and landowners working together across landscapes to deliver transformational outcomes such as woodland creation, river restoration, and large-scale habitat recovery. Unlike other parts of ELMS, this scheme blends public funding with private investment. One example, the Evenlode Landscape Recovery Project[3], will restore rivers and streams while maintaining food production and unlocking new revenue opportunities, highlighting the blend of habitat restoration and farming activities promoted within this scheme.

Landscape Recovery can therefore support long-term, collaborative investment in regenerative agriculture, particularly where landscape-scale change is needed. Their bespoke, farmer-led approach aligns with multiple versions of regenerative agriculture. For Version 1 (gradual, farmer led), Landscape Recovery can support farmer autonomy through flexible, tailored agreements. For Version 2 (traditional, mixed farming), Landscape Recovery encourages collaborative action which align with this versions' focus on peer-to-peer learning leading on-farm actions. Version 4 (systematic changes, community led) aligns most strongly with Landscape Recovery due to its focus on large-scale land use change, long-term transformation, and shared decision-making across different actor groups. However, the tech focussed approach in Version 3 (tech-led, AI optimistic) shows limited alignment with current policies, as its emphasis on data-driven decision making is not explicitly part of Landscape Recovery, but it is not incompatible. However, there is potential for technological innovations to be integrated into future projects, particularly as private finance providers are likely to demand robust data to demonstrate benefits that justify their investment.

Overall, by combining long-term funding with local leadership, both Higher Tier and Landscape Recovery schemes offer a powerful platform for scaling regenerative practices across the farmed landscape.

A note on private finance

There is currently a gap between the funding allocated in the government's Spending Review and the level of investment needed to meet the UK's environmental targets under the Environment Act and its net zero commitments.[4] Private finance is widely seen as a crucial part of closing this gap. While the government has issued a call for evidence on how to unlock more private investment in nature and farming, beyond its employment in the LR schemes, its future approach remains uncertain. Of the four versions of regenerative agriculture explored in this briefing, Version 3 (tech-led, AI optimistic) appears best positioned to attract private finance, as it emphasises the use of data and monitoring to guide decision-making. This data-driven approach can help reduce risk and increase confidence for investors, making it a more investable model for scaling regenerative practices. However, data ownership is a key concern, many farmers distrust large corporations and worry that sharing data could shift decision-making power away from them. There's also fear it could be used to unfairly penalise farmers or undermine their autonomy.

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Supports large scale, long term land use change aligned with transformational approaches in the regenerative agriculture movement. Encourages the peer to peer learning which is essential to knowledge building. Supports flexibility with bespoke agreements aligning with regenerative agricultures' context specific principles. Reduces risks to farmers changing their practices through encouraging blended finance models.	Lack of clarity on how food production and innovation are integrated long term into restored landscapes. As of yet, it is not clear how digital coordination or innovation, such as data-led decision-making, can be utilised in these schemes.

2. The Land Use Framework

The government's upcoming Land Use Framework is expected to play a key role in balancing competing demands for land, such as food production, climate action, and nature restoration. While its implementation is still unclear, it is likely to serve as a guide to where government incentives support land use change.

Our analysis of the regenerative agriculture versions found that Version 4 (systematic changes, community led) is likely to align most closely with the Land Use Framework. It calls for transformational, system wide land use change, including redistribution of land and increased community ownership. The strategic, landscape scale planning envisioned in the Land Use Framework could therefore support this version. Version 3 (tech-led, AI optimistic) could also be well supported by the Land Use Framework, given its emphasis on context-specific land management and data-driven decision-making. The Land Use Framework's focus on using evidence to place the "right land uses in the right places" directly reflects the principles of this version. By contrast, Versions 1 (gradual, farmer-led) and 2 (traditional, mixed farming), which focus more on incremental changes at the farm level and integrating nature into existing systems, may be less directly supported by the LUF, as they involve fewer shifts in broader land use patterns.

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Supports land redistribution. Aligns with taking a strategic approach to balancing food production with climate and nature uses for land and context specific.	Not known how it will support locally led approaches and doesn't explicitly prioritise regenerative agriculture. Cannot guarantee support for peer-to-peer learning.

Reinforces the use of data and evidence-based decision making to guide where and how land is use.	

3. Farming Innovation Programme

The Farming Innovation Programme (FIP), led by Defra in partnership with UK Research and Innovation (UKRI), funds research and development projects aimed at improving the sustainability, productivity, and resilience of English farming. By supporting science-based solutions to agricultural challenges, FIP plays a key role in advancing innovation across the sector.

FIP aligns most strongly with Version 3 (tech-led, AI optimistic) of the regenerative agriculture versions, which focuses on using technology, data, and innovation to drive more sustainable land management. It could therefore be a key component in helping to scale regenerative tech and supports farms looking to adopt cutting-edge tools and practices.

However, the programme places less emphasis on traditional knowledge and farmer-to-farmer learning, which are central to Versions 1 (gradual, farmer-led) and 2 (traditional, mixed-farming). These versions prioritise local experience, autonomy, and peer-led innovation, which are not currently a core focus of FIP. As such, while FIP is a valuable driver of technological progress, broader support would be needed to ensure regenerative agriculture in all its forms is recognised and enabled.

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Supports technological innovations for monitoring and decision making on farms to scale regenerative practices.	Strongly aligned with tech-driven models, but not with more traditional regenerative approaches. Risks sidelining farmer autonomy and grassroots practices.

4. Farming rules for water

The Farming Rules for Water are a set of baseline regulations introduced in 2018 to reduce agricultural pollution and protect water quality.[5] They require farmers to manage nutrients, prevent runoff, and maintain soil cover to reduce the risk of diffuse pollution entering rivers and streams. The regulation seeks to embed minimum environmental standards across English agriculture.

Farming Rules for Water align with regenerative agriculture through their focus on input reduction and improved soil management, which cuts across all versions as are core principles. However, enforcement of this regulation has historically been weak, and where tightened, the regulation can raise questions about whether this fits with the grass-roots movement ethos of regenerative farming. Version 3 (tech-led, AI optimistic), which emphasises measurable outcomes could generally be more receptive to regulation and monitoring. By contrast, Versions 1 (gradual, farmer-led), 2 (traditional, mixed-farming) and 4 (systemic, community-led) which prioritise autonomy, peer-to-

peer learning, and community engagement, may perceive rigid enforcement as contrary to the spirit of regenerative agriculture.

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Promotes input reduction and better soil management in line with the core principles of regenerative agriculture.	Risks undermining farmer autonomy through enforcement.

Beyond farm gate policy

5. Grocery Code Adjudicator (GCA) and Defra's Fair Dealings Obligation for Milk:

The Grocery Code Adjudicator (GCA) regulates relationships between supermarkets and their suppliers, ensuring that retailers treat suppliers fairly and comply with the Groceries Supply Code of Practice.[6] Similarly, Defra's Fair Dealings Obligation for Milk is designed to create greater transparency and fairness in milk supply contracts, giving farmers more predictable terms and a stronger voice in negotiations with processors and buyers.[7] Together, these measures address imbalances of power in the supply chain and seek to improve farmers' economic resilience.

Both policies align with regenerative agriculture's emphasis on fair farmer livelihoods. For Version 1 (gradual, farmer led) they support farmer autonomy by reducing exploitative pressures from powerful buyers. Version 2 (traditional, mixed farming) also benefits, as better terms can strengthen farmer-led choices to diversify production without being forced into unsustainable models. Versions 3 and 4 also gain from greater contractual stability, which reduces risks when adopting new technologies (V3) or transitioning to systemic change (V4). However, these policies stop short of reshaping food system incentives or challenging demand for products that drive unsustainable practices. Their focus remains on fairness in transactions, not on driving more transformative environmental outcomes.

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Improves fairness and transparency in supply chains. Strengthens farmers' bargaining power and economic resilience. Supports stability needed for long-term regenerative investments.	Focused narrowly on contracts and fairness, not wider sustainability outcomes. Does not incentivise changes in what products are produced or consumed.

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Endnotes

[1] Department for Environment, Food & Rural Affairs (Defra), 26 January 2023, *Environmental Land Management update: how government will pay for land-based environment and climate goods and services*
[2] Defra, 'Sustainable Farming Incentive action uptake data July 2024', www.gov.uk/government/statistics/sustainable-farming-incentive-action-uptake-data-july-2024, (last accessed 10 November 2025)
[3] Defra, 13 November 2023, 'Landscape Recovery: We want to prove that this works and can work across the country'
[4] The finance gap is the difference between required spending and committed/planned spending associated with the delivery of a set of nature-related outcomes. Estimated between £44 billion and £97 billion over the next ten years according to: Green Finance Institute, 2021, *The finance gap for UK nature*
[5] Defra, 2025, 'Enforcing the farming rules for water'
[6] Grocery Code Adjudicator, 2025, *Annual report and accounts: improving fairness for suppliers*
[7] Defra, 2024, *Additional guidance for: The Fair Dealing Obligations (Milk) Regulations 2024*