Environmental Land Management White Paper:

OUR VISION FOR A SUSTAINABLE FOOD AND FARMING SCHEME (SFFS)

Supporting Organisations:

Tenant Farmers Association

RABDF
Working for British Dairy Farmers

COMMERCIALFARMERSGROUP

Sustainable Food Trust
A global voice for sustainable food and health

National Sheep Association

CLA

Game & Wildlife CONSERVATION TRUST

NFU

LEAF
LINKING ENVIRONMENT AND FARMING

1) Foreword

Our joint initiative in developing a Sustainable Food and Farming Scheme (SFFS) focuses on creating a solid foundation for those managing the farmed environment - farmers, growers and land managers - to deliver the government's vision for environmental land management. As the government regains control of agri-environment policy, previously only available through the European Union (EU) Common Agricultural Policy (CAP), we now have the chance to create a holistic scheme to drive sustainable farming.

We are conscious that to date the operation of schemes under the CAP often created an either/or situation for farmers, growers and policy makers with BPS and agri-environment schemes often seen to be competing for funding. Frequently, this led to sub-optimal decision making at both policy and farm levels. This paper aims to radically address these shortcomings by taking an integrated approach that will see farming bring benefits across government's agenda including Defra, the Department of Health, Department for Education, Department for Business, Energy and Industrial Strategy and the Treasury, making the case for necessary continued public investment. We cannot look at the natural environment in isolation from productivity, trade, supply chains, food security, rural economy and community or health and nutrition. All these things need to be brought together systematically, and through our SFFS proposal we have the delivery platform and the determination to achieve this.

We share an ambition for the UK farm sector to be the global leader in climate friendly farming and in delivering a broad range of public benefits including landscape, biodiversity, access and animal welfare. UK farming manages over 70% of our iconic countryside and already takes seriously its responsibility to protect, maintain and enhance society's landscapes, encourage wildlife, benefit soil and water, and reduce impact on the climate alongside providing high quality food for the nation and global consumers. This was proven in participation in agri-environment schemes since the mid-1980s, which reached a peak of 70% of farming businesses. But the situation is very different now, with many managing our land confused, unable or unwilling to participate in the government's schemes. This must change. Our SFFS proposal describes an approach that is engaging at scale and broadly based in intention.

As home to 70 million people, the UK is one of the most prized food markets in the world. By its very nature Brexit will open up UK agriculture and horticulture to much greater competition. This is why the SFFS focus must ensure that those managing the farm environment, whether in upland or lowland, can deliver more for nature and the environment, while remaining the competitive supplier of choice to British consumers across food retail outlets, and becoming the supplier of choice for out-of-home eating and public procurement. Those farming our land are uniquely positioned to produce food with a low carbon footprint alongside innovative products for packaging, energy, and insulation and opening new markets for the environment, water and natural fibres such as wool.

Achieving net zero in agriculture and horticulture will make more space for nature by making in-field production more resourceful with less impact, creating a truly symbiotic relationship between sustainable food production, nature friendly farming, trees, soil health, biodiversity and environmental delivery. Our SFFS proposal prompts review of the impact of the whole farm in its entirety. With the UK hosting next year's United Nations Climate Change Conference (COP 26), SFFS will provide the basis for a global blueprint for sustainable food production, and one that will have resonance with organisations like the World Farmers Organisation.

Our SFFS proposal considers people too, both those that manage land and those that use that land. One of the Covid-19 legacies will be harnessing the benefits to mental health and wellbeing of exercise in the countryside, not just valuing farmland for the view but re-connecting the nation with the natural world that surrounds us. The SFFS can also revolutionise the approach to accessing jobs in food and farming - from seasonal workers and building on the success of Pick for Britain, to creating opportunities for students and others looking for work – by helping to attract a diverse range of people to be the sustainable farmers, growers and managers of the future, with the right skills and attitudes to business as well as the environment, health and safety, and animal welfare.

UK agriculture already operates to some of the highest standards of animal health and welfare and our ambition should be to see this continue to improve. We have made great strides in areas like antimicrobial resistance (AMR). The SFFS should enable the UK government to be a unique influencer at the World Trade Organisation (WTO), showing the intrinsic link between animal health and welfare, human health, food production and how we trade.

The SFFS is grounded in applicants having great business control with ambition to farm smarter, using innovation, research and development, data sharing and new technologies to incentivise lower impact farming, for example in the use of agrochemicals. The goal is to achieve healthy plants, healthy people and a healthy planet as we further our potential to raise our productivity but reduce our impact.

We also need to restructure the narrative on health and nutrition. The Government's obesity strategy, and the work of Henry Dimbleby in thinking about a new National Food Strategy, are important foundations upon which SFFS could build to engage the nation on issues such as seasonality, nutrition, nutritional density and the overall health benefits of less but better processed foods, as well as relearning how to cook meals from scratch. We should be producing more to fulfil domestic demand for fruit and vegetables. As we build "brand Britain" for our food at home and abroad the SFFS should be our unique selling point.

Much of the success of SFFS will be ensuring that the farming community is able to respond to current market demands and work in greater collaboration within supply chains - buying and selling together. Just as successful collaboration characterises GWCT Farm Cluster groups, so too should the markets be fairer places for farming. We believe that access to robust market data, fair purchase contracts and building on the existing Producer Organisation provisions will help strengthen the position of farmers and growers in the supply chain. Only profitable thriving farming businesses can achieve true and meaningful environmental gains.

In summary, this paper argues for a systems approach to be taken. It is not enough simply to introduce another agri-environment scheme within a self-contained silo without consideration of productivity, profitability, resilience, volatility, supply chain fairness, food security and international trade - all things highlighted within the government's previous "Health and Harmony" consultation. British farmers and growers will compete in a global marketplace in the face of supply chains that often fail to deliver fair returns to the primary producer. The Groceries Code Adjudicator (GCA) has made significant progress since its introduction in 2013, but there is more to do to tackle unfairness within the UK food supply chain. Good environmental outcomes rely on UK agriculture being profitable and resilient. Policy must respond to these wider challenges as well as ensuring that farmers are rewarded fairly for producing valuable public goods.

Finally, the new agricultural policy must work for all farm businesses in England, embracing their rich diversity, respecting and understanding the vast array of land occupation agreements, and inspiring and enabling our farming and growing community to engage with the scheme at scale.

2) Overarching Design of the Sustainable Food & Farming Scheme

The SFFS must be broadly based, with engaging and accessible options for farmers, growers and land managers to achieve multiple environmental and public good outcomes. The expectation is that SFFS will provide the basis for farming to deliver across a wide range of areas, including: maintaining and restoring soil, water and air quality; reinforcing a sense of place and landscape character; unlocking farming's ambition to be net zero by 2040; enabling those managing our land to mitigate flood impacts and make best use of water; applying the Lawton principals for more, better managed and better connected habitat, helping meet the ambition for thriving plants and wildlife in the 25 Year Environment Plan; protecting animal health and delivering continuous improvements in the welfare of our farmed animals; and, improving public access to, and public understanding of, the countryside. To enable this, **we propose a 'ladder' approach to environmental sustainability**, while retaining sufficient flexibility

for the majority to participate according to the applicant's skills, environmental setting and ambition, and environmental features present.

This 'White Paper' sets out our proposals for an ambitious **'Sustainable Food & Farming Scheme' (SFFS) that enables the delivery of public goods in the frame of sustainable and productive farm businesses.** We believe that the SFFS must provide the **foundation** on which to build business resilience grounded in sustainable practices, and that this foundation should enable agreement holders to **progress through the tiers**, and to collaborate beyond their own holdings in local and regional partnerships that deliver change greater than the sum of the parts. The Animal Health and Welfare Pathway (AHW Pathway), which was introduced as a concept in the Health & Harmony Consultation 2018 and is now being worked on in partnership with Government and industry, fits with the ambitions of the SFFS. Therefore, we believe that the AHW Pathway should be delivered as an important component of the SFFS. In summary, the elements of our SFFS framework are:

- **Farm Tier** – **building a foundation for environmental and business resilience**. This is the core tier that will build business and environmental resilience grounded in sustainable practices. The measures in this core tier should be accessible to all businesses, delivering gains for the environment and productivity while also building farm business capability. Crucially, it would be available across the country and to all farm types, tenures and sizes. The Farm Tier would also incorporate the opportunity for earned recognition for those participating in assurance schemes, like Red Tractor, or those adopting a system approach, such as LEAF Marque or organic.

- **Collaborative Tier – maintaining, enhancing and working together** - this competitive tier would build on the SFFS themes to focus on more complex measures with greater public benefits. Both individual business or facilitated multi-farm agreements would be the available. The tier will aid farmers, growers and land managers in delivering more complex and challenging land management and land use options such as new habitat, changes in farming systems and farm woodland. The tier would feature opportunities for facilitating and rewarding delivery via collective effort (e.g. Producer Organisations, "Farm Clusters" or on common grazing) where opportunities for larger landscape scale delivery or productivity ambitions can be achieved by farmers working together. It can also be tailored to local needs e.g. specific requirements for Nature Recovery Networks, SSSIs or priority species.

- **"Tier 3" – more complex changes to land use or management**. This tier would support farmers, growers and land managers in farmed environments to deliver the most ambitious or complex environmental management, and restoration, to support the wider landscape, through large areas of habitat or forest creation, restoration of priority habitats and substantial or challenging habitat creation to achieve broader outcomes such as addressing climate change or flood mitigation. It can be tailored to local needs.

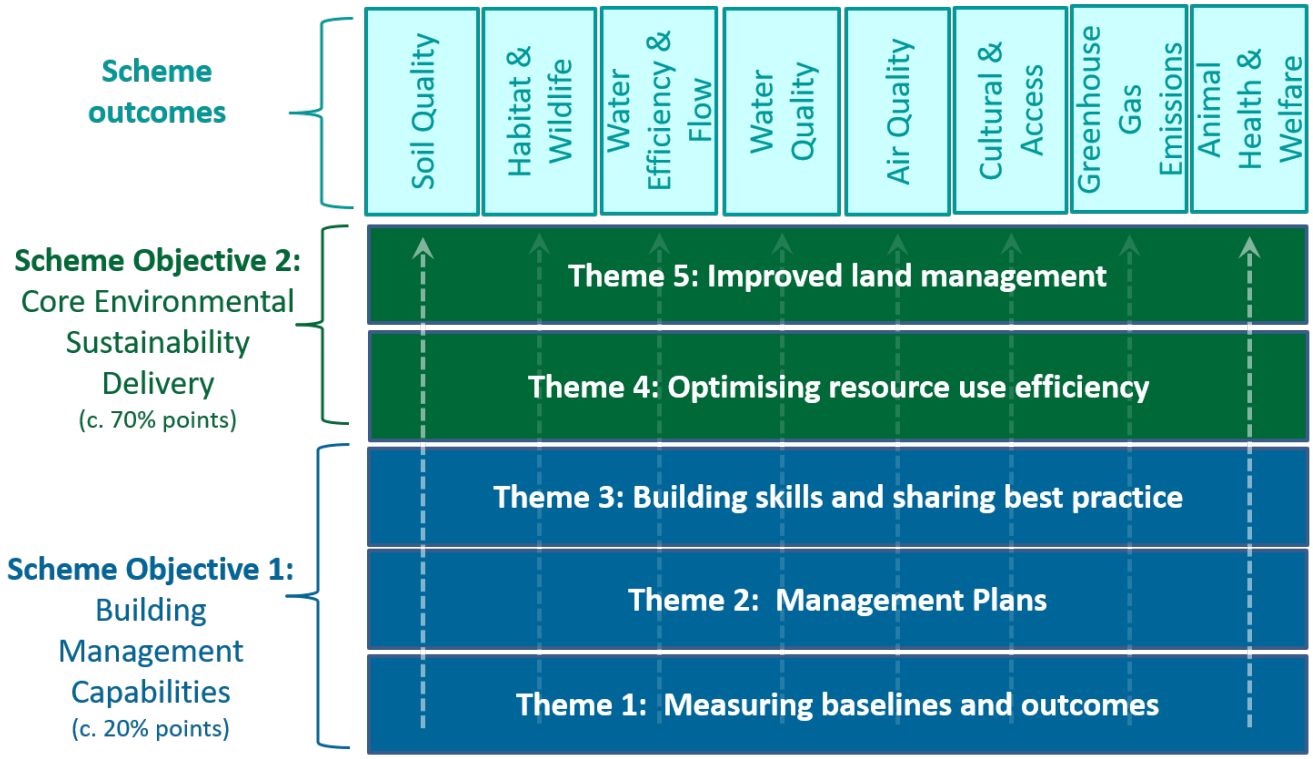
In all tiers, it is important for the applicant to have the freedom to choose activities to include in their agreement. The applicant should be able to choose the appropriate actions from any of the tiers within SFFS, including being able to apply for entry to the higher tiers. This would provide flexibility to choose the best land management and capital options for their land and farming systems.

3) What are the key objectives and architecture for the SFFS?

The SFFS will seek to identify, support, promote and enhance good farming and environmental practices that go hand in hand with profitable farm businesses (ref: Figure 1). Bringing together the elements to support both productivity and environmental management will enhance the long-term viability of scheme delivery and encourage incremental improvements over time as best practice develops. Flexibility in multi-year agreements would enable agreement holders to incrementally tailor the plan in line with their evolving business priorities.

Figure 1 Sustainable Food and Farming Scheme Outline

showing scheme objectives, key themes, schemes outcomes and indicative points allocation. (excludes 10% allocation for "synergy multiplier" points).



Fundamental to our vision for the SFFS is that it delivers **two complementary objectives - building management capabilities and core environmental sustainability** - with the result that farming delivers more with less input and less impact**.** This will enable farm businesses to have a solid platform which provides them with the greatest opportunity to deliver for the environment and become more resilient, sustainable, and productive. Many of these actions could have a capital element and so may require access to capital grants, whether to accelerate and increase scale of environmental gain or boost the environmental benefits of productivity actions. Alongside this there is also need for other business supports - some transitional, some longer term - that could assist with:

- whole farm planning advice e.g. resilience programme and advice vouchers;
- productivity grants, which will have to demonstrate environmental benefits;
- training and skills development.

Defra's plans to launch elements of ELMS early within a Sustainable Farming Incentive could match well our SFFS proposal as both envisage core measures that ought to underpin resilient sustainable farm businesses.

4) SFFS: Key Themes and features

The SFFS's five main themes are grouped to deliver **two primary objectives** of progressively building management capabilities and environmental sustainability delivery, as set out below.

SFFS Objective 1: Build Management Capabilities

The long-term ambition of the SFFS is to **build the capabilities of agreement holders, government and supporting industries** to deliver world leading sustainably produced food. This will require investment in knowledge capital to promote the creation and dissemination of best practice and develop a culture of continuous improvement in line with emerging evidence. Best practice in this regard refers to improving the ability to fairly reward agreement holders for environmental sustainability delivery, enhancing animal health and welfare outcomes, and demonstrating environmental improvements. This should incorporate the development of peer to peer knowledge exchange through existing Demonstration Farm networks such as LEAF, AHDB, GWCT etc.

The three themes - **management plans, measuring baselines and outcomes** and **building skills and sharing best practice** - are all designed to serve this objective. The SFFS would incentivise the use of farm planning platforms (where fit for purpose), or devise plans and set targets, collect data to measure performance against plans, as well as improve understanding of land use and share insights with others on best practice. It would also acknowledge and promote the development of skills and training. Together, measures within these themes would help develop institutional capabilities to deliver fairer rewards for the environmental outcomes. If we wish to work towards developing a truly equitable ELMS, those managing the farmed environment must be empowered to become more active partners and participants in the wider scheme design as it evolves over time.

SFFS Objective 2: Core Environmental Sustainability Delivery

The themes of **improved land management** and **optimising resource use efficiency** are core objectives of the SFFS. As such, a **significant proportion of the points awarded would be for the adoption of measures within these two themes as these directly deliver the environmental benefits**. The combination of capital investments in areas such as water infrastructure and precision application technology, alongside land management measures, such as cover crops and buffer strips, habitat creation and restoration, will deliver a more robust and sustainable approach to environmental outcomes, including improved water quality and soil health and the recovery of declining and red-listed species. Careful dovetailing of SFFS entry level requirement with a regulatory baseline that is reasonable, credible, transparent and consistent will be required here to ensure farmers are supported to undertake actions which have net operational costs and adopt practices which have long term operational gains (as in resource use efficiency savings).

Five main themes would structure the SFFS under which the menu of measures would deliver against the broad objectives of outcomes, such as the 25 Year Environment Plan and Animal Health Pathway. Between these themes there would be **complementary pathways of measures which would support the development of a coherent SFFS strategy**. The five themes are explored in more detail in the following sections with measures being grouped under sub-themes[1].

[1] *Further details of examples of the types of measures that could be included under these themes and examples of measures relevant to different sectors are provided in Annex 1.*

Theme 1: Measuring Baselines & Outcomes

To build towards more innovative payment methodologies, such as results-based schemes, **investment in data collection and sharing is essential now to be able to establish reliable farm level baselines and demonstrate additional outcomes**. Hence, innovative farms should be recognised for existing actions to monitor and measure performance, while others could be prompted to follow a similar path with grants to purchase remote sensing, mapping equipment, monitoring software and appropriate IT infrastructure. Applicants could also be rewarded for conducting physical sampling and recording of farmland features, whether that be visual soil assessments, nutrient mapping, biodiversity assessments, carbon/GHG audits or measurements of water quality and flow to develop an environmental asset register to provide a baseline for scheme evaluation. This would also include rewarding livestock monitoring and herd management practices to reward the associated animal welfare and environmental benefits of better managing livestock movements on farm.

There is significant potential to aggregate farm level data to gain valuable insights into the macro-trends in land management, the changing status of natural capital and the emergence of pests and disease. Such aggregated data has the potential to inform future scheme design with improved reward mechanisms for environmental delivery, develop better targeted advice, inform research and development initiatives, and drive evidence-based best practice on farm. The potential of using such aggregated data will only be realised if SFFS participants are provided with appropriate ownership and control over what data is shared and how their data is utilised. This includes providing appropriate protections for the use of data, restricting its use to anonymised macro level analysis and protecting sensitive personal and commercial information. If sufficient confidence is achieved that appropriate safeguards on data sharing and use are in place, a farmer-led approach to data collection and sharing could yield significant benefits in developing the management capabilities and understanding of farmers, government, and supporting industries.

Theme 2: Management Plans

The scheme should **reward the development of a management plan** where it forms the basis for the farm business to deliver better environmental (or public benefit) outcomes, such as consideration for on-farm as well as local environmental, economic and social conditions. These sub-themes could include, for example, carbon or GHG management plans, a manure management plan, a soil management plan or an IPM plan. This will help the farmer/grower to articulate a clear plan of action which aligns the delivery of environmental outcomes with the farm's economic outputs, thereby underpinning a more sustainable farming approach. **Additional recognition should be provided for farms that voluntarily choose to produce multiple plans, which may be combined to produce a whole farm plan.** These plans would outline the management strategy, objectives, resources to be utilised, timelines, economic considerations, social considerations and means for measurement and evaluation against objectives. The actions within the plans would be based on the menu of measures available under the remaining SFFS themes. This theme also provides the opportunity for some earned recognition through participation in, for example, Red Tractor, the AHW Pathway, LEAF Marque, or for systems-based approaches such as being Certified Organic etc.

Theme 3: Building Skills and Sharing Best Practice

Sharing data, for example from completing an annual sustainability assessment or by participating in the Livestock Information Service, is a key aspect of the SFFS proposal. Alternative paths may be collaborative agreements (such as common land agreements or Farm Clusters) to make more efficient use of co-products, as well as engagement in peer to peer learning such as through Demonstration and Monitor Farms. For livestock farmers this may come through membership of

the AHW Pathway, for example, or demonstration of active engagement in these initiatives through development of a Continuous Professional Development (CPD) register. Building on existing schemes (such as BASIS, NRoSO, DairyPro etc.) would also have potential to weight SFFS points that the farmer/grower collects, in turn increasing payment rates. Measures within this theme will play a key role in increasing capabilities across farms and in increasing environmental outcomes. It will also help promote the skills and understanding required to increase engagement in more sophisticated results-based schemes that may be developed over time, therefore driving greater innovation towards payments for ecosystem services. This theme complements the proposed establishment by industry partners of a new independent professional body for skills and training under the Agricultural Productivity Task Force. This body aims to produce a 'professional framework' to bring together the currently fragmented landscape of both specific formal and informal training options available for those working in agriculture and horticulture. The framework will help signpost and promote relevant existing skills and training, but also help identify gaps in provision where new and enhanced skills training will be required in the future, such as skills in optimising environmental management.

Theme 4: Optimising Resource Use Efficiency

Another core environmental sustainability delivery theme of the SFFS would be optimising resource use efficiency to minimise environmental pressure while simultaneously promoting the economic resilience of the farm business through grounding its performance in sustainable farming practices. This would include grants to promote the uptake of precision farming equipment, and investment in renewable energy and water management infrastructure. Alongside this, use of nature-based solutions to boost productivity while simultaneously enhancing environmental outcomes would be rewarded through capital payments that promote use of biobeds or biofilters as part of an IPM programme. Similarly, regenerative soil management that improves soil structure, improves infiltration, and increases organic content with measures like direct drilling, retaining crop residues, organic matter additions, cover crops, and longer and more diverse crop rotations, would be encouraged.

Theme 5: Improved Land Management

All our organisations have contributed to Defra's ELMS programme: measures within this theme will deliver aspirations for ELMS within a coherent sustainable farm development plan. As illustrated in the Annex, measures would fall under nine sub-themes (including, for example, habitat restoration and creation, recovery of declining or red-listed species, grassland management, promoting access, boundary maintenance and enhancement). Agreement holders should have the freedom to select from menus across the SFFS structure to reflect the opportunities and needs of their land, and their ambitions and interests to restore wildlife-rich habitats in- or outside protected areas. It will be important to include a wide range of measures which may be delivered in different landscapes (e.g. uplands), implemented by different farm types and with varying agreement lengths to suit the diversity of farming systems the scheme is targeted at. To encourage uptake, the range of measures must also factor in spatial considerations, supporting multi-scale delivery from smaller scale interventions which complement horticulture/poultry production systems (e.g. habitat/flower mix creation within orchards or between polytunnels) to relatively larger scale interventions (e.g. upland grassland management) which suit spatially distinct farming systems. There should also be scope within the SFFS under this theme to reward the management of existing farm woodlands or shelterbelts and coppice planting.

a) Uptake of the Sustainable Food and Farming Scheme

Given the scheme's broad intent, eligibility for the SFFS should be wide. Our ambition is that the vast majority of farmers, growers and land managers of the farmed environment will participate, delivering a range of public goods across England.

b) Promoting complementary measures and progression

A central design feature of the SFFS would be a **synergy multiplier.** This would incentivise a holistic approach to delivering environmental outcomes embedded within sustainable farming practices. The uptake of specific capital grants for investments which complement land management practices will allow applicants to earn points towards the synergy multiplier, thereby increasing the total number of SFFS points earned. An example could be where a farmer/grower develops a soil management plan and adopts soil testing, appropriate crop rotation practices, measures to avoid soil compaction, and engages in peer-to-peer learning on soil management. They would gain a "synergy multiplier" that recognises the cumulative value of complementary measures across the five themes which will boost outcomes for that farmer/grower and others in their network. Similar synergies may be delivered through Integrated Pest Management (IPM) or animal health improvement plans.

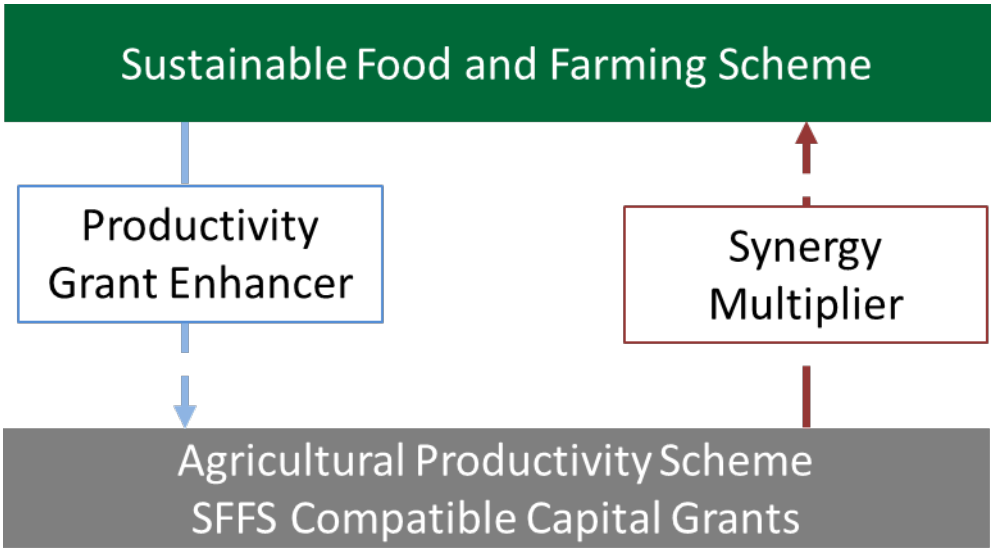


Figure 2 Productivity Grant Enhancer

A **productivity grant enhancer** could also recognise the synergistic benefits of combining complementary measures across the themes. Thus, SFFS design would promote uptake of specific measures where they deliver greater environmental benefits (*see Capital Payments section below*). This enhanced access could take the form of a grant covering a higher proportion of the capital cost. This would either involve setting the initial grant offering at a low level and then providing a significant uplift for those adopting complementary measures, or for the initial grant to be offered at an attractive level (say 40% of costs) with an additional uplift for those adopting complementary measures. The balance between the initial funding rate set and the level of uplift will provide an effective incentive to embed productivity investment within a broader strategy for delivering environmental outcomes. An example would be where a farmer or grower develops a water or soil management plan, invests in smart drainage, ditch management and water harvesting, adopts soil quality improving land management measures and engages with knowledge exchange initiatives. They would be offered enhanced grant funding for the construction of a water reservoir. In this example, the adoption of measures from across the five themes would deliver a more balanced and resilient approach to water resource management.

c) Agreement flexibility

There would be sufficient flexibility to enable SFFS agreement holders to incrementally tailor the plan, year on year, in line with their evolving business priorities. As such, the combination of measures across the five SFFS themes would deliver different payments rates depending on measures chosen. It would be for individual applicants to select packages of measures best suited to their business and environment,

rather than follow a prescriptive pathway. Where multi-annual options are entered into there should be scheme flexibility to allow for changes to land tenure alongside on-going delivery of SFFS.

d) Agreement length

Land management options should vary in length. They could be one, five, ten or 20 years in length, with the management agreement offering break clauses to recognise significant changes in business context. Our vision is that for the majority of SFFS agreements there would be an annual offer, with a presumption of successive agreements offering increasing public value over longer periods as agreement holders become involved in higher tiers to the scheme.

e) Capital grants

There should be a dedicated agricultural productivity scheme outside of the SFFS. However, access to capital grants within SFFS will also be an important shaper and enabler of actions. Our proposal for a SFFS productivity grant enhancer and synergy multiplier would play an important role in ensuring both schemes drive complementary outcomes. However, we envisage that most SFFS capital payments would be offered in the context of multi-annual agreements within an agreed programme of investment that can deliver environmental, welfare and productivity gains. To ensure infrastructure improvements deliver maximum public and environmental benefit and address wider market failures, capital grant applications should be linked to the outcomes farmers/land managers agree to deliver as part of their Management Plans, thus providing evidence that any funded improvements will contribute towards wider ambitions such as improved air quality.

Eligibility for capital grants, including those which additionally help achieve productivity improvements, would be aligned with the ambition and theme of action agreements. Commitment to maintaining associated practices over multiple agreements would optimise this investment.

f) Eligibility

The ambition is for all farmers, growers and land managers of the farmed environment to be able to access the SFFS – all those who have the ability to actively deliver the scheme measures and are willing to take the risk to do so either individually or collectively.

g) Wider Defra Future Farming Programme

Beyond SFFS, within Defra's Future Farming programme there will be a wider offer of support to the land-based sector. Capital payments would also be available to accelerate and shape productivity efficiencies. Some of these may link to the SFFS offer. The boundaries of both offers should be clear and leave no room for action with a public benefit to go unassisted. For example, we anticipate that commercial forestry and large woodlands would benefit from a separate scheme to SFFS, which would focus on the farmed environment of lone trees, hedges, and farm woodlands.

5) Key Design Principles and Outcomes of the Sustainable Food and Farming Scheme

In creating the SFFS, we believe the following **overarching principles** should be central:

1. **Sustainable production and environmental delivery are symbiotic.** Securing the economic viability of farm businesses will enable those businesses to deliver public goods more cost-effectively. Optimal environmental outcomes are needed in a productive landscape, but profitable farm businesses are also required to successfully deliver and sustain these environmental benefits.
2. **Environmental measures should seek to deliver outcomes with both productivity and environmental gains.** For example, investments, training, advice and knowledge exchange that make more efficient use of inputs while also reducing pressure on natural resources, alongside

creating or restoring wildlife-rich habitat on farmland and helping the recovery of declining or red-listed species.

3. **All farmers, growers and land managers of the farmed environment, whether their land is rented or owner occupied, livestock or arable, organic or conventional, should have voluntary options of entry.** The principal target for the SFFS should be those willing and able to deliver the scheme's measures and taking management risk.
4. **The SFFS must recognise the value of existing good practice that delivers public benefit, while also encouraging the wider adoption of best practices[2].** Hedges, trees, and field boundaries support an immense array of biodiversity as well as delivering other environmental outcomes. Measures that promote best in-field grazing and cropping practice can deliver very significant outcomes because of the scale of potential uptake.
5. **The scheme must be simple, transparent and cost-effective to administer.** The aim should be that the SFFS is open to all and secure a very high uptake across landscapes and businesses. SFFS will require an innovative delivery platform that learns from the e-retail and e-mobile communications to support both the applicant in choosing the most appropriate option paths and regulators to control the scheme at low cost. SFFS must reward the maintenance of existing features and practices that currently deliver public goods.

These design principles would lead to multiple **positive outcomes including**:

- The **SFFS will contribute actively to achieve the goals within the 25 Year Environment Plan.** Specifically the SFFS would support priorities for farming including (but not exclusively) the overarching scheme outcomes of integrated water management, animal health and welfare, clean air and IPM.

- **The SFFS will be a key contributor to the farming sector's ambition to reach net zero by 2040.** Agriculture is uniquely placed as both a GHG emissions source and sink: we believe action to tackle climate change in UK agriculture requires a portfolio of different policies and practices, so SFFS in well placed to lead our sector's effort. It is no coincidence that many of the measures across all five key themes of the SFFS are highly compatible with 'low-carbon farming' actions outlined in the NFU Net Zero Roadmap, particularly those measures contributing to enhanced productivity (Pillar 1 of the Net Zero Roadmap) and carbon storage (Pillar 2 of the Net Zero Roadmap).

- **The SFFS should actively contribute to achieving the recommendations of the forthcoming National Food Strategy**. We believe that the strategy must play a pivotal role in supporting British farming's ability to improve productivity and sustainability, andsupport the nation's health. To aid this, government must invest in innovation and specifically support farm businesses to address the productivity and sustainability challenges by providing targeted investment, supporting research and development, and incentivising the adoption of technical advances that strengthen resilience within the farming sector.

- **SFFS should actively deliver for the Animal Health and Welfare Pathway.** Improvements in animal health and welfare will have beneficial public health implications, including better control of zoonotic disease risks reducing AMR risks, as well retaining UK farming's record for high animal welfare farm standards.

- **The SFFS should enable us to continue building institutional, farm business and individual capacity for delivering environmental outcomes alongside productive farming**. This will require investment in management capabilities, data, advice, information systems and fair and timely payment for scheme delivery. As such, the initial years of the SFFS will require higher levels of investment in aspects such as management plans, data collection and resource use

[2] A similar scheme recommendation was made in the "Future of Food and Farming Report" 2002

efficiency practices to build resilient and productive businesses that can deliver environmental outcomes over the long-term.

SFFS - Points-Based scheme delivery

Our experience is that farmers, growers and land managers would prefer **a points-based system**, which allows the factoring in of monetary and non-monetary values and that can weigh private and public benefit. Evidence from the CLA's ELM Test and Trial 'Incentives for Sustainable Farming and Forestry' shows a points system is popular due to its familiarity, flexibility, and choice/control. Some recognise a points-based system was criticised in ELS, but most felt this reflected poor evaluation of the ELS scheme, not a fundamental flaw with a points-based approach. It is certainly felt preferable to alternative reward approaches.

The SFFS would award for:

- selecting **measures**,
- existing **participation in specific complementary assurance/accreditation schemes** (such as Red Tractor, AHW Pathway, LEAF Marque or recognising systems such as being Certified Organic and participation in Farm Clusters); and,
- the **synergy multiplier** for selecting complementary measures which enhance outcomes.

The total points awarded would then correspond with a specific payment band for delivery. Those who do more would receive a higher payment. The points assigned to each measure would be based on the opportunity cost of implementation and the expected value of environmental benefits delivered.

The benefits of a points-based system:

- a **simple and transparent** approach allowing applicants to assess and compare the benefits of selecting a measure against alternative measures as well as non-adoption;
- points for each measure would **reflect the balance of private and public benefit delivered** (i.e. points increase with public benefit);
- a **consistent metric** to compare the benefits of multiple-environmental outcomes;
- allows the **factoring in of monetary and non-monetary values** (such as risk of delivery) when weighting the reward for respective measures;
- for the higher tiers within ELMS the approach could also **offer enhanced weighting for measures** which align with local priorities, which are based on robust evidence and data.

Given that the allocation of points to measures will underpin the payment rates achieved by the farmer/grower, it is proposed in Figure 3 that for **Farm Tier (SFFS) 20% of points should be awarded for the Building Management Capabilities themes**, **70% for the Core Environmental Sustainability Delivery themes and 10% for the synergy multiplier.** These weighting bands are proposed to reflect the level of emphasis that should be placed on each theme within the SFFS. In practice, there may be individual measures within the Building Management Capabilities theme which have a high points allocation, but the proposed weightings illustrate the overall level of emphasis which should be aimed for.

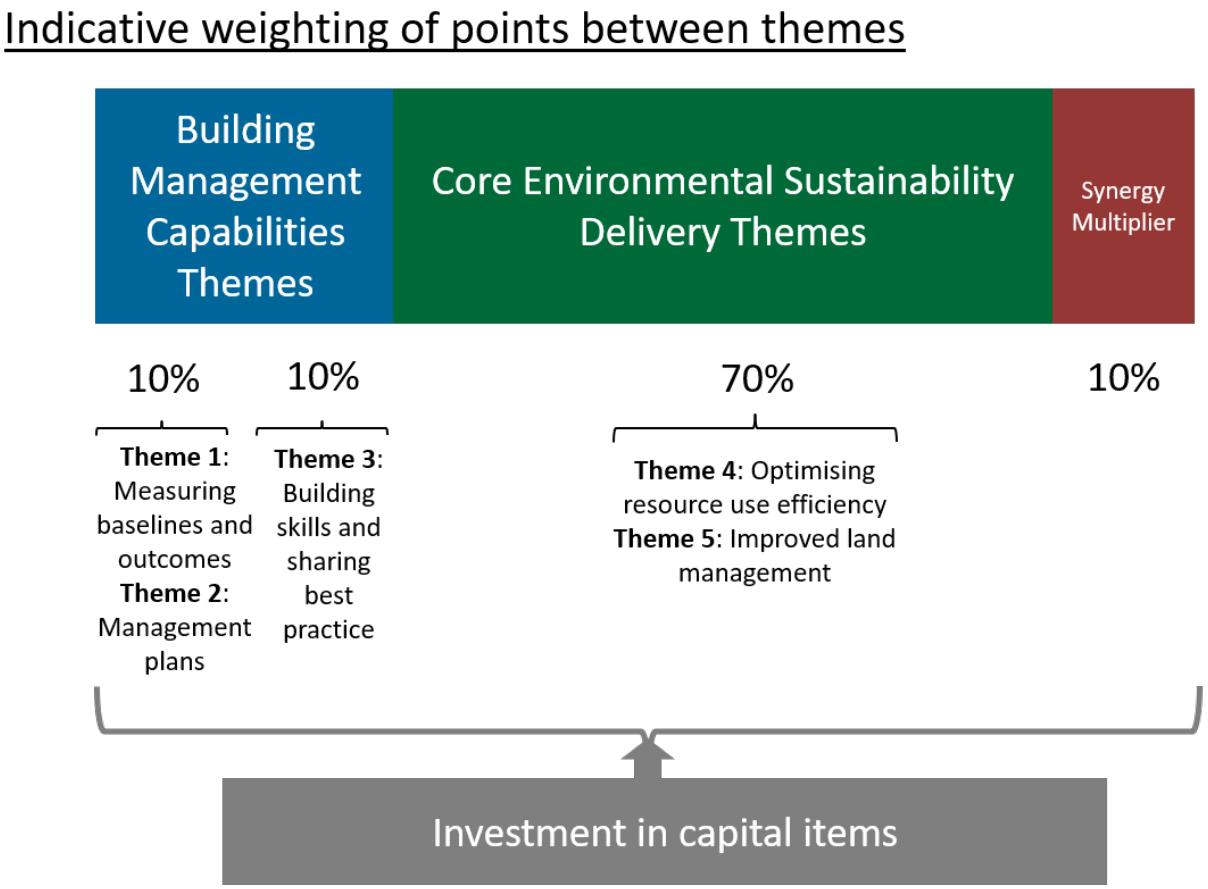


Figure 3 Weighting of points between themes and objectives

How Will Payments be Awarded?

Payments will incentivise capital investment in technology and infrastructure, improved farming practices and changes to land use to deliver environmental outcomes. As such, payments will consist of:

- Grants to support investment in specific capital items
- Regular payments to reward the maintenance and enhancement of natural capital

Capital grants would play an important role in funding measures, particularly within the following three key SFFS themes:

- Measuring Baselines & Outcomes
- Improved Land Management
- Optimising Resource Use Efficiency

These grants would co-fund investments in built infrastructure, fully fund investments in green infrastructure and co-fund investments in technology. A level of obligation for ongoing environmental action would be attached to capital grant allocation. **Where investments are co-funded, green finance options would be supported** to allow access to green loans through the private sector which offer favourable terms for the adoption of innovative investments which would promote ELMS environmental outcomes. This will align SFFS with the government's broader initiatives to increase the flow of green finance to support the transition to net zero. As such, the SFFS could **provide an appropriate pull factor on the demand side for private sector finance** into delivering environmental outcomes while broader government initiatives (e.g. the climate stress tests proposed by the Bank of England and initiatives from organisations such as the Green Finance Institute) targeted at the financial services sector

provide the push factor stimulating the supply side. Crucially, this will help to ensure those participating in SFFS are able to access the appropriate blend of public-private finance to invest in delivering environmental outcomes.

Regular payments would be made for the delivery of environmental benefits and for measuring baselines and outcomes. These payments would factor in the opportunity cost of implementation and the value of environmental benefits delivered. It is essential that these **payments must pay a 'fair reward'** that provides an incentive for participation and helps secure high levels of participation, particularly in the SFFS. We have all been critical of the income forgone (IF) calculation within Countryside Stewardship which has led to the undervaluing of environmental outcomes. Current payments only recognise one management change while failing to reward for multiple environmental outcomes. However, while there is significant innovation and investment in developing the economic techniques and underlying data to support a fairer outcomes-based pricing mechanism, this is not expected to be deliverable at scale by 2024. It is an important requirement that payments for rewarding environmental outcomes must be based on robust economic data and have an appropriate degree of transparency to ensure they appropriately address the balance between risk and reward for those delivering environmental outcomes while demonstrating value for public finances.

Therefore, in the early stages of design of the SFFS, **a compromise will be necessary to ensure scalable uptake by 2024**. A payment baseline will need to be established (i.e. the minimum price floor for payment rates), and, considering existing data limitations, the payments approach for the SFFS will necessarily involve reforming the current IF calculation. To achieve this the IF calculation will need to account more appropriately for lost income, transaction costs, fixed costs, and look for a more appropriate point on the cost curve to ensure the payment 'cost of production' baseline is set at a rate which matches the reality faced by the significant range of farm businesses who will engage with the scheme by 2024. The individual measure payment rate would then inform the points assigned to the measure and, in turn, the points awarded for any synergy multiplier. Awarded points for the individual measures selected will then be accumulated to provide an accumulated payment rate which will fall into a range of payment bands representing the level of environmental sustainability delivery.

Looking to the future, the aspiration would be to **continue to develop the payment methodology beyond 2024.** This would be achieved by leveraging the capacity building benefits achieved through ongoing efforts to develop the technical methodology for price discovery, while also harnessing the insights achieved through the Building Management Capabilities sub-themes within the SFFS. These themes look to empower and equip farm businesses with the skills and evidence required to play an increasing role over time in scheme design and in the setting of equitable payment rates. **This will also strengthen the capabilities to roll out an outcomes-based approach over time as the evidence base, as well as administrative and delivery capabilities, are developed.**

What is the Intended Budgets Allocation & Uptake by Tier?

Within SFFS we anticipate the largest proportion of budget would be allocated to the 'Farm Tier' which, subject to ongoing review or delivery and uptake, should be in the region of 65%. The Collaborative Tier would attract in the region of 30%, and Tier 3 5% of the total budget.

The aim should be to ensure delivery costs (i.e. not including supporting guidance and advice) for SFFS are far below the costs of the current Countryside Stewardship (which is running at about 25% of the grant value to deliver). We suggest the delivery costs should be in the region of 5%, which is slightly more than BPS at 3-4%, recognising that the ELMS would have more complexity than BPS.

What would be the regulatory baseline?

Our withdrawal from the EU provides an opportunity to review the regulatory framework under which farming's environmental responsibilities are defined, and to devise a regulatory regime that is fit for purpose, effectively supporting productive agriculture and trade in agri-food products, while protecting

the environment and the public. As the UK develops its own regulations, science, evidence and proportionality should guide government thinking. Regulation aimed at protecting the public and environmental health should be risk-based, and impact assessments should be used to gauge the effects of rules on farm businesses. We suggest that the baseline for SFFS entry should be equivalent to the current regulatory baseline with opportunities for agreement holders to earn points (and subsequent payment) for activities that exceed this baseline. Thus, where elements of current compliance deliver public benefits (e.g. improved soil health or diverse rotations) they should be an eligible SFFS Farm Tier measure.

At the farm level, inspections need to be more proportional and better co-ordinated across different regulatory agencies to reduce overlapping and duplicated checks. Agreement holders who demonstrate they present a low risk of infringing the rules, and those that go further through voluntary schemes, should have this effort recognised when compliance with regulation is being assessed. Earned recognition should feature in the design and implementation of future regulation.

How should the SFFS be delivered?

Cost effective delivery is critical to the successful launch of SFFS. Too often, lofty policy ambitions have overstretched delivery capability leading to costly delay, disenchanted farmer customers and disappointment with lower than expected environmental delivery. Therefore, scheme design, piloting and review must go hand-in-hand using the final IT delivery platform. A well-resourced national delivery body is needed, with a 'can do' attitude focussed on finding solutions to enable good delivery, backed by a well-resourced IT programme matched to the policy ambitions.

For many SFFS applicants, especially those to the 'Farm Tier', the default should be that individual professional advice is unnecessary through a well-designed, low administration cost scheme. More demanding measures and situations, such as those in the Collaborative Tier, are more likely to benefit from professional guidance and advice. Our organisations will continue to work with Defra to design appropriate advisory support, but we are agreed that where necessary, it should be for the applicants to commission advisers reflecting the diversity of SFFS outcomes to assist them in application proposals and delivery advice. We advocate using local, trusted project officers who can build relationships with potential applicants and agreement holders at grassroots level, also working on the principle of "one to many" scheme promotion. Previous schemes such as Environmentally Sensitive Areas and Catchment Sensitive Farming hugely benefited from this type of arrangement. Project officers should be the link between the scheme and the farming community, and they should be given the autonomy to make decisions appropriate to their local areas within sensible frameworks.

Trust will be the key commodity between advisers and potential applicants. It will be more difficult to deliver the trust required if advice is contracted and mandated. Third-party advisers, with only a commercial interest in applications, risk leaving a legacy of low agreement 'ownership' among agreement holders. Building relationships, working alongside the farming community, and working on schemes together will be vital for the success of the scheme.

This is why we see a key role here for project officers to help develop the best schemes possible and to use participation in the Farm Tier as a step on the ladder into higher tiers of the scheme when they are comfortable to do so. In doing so, advisers ought to use the knowledge of those managing the land and its attributes, rather than use template approaches without sensitivity to locality or business. Past attempts to use a 'one size fits all' approach should not be repeated.

The delivery body should be responsible for all applicant-facing SFFS communications and administration, for consistency. It is vital that a fair and balanced contract with government secures each agreement - one that provides a fair and transparent split of risks and responsibilities between both parties; one that would be in sharp contrast to the unbalanced contract that characterises the current CS model. In support of this, applicants should expect predicable payment terms to be set out which have to

be met by the delivery body. There should be a **proportionate monitoring regime**, in the first instance providing advice and encouragement to correct errors before penalties are applied. There is an opportunity to reduce the inspection burden on farms and we are supportive of an enforcement approach which is targeted, consistent, and proportionate

Unfortunately, to date BPS/CS/ES agreement holders have had a poor experience of remote sensing and satellite imagery because of inaccurate mapping of hedges and field areas by the RPA. With the SFFS there is a real opportunity to move on and ensure the exciting potential of new technologies is fully utilised. Considering innovative ways of carrying out assessments will be part of finding a better approach. New technology offers new and exciting opportunities e.g. mobile phone apps. If these can use data already being captured on farm that would simplify the process and also provide an added element of earnt recognition at the same time. As set out in the NFU's Farmed Environment Report in 2018, there remain significant gaps in our knowledge about farming's contribution to environmental performance. Such collective industry data could have an extremely valuable role in the promotion of our sector's achievements in the delivery of public goods for public money if appropriate ownership and control over what data is shared is in place. A further characteristic of the scheme should be the potential for agreement software and data regarding agreements to be exportable and compatible with applications in everyday day use (i.e. MS Excel / Word). A solution has to be found that is simple to use and not resource intensive on farm or bureaucratic. It will require a range of solutions to ensure the SFFS is accessible to all, including those without access to broadband, but we should start to explore the possibilities now to be able to use them in the future.

What should be the focus of initial roll-out?

As stated at the start of this paper, our vision is that SFFS must sit within a coherent framework of policy interventions that ensures the long-term resilience of UK agriculture. We also recognise that this framework will evolve and SFFS will have to change too. Some of the more ambitious ideas presented here may be several years in development, but some options within the five themes should be relatively simple, and easy and quick to deliver. However, transition from the current CAP-BPS approach to a new domestic agricultural policy is an immediate concern.

Our understanding is that Defra's proposed 'Sustainable Farming Incentive' (SFI) could bridge this gap between BPS and ELMS rollout by introducing elements of the final ELMS. Our SFFS proposal would fulfil a similar function, albeit not as a stopgap scheme but one introducing measures, and an approach, capturing the fundamental design and philosophy for a long-lasting solution.

We envisage that elements of SFFS could be introduced in 2022 with early roll out of options within the Farm Tier which could quickly recognise and reward positive steps with minimal barriers to implementation and delivery. Such activities could include recognition of membership of Red Tractor, LEAF Marque or organic certification; simple in-field activities such as boundary, margin and grassland maintenance; production of IPM and AHW Pathway plans; and capturing and rewarding some of the environmentally beneficial measures formally required under BPS, such as Ecological Focus Areas. It will be imperative that there is a swift and seamless introduction of these options to match the loss of income and environmental benefit as BPS is phased out.

ANNEX 1: Examples of the types of measures that could be rewarded under the five key themes and sub-themes of the SFFS, including some illustrative examples* of measures under these themes which may be relevant to different sectors.[3]

**Note these are indicative examples only taken from a fuller list of potential measures*

Theme 1: Measuring Baselines & Outcomes

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Remote Sensing Equipment	•	•	•	•	•		•	•
Monitoring software and information systems	•	•	•	•	•	•	•	•
Mapping land management	•	•	•	•	•	•	•	•
Soil/Spade testing	•	•	•	•	•		•	
Livestock monitoring and herd management	•	•		•	•		•	•
Pregnancy Detection or Scanning							•	
Nutrient testing	•	•		•	•		•	•

The table below provides some example measures which would feature within this theme and which may be adopted by different farm types. It is important to note that this table is purely illustrative, and many measures listed under a particular farm type may also be adopted by other farm types as part of the menu of measures available to them.

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Crops								
Remote sensing equipment mounted on sprayers to support precision application	•	•		•			•	
Soil spade tests and sampling to assess and record soil condition	•	•	•	•	•		•	
Investment in pest & disease monitoring	•	•		•	•		•	
Drones and robotics equipment for land use mapping and data capture	•	•	•	•	•		•	
Conducting biodiversity surveys		•						
Developing a natural capital asset register	•	•	•	•	•	•	•	
Livestock and Dairy								
Conducting carbon audits	•	•	•				•	
Livestock identification equipment - Hardware to deliver improved EID							•	•
Manure testing to manage nutrient input	•			•	•		•	
Welfare assessments							•	•
Farm software (Herd/Flock management etc.)							•	•
Livestock genetic improvement scheme - Genetic testing and recording							•	•
Wi-Fi boosters to record livestock movements in buildings and grazing (using EID)							•	•
On farm forage, soil and FEC analysis	•		•	•			•	•
Horticulture and Poultry								
Poultry - ammonia sensors					•		•	
Welfare assessments							•	•
Biodiversity assessments		•						
Carbon auditing	•	•	•				•	

[3] Editor's note: Table to be updated with 'Biodiversity' column to read 'Species and Habitats" and measures to include GHG/Carbon management plan

Theme 2: Management Plans

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Manure management plan				•			•	
Greenhouse Gas Management/Carbon Plan	•	•	•	•	•		•	•
Grazing rotations/Grazing plans	•			•				
Antibiotic/anthlementic health plans								•
Nutrient management plans	•	•		•	•		•	
Soil management plan	•	•	•	•			•	
Crop protection management plan	•	•		•				
Farm woodland management plan		•		•	•		•	
Completing the VI IPM Plan or the LEAF Sustainable farming review	•	•	•	•	•		•	•

Theme 3: Building Skill and Sharing Best Practice

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Environmental data sharing for benchmarking	•	•	•	•	•	•	•	•
Livestock information service					•		•	•
Collaborative slurry / muck storage and application	•			•			•	
Grower groups / Co-operative knowledge exchange arrangements	•	•	•	•	•	•	•	•
Monitor farms and peer to peer learning	•	•	•	•	•	•	•	•
Hosting and attending demonstration farms	•	•	•	•	•	•	•	•

Theme 4: Optimising Resource Use Efficiency

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Precision nutrient management equipment	•	•		•	•		•	
Precision sprayers	•	•		•	•			
Precision weeding equipment	•	•		•				
Precision feeding equipment				•	•		•	•
Renewable energy infrastructure					•		•	
Smart drainage and water storage infrastructure	•		•	•	•			
Biobeds, biofilters		•		•			•	
Biological controls/ natural predators, beneficials		•		•			•	
Soil structure management practices	•	•	•	•	•		•	

The table below provides some example measures which would feature within this theme and which may be adopted by different farm types. As above, it is important to note that this table is purely illustrative, and many measures listed under a particular farm type may also be adopted by other farm types as part of the menu of measures available to them.

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Crops								
Use of 95% drift reduction technology (DRT) nozzles	•	•		•	•			
Drones/UAVs for targeted spray applications				•			•	
Automatic switch off on sprayers, variable rate application of fertilizer, seed and pesticides	•	•		•	•		•	
Water storage reservoirs			•				•	
Farm in-field drainage systems and ditch management	•		•	•			•	
Conservational Tillage	•	•	•		•		•	
Livestock and Dairy								
Slurry storage covers				•	•		•	
Urease and nitrification inhibitors				•			•	
Low emission slurry spreading equipment: Slurry injector/ band spreaders / dribble bars etc..				•	•		•	
Rainwater harvesting equipment			•					
Precision dairy technologies (i.e. feeding, weighing, health monitoring)			•		•		•	•
Livestock identification equipment								•
Horticulture and Poultry								
Precision weeders	•	•	•	•				
Internal water treatment systems (Hort)			•					
Water scheduling, boom or trickle precision irrigation equipment (Hort)			•				•	
Biomass heating							•	
Ammonia scrubbers					•		•	

Theme 5: Improved Land Management

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Crop rotation management for soil enhancement	•	•	•	•	•		•	
Grassland management	•	•	•	•	•	•	•	•
Creating and restoring habitats		•				•	•	
Boundary maintainence/enhancement	•	•	•	•		•	•	•
Supporting the recovery of declining and red-listed species		•		•		•		
Protecting and enhancing polinators and invertebrates	•	•	•	•	•			
Protecting and enhancing existing woodland features and in-field trees	•	•	•	•	•	•	•	•
Promoting access						•		
Woodland or traditional orchard management		•	•	•	•	•	•	•
Tree or farm woodland planting		•	•	•	•	•	•	•
Maintaining historical features						•		

The table below provides some example measures which would feature within this theme and which may be adopted by different farm types. As above, it is important to note that this table is purely illustrative, and many measures listed under a particular farm type may also be adopted by other farm types as part of the menu of measures available to them.

	Soil quality	Biodiversity	Water efficiency and flow	Water quality	Air quality	Cultural/ Access	Greenhouse gas emissions	Animal Health and Welfare
Crops								
Cover and Catch Crops	•	•	•	•	•		•	
Overwintered stubble	•			•				
Field margins and buffer strips to slow water flow and retain soil erosion	•	•		•				
Ditch management	•		•	•			•	
Skylark plots		•						
Supplementary feeding in winter for farmland birds		•						
Livestock and Dairy								
Hedge and wall maintenance and repair		•	•			•	•	•
Riparian buffer strips		•	•	•		•	•	
Low input grasslands	•	•		•				
Management of semi natural and species rich grasslands	•	•	•			•	•	
Maintenance /Restoration of successional areas and scrub		•				•	•	
Bankside erosion protection			•	•				
Horticulture and Poultry								
Planting trees between fields/on the poutry range	•	•	•		•	•	•	
Precision inter row cultivations/ harrowing to reduce herbicide (Hort)		•		•				
Ponds of high wildlife value		•						
Pollen and nectar mix		•				•		
Biological controls/ natural predators, beneficials		•		•			•	
Educational access						•		

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