

ELMS Trial Questionnaire



Tom Ormesher (National Farmers Union) tom.ormesher@nfu.org.uk

Charlotte-Anne Chivers (Countryside and Community Research Institute (CCRI)
University of Gloucestershire

David Christian Rose (School of Agriculture, Policy and Development, University of
Reading)

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The Voice of British Farming

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Executive Summary

NFU South East is conducting a trial of the new Environmental Land Management Scheme (ELMS), focussing on land management plan design, the delivery of public goods and enabling farmer coordination. As part of a four-stage trial, this document reports the findings from an online survey completed during July and August 2020, which received a total of 441 responses from commercial farmers representing all major farming types across the region.

This report contains an exploration of farmer design preferences for the new policy, where the guiding feedback we received on Land Management Plans was a strong desire to keep it as light touch as possible. Our six key recommendations should therefore be read with this guiding feedback in mind:

1. Land Management Plan (LMP) design should be flexible, helping to generate a list of feasible options and taking account of previous environmental work done on each holding. The LMP should also include:
 - a. Information on high value, high potential (enhancement) and risk areas on the holding;
 - b. Simple maps and actions, recording a range of core farm features such as woodlands, hedgerows, watercourses, wetlands, ponds, soil type and condition, fertiliser use; and
 - c. Details of local environmental priorities.
2. LMP design should encourage all farmers to engage by focussing on:
 - a. A points-based system;
 - b. Multi-annual funding certainty; and
 - c. Tier 1 delivery, providing access to Tiers 2 and 3 through simple add-on options.
3. ELMS should be simple and easy to understand where, as a rule of thumb, if you need a farm adviser to help complete the LMP, it means the requirements may already be too complicated.
4. ELMS should facilitate farmer clusters and landscape scale farming, rewarding farmers with extra money for that coordinating effort. However, this shouldn't prevent farmers also going it alone.
5. Recognising that some aspects of the new system will inevitably require guidance, Defra should review opportunities to incentivise industry-led organisations, such as producer organisations to support business relevant decision making within the context of the new policy; and finally
6. Defra should track ELMS uptake amongst traditionally unengaged farmers in line with the engagement factors identified in this report.

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1. Introduction

NFU South East is conducting a trial of the new Environmental Land Management Scheme (ELMS) to guide policy design and help farmers gain access to funding. This is one of several 'Tests and Trials' commissioned by Defra, investigating various scheme elements and shaping the policy before its scheduled piloting from late 2021 and implementation from 2024.



Our trial, focussing on Land Management Plan design, the delivery of public goods and enabling farmer coordination, comprises four stages. At Stage 1 we are co-designing a Land Management Plan template in consultation with commercial farmers and growers. At Stage 2, the template will be actively used on 20 farms across the South East region. At Stage 3 we will investigate opportunities to collaborate and at Stage 4 we will undertake an evaluation of trial outputs. This report relates to Stage 1 in which we are co-designing a Land Management Plan template with a focus group of 20 farmers in wider consultation with NFU members across South East England.

As part of the Stage 1 design process an online survey was completed during July and August 2020, the results of which are presented in this report. This exploratory survey was designed to give farmers the opportunity to comment on a wide range of factors relevant to ELMS policy design, helping to inform and instruct the design of a farm planning template to be trialled across 20 active farms in the region.

2. Methods

The survey was hosted on SurveyMonkey between 08/07/2020 to 08/08/2020. Farmer participants were recruited by advertising the survey on the NFU website and via direct emails to approximately 4,500 NFU farmer and grower members in the South East region. The survey was designed to enable farmers to provide open answers, with opportunities for respondents to provide qualitative elaboration alongside quantitative answers.

The full list of survey questions is presented in **Appendix 1** however the key areas investigated focused on farmer preferences concerning:

- Land Management Plan (LMP) design
- The proposed three-tiered approach to ELMS
- Advisory support expectations
- Farm business objectives; and
- Motivations to participate.

Several survey submissions were removed from the dataset due to being blank or inconsistent, resulting in a total of 441 remaining responses. Numerical data were analysed using Microsoft Excel and SPSS 26. Chi-squared testing was undertaken to identify significant associations between farmer characteristics and their answers. Meanwhile, free-text answers were analysed using NVivo 12 Plus to categorise quotes, thus leading to the identification of emergent narratives and themes.

Not all farmers answered every question, thus percentages may not have been calculated from the total number of respondents who participated in the survey. Moreover, many questions were multiple choice with non-mutually exclusive options, thus some percentages inevitably add up to more than 100%.

A detailed breakdown of the characteristics of the respondent farmers is provided in **Appendix 2**, showing that a notably high number of respondents had already been well engaged with previous agri-environment schemes and considered environmental management an integral part of their business (65% n = 242). Furthermore 69% of respondents had been farming for over 30 years and 73% either wholly or mostly owned their farmland. Respondents were involved in a range of different farming enterprises, including arable (38%, n = 165), mixed (24%, n = 105), beef and sheep (20%, n = 89), horticulture (7%, n = 29), dairy (6%, n = 25), and 'other' 6%, (n = 25). Almost all respondents (98%) were NFU members.

The survey results should be interpreted with these characteristics in mind.

3. Results

The questionnaire results reported below are set out in four main sections in order of priority to our trial:

- Land Management Plan Design Preferences;
- Responses to Current Policy Design
- Working with Others; and
- Motivation and Engagement Preferences

Some questions generated large amounts of written commentary, which often proved more illuminating than the numeric responses alone. In this context the results below are necessarily descriptive in order to provide a representative overview of the feedback.

3.1 Land Management Plans

One of the core elements of ELMs will be the requirement for individual land managers to develop their own Land Management Plan (LMP) for their holding and submit this to Defra. Given the centrality of the LMP to future policy administration, this trial is specifically investigating farmer preferences concerning its design.

3.1.1 Structure and Function of the Land Management Plan

We asked three questions about how the LMP should be structured and what function it should perform within a farm business context. The detailed breakdown of these preferences is provided in **Appendix 3**, where the results have been segmented into preference quartiles (i.e. high preference >75% of respondents in favour, moderate preference >50% in favour, low preference >25% and very low <25% in favour).

There were five high preference characteristics, favoured by over three quarters of respondents to each question:

- *The LMP should be flexible so that I can amend as my plans change*
- *The LMP should provide me with a list of options that would work on my land*
- *The LMP should take account of the previous environmental work done on my land*
- *Environmental Information in the LMP should help me identify the opportunities on my farm; and*
- *The LMP should include records on woodland and hedgerow locations.*

There were a further nineteen ‘moderate preference’ characteristics, which over half of the respondents favoured:

- The LMP should:
 - *Help me plan work over several years*
 - *Be completed with the support of an adviser*
 - *Be completed by the active farmer*
 - *Only relate to environmental management on my farm*
 - *Help with other business decisions (e.g., diversification and production options not just environmental management)*

- Environmental Information in the LMP should:
 - *Identify high value or high potential environmental areas*
 - *Mainly focus on maps of my farm, showing the actions I will deliver*
 - *Identify risk areas on my farm (e.g. where I should reduce runoff)*
 - *Take account of the value provided by food production businesses*
 - *Include details about the wider environmental priorities in my area*

- The LMP should include records on:
 - *Watercourses, wetlands and ponds*
 - *Records of soil type and condition and any soil management activities*
 - *Records of fertiliser use and management including NVZ records*
 - *Designations such as SSSI, Scheduled Monuments, AONB, NVZ, Water Protection Areas*
 - *Chemical use records and management information*
 - *Areas of historical interest*
 - *Potential enhancement areas (e.g., water storage, biodiversity enhancement)*
 - *Records of soil erosion and runoff risk*
 - *Species records e.g., birds, bats, wildflowers*

In developing the design of a basic land management plan template, we suggest the above high and moderately high preference factors should be used as core building blocks because they are broadly acceptable to a majority proportion of farmers.

3.1.2 Simplicity and Flexibility

There were 166 written comments to the three main questions on LMPs which contained remarkably consistent messaging around themes of simplicity, flexibility and the relevance to farm business priorities. For example, many farmers highlighted the need to avoid onerous or complicated requirements, with one farmer stating:

“ELMS needs to take into account that not all farmers have an army of staff or as in my case no staff at all and cannot cope with the extra burden of lots of paperwork/financial strain of needing advisers etc as my time is dedicated to my livestock and their needs.”

“The application should be simple enough not to require the need of a professional and not penalty driven so that genuine mistakes are not penalised.”

Others also commented that the plan should avoid being a large document and avoid involving advisers as this introduces unnecessary cost and complication. As one farmer put it, *“Keep it simple, stupid!”*

In terms of ability to change the plan, several farmers commented on the need for flexibility highlighting that *“[w]e rent a large part of our land on short term agreements. the scheme must be able to deal with changes, e.g., if we rent extra land or lose some land”*. Another farmer also made the point that *“land-based options or rotational options should be able to fluctuate to fit in with rotations / field sizes”*.

Free-text elaboration indicates that by flexible, farmers mean that the scheme should allow for farmer experimentation, be locally relevant, and non-prescriptive. For example, some respondents stressed that different farms would need different information and would be used for varying reasons. One farmer argued that *“if land management plans are too authoritarian, they will limit the uptake”* whilst another warned against the LMP *“becoming a bit of a tick box exercise”* if you have to *“shoe-horn into pre-determined categories”*.

3.1.3 Relevance to production elements

Just 24% (n = 85) of farmers agreed that food production is becoming increasingly unimportant on their farms, illustrating that farmers continue to hold identities as food producers and would be unlikely to engage with schemes significantly affecting their ability to produce food. As one farmer explains:

“It needs to be remembered that we are farmers. Our job is to feed the people. If we cannot do that everything else is a waste of time.”

Many, but not all farmers (44%, n = 169) were keen to be given details about the production side of their business in an LMP and to be provided with help concerning

production-related business decisions (52%, n = 201). The three quotes below suggest a possible context in which ELMS can work with production priorities by recognising the intrinsic environmental and nutritional value from production systems:

“The ELMS plan should cover in-field agricultural management as well as environmental management. The baseline needs to be that the environmental status of the farm and landscape needs to be stable and improving and food production is achieved within that framework”

“It should take account of the value food production businesses provide to the environment. For example, orchards and OSR crops provide plentiful resources for pollinators. Orchards sequester carbon. Environmental benefit is not just derived from areas where farming is not taking place.”

“Our main priority is producing food (vegetables) to feed the nation. We do not want schemes making food production even more difficult than it already is. The production of fresh vegetables and salads should not be undervalued.”

3.1.4 How do farmers feel about keeping records to obtain their ELMS payments?

Farmers were asked to indicate how they felt about keeping records as part of their LMPs. Most respondents (92%, n = 329) showed a willingness to keep records, though over half (59%, n = 212) were concerned that they may be penalized if they make any errors. This figure was similar for farmers who have not been previously involved in any AES, where 63% (n = 34) stated that they wouldn't want to be penalized where mistakes have been made.

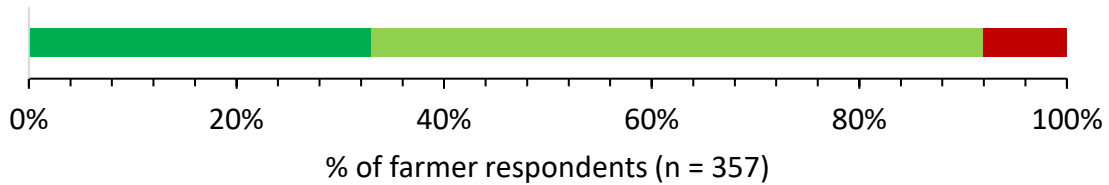
This has direct links to some of the findings within this study surrounding existing AES, where several farmers (n = 16) provided free-text answers about feeling unfairly persecuted:

“We work hard to ensure that we comply with all the requirements but have been checked for compliance twice over the last 4 years and severely penalized for not complying with the tiniest of area non-compliances. It all seems very draconian and there is no margin for error.”

Further comments were also made about the need to avoid duplication with other record keeping requirements, enabling accreditations such as LEAF marque and Red Tractor to count towards LMP approval. As one farmer explains “[m]embership of an assurance scheme should be linked into the provision of good practice and should not need to be proven again”.

Or as another puts it “[p]lease do not make this complex or allow it to result in the duplication of record keeping required by other authorities” ... “much of this is already documented, big danger of needless duplication.”

Figure 1. Farmers’ willingness to keep records to obtain ELMS payments (n = 357)



- Happy to keep records as it benefits the farm business
- Can see the relevance of keeping records but wouldn't want to be penalised for any errors
- Can't see the point of keeping records

Nonetheless, in a further clarifying question we found that 65% (n = 243) of respondents agreed that “if designed correctly an LMP could assist with other accreditations”.

Some also made the point that the LMP should be a positive statement about future enhancement, rather than a regulatory compliance exercise:

“I don't want recording obligations to proliferate. I'd prefer ELMS to focus on the positive environmental issues, not the things I can be penalised for if I make a mistake, which keep me awake at night.”

“Record-keeping is probably one of the most tiresome and time-consuming things I have to do for the farm business, and although I understand the need for it any more would make me seriously wonder about carrying on.”

“It needs to be clear whether the Land Management Plan is a plan identifying future work to be undertaken, or a detailed record of actions actually carried out. If the latter, it would need to be very easy to record actions, such as moving livestock to graze another field, or muck spreading in a specific field.”

This sentiment is reinforced by a relatively weak response to the statement “the LMP could form the basis of future inspections” where only 28% (n = 107) of respondents agreed. In this context we suggest the LMP should principally function as an ambition statement and positive action plan rather than a compliance activity.

“ELMS should be about letting us farm rather than filling more forms in!”

3.1.5 In what format should the Land Management Plan be delivered?

The survey gave two options about how the LMP could be completed: purely online or a combination of online and paper based. Of the farmers who chose a single option (n = 298), 55% (n = 165) thought that online only would be adequate, whilst the remaining 45% (n = 133) thought there should be a mix. Indicating that whilst over half of participants appear content with completing an LMP online, a digital by default approach may not suit all farmers.

3.1.6 Preference for a Points Based System

Finally, after exploring the above elements we also asked a clarifying question about the way in which a plan could demonstrate public value for money.

As shown in **Figure 2**, 70% of responses (n = 322) demonstrated a preference for a points-based scheme over area-based, results-based, credit-based or reverse auction approaches. This provides clear guidance in terms of how the process of specifying actions in an LMP should be administered.

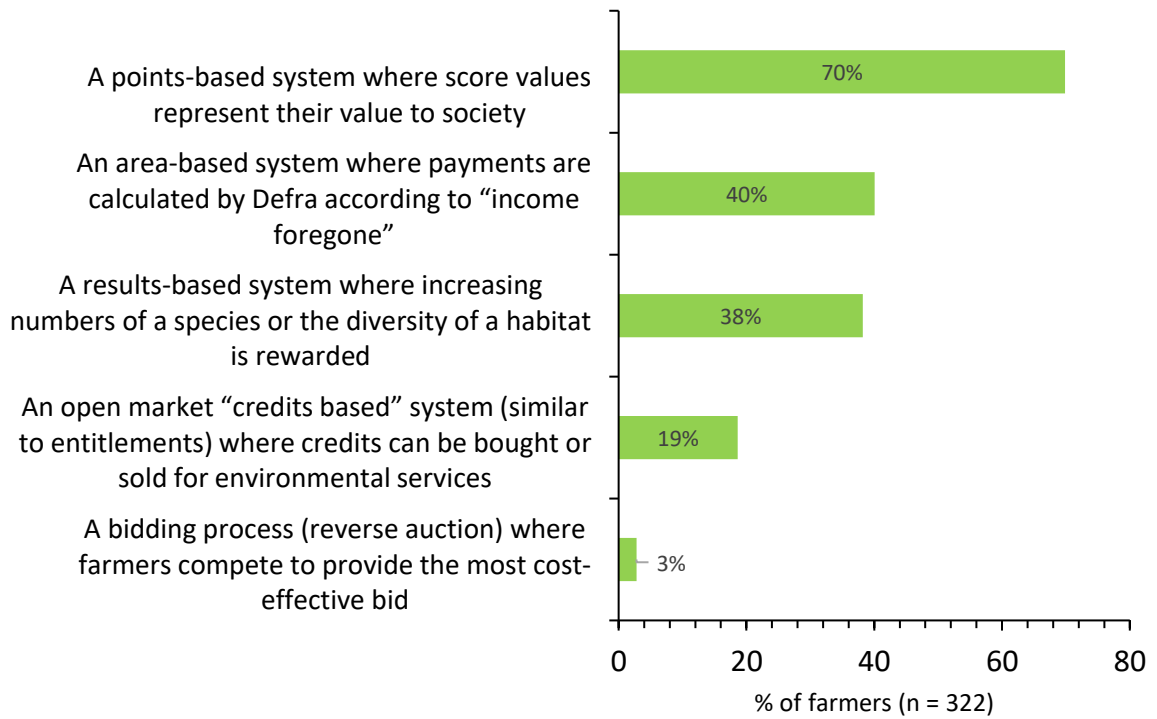
Free text answers to this question include several thoughtful responses, with themes focussing on the need to avoid administrative complexity and to avoid making the scheme competitive and divisive. Several highlighted concerns that the results-based and reverse auction processes could be unfair and unreliable, whilst positive responses typically focussed on flexibility and inclusivity.

“I think that the key is flexibility so that people who want to do more can but it also encourages everyone to try something. You should also be able to change what you do during an agreement. I do not agree with a competitive system. The scheme should be encouraging all farmers to be involved.”

Another farmer also reminds us not to lose sight of the bigger picture *“[t]here is a real risk that if the system is too complicated, it won't be adopted by a lot of farmers and landowners. I would suggest it is important to concentrate on options that will make, or at least have the potential to make, real improvements to the environment and biodiversity as a whole.”*

In the context of a question about a points-based system, this last comment serves as valuable guidance not to let the administration get in the way of the objective of the scheme. Or as one response suggests *“[j]ust give us the outline framework, and we will do the work.”*

Figure 2. Farmer preferences for achieving ‘value for public money’ in an LMP



3.2 Response to Current Policy Design

3.2.1 Farmer Views of the Three-Tiered Approach

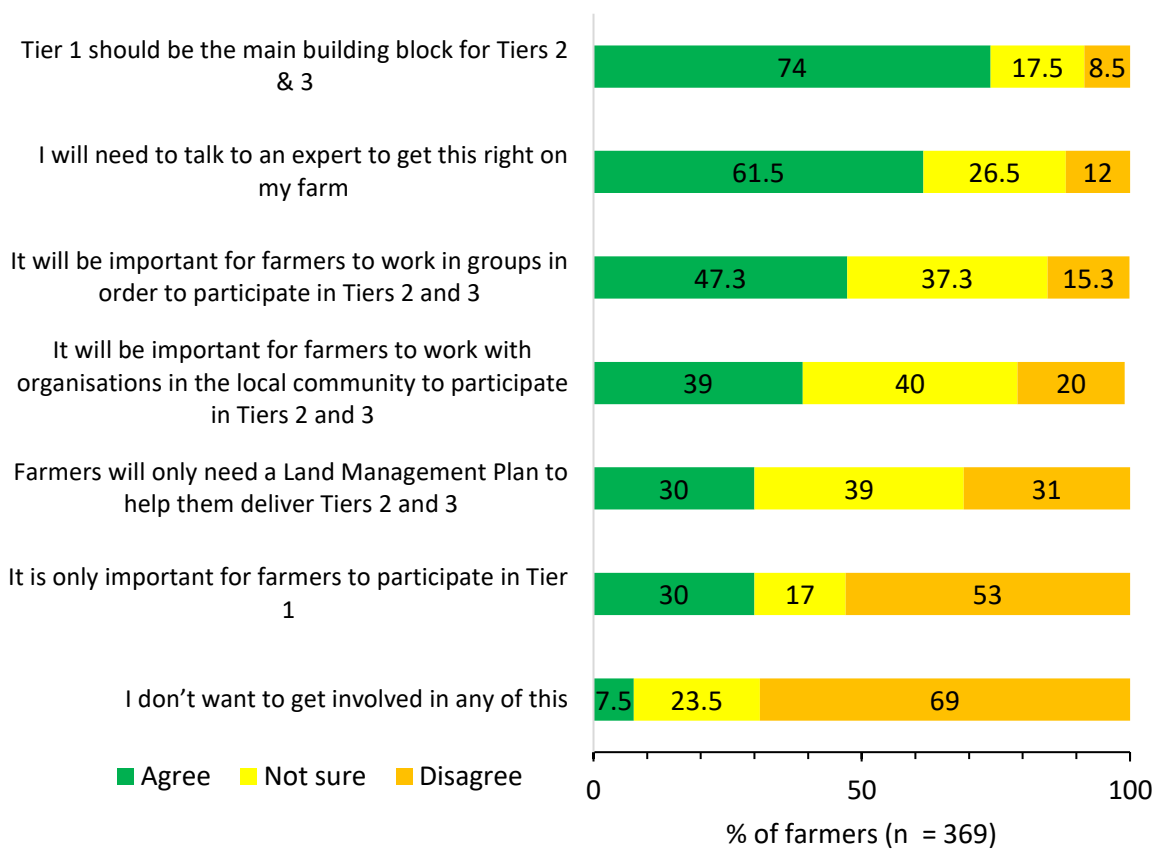
We explored how ELMS could be configured to maximise farmer uptake, in light of the proposed three-tiered structure (Defra, 2020). To introduce this, we provided the following information to survey participants:

1. Tier 1 will focus on actions that are accessible to all farmers (e.g., nutrient and soil management).
2. Tier 2 will focus on local priorities (e.g., rights of way networks or connecting habitats between farms).
3. Tier 3 will focus on landscape-scale change (e.g., large scale nature recovery and net-zero emissions).

Following this introduction, participants were then asked to agree or disagree with several statements (Figure 3).

Figure 3. Farmers’ views surrounding the three proposed tiers of ELMS (% scores)

To what extent do you agree with the following statements about the three proposed ELMS tiers? (% scores) (n = 369)



Tier 1

As shown in **Figure 3**, more than half of respondents thought that Tier 1 should provide the building blocks for Tiers 2 and 3. By contrast, few respondents thought that LMPs would only be required for Tiers 2 and 3, or that farmers should only participate in Tier 1. Indeed, over 50% of respondents thought that farmers should participate across all three Tiers. Taken together this indicates preference for a widely accessible approach, mainly focussed on Tier 1 but giving options for farmers to access Tiers 2 and 3 by the same pathway.

As one farmer suggests *“I think if Tier 1 is done properly, financed properly, and allowed to happen at scale, then Tiers 2 & 3 will just happen.”*

In a related free text response, one farmer explains how *“Farm businesses come in many shapes and sizes and a 'one size fits all' will be hard to achieve. The design needs to be modular such that it can be tailored to individual business. It needs to be comprehensive for large scale diversified businesses but not overwhelming for small scale simple businesses.”* (our emphasis)

In a separate question, only half of farmers (54%, n = 201) agreed that Tier 1 payments could be based on keeping an accurate LMP with the following qualifying statements made:

“A lot of what is wanted to be achieved in Tier 1 is already being monitored or recorded, please do not create paperwork for paperwork sake.”

“If farmers are already doing everything they can and have done so historically, trying to jump through hoops to access funds from T 1&2, when you live on the edge of a town and 100s of people walk across the farm daily, being asked to do extra for 'public good', is not helpful.”

Whilst many farmers may automatically fulfil the requirements of Tier 1, farmers may refuse to engage with Tiers 2 and 3 if they are perceived as too complex. As one farmer said, *‘if it is made too difficult to do Tier 2 and 3 people will just go for Tier 1 and leave it at that’.*

Tiers 2 Local Priorities

By contrast to the buy-in demonstrated for a Tier 1 focus, farmers are much more uncertain about how they will work in the context of local priorities. For example, in one question only 40% (154 of 384 respondents) agreed that the LMP should “help me understand the priorities of organisations and communities in my local area”.

As shown by **Figure 3**, some farmers were unsure as to whether it will be important to collaborate with local organizations for Tiers 2 and 3, with some providing qualitative answers explaining why:

“I'm happy to discuss my plans with ‘organisations in the local community’ (whatever that means) but only to advise them of what I plan. I'd suggest it's unreasonable to allow them too much influence.”

“If I had to work with local organisations from the local community, we would not participate. Our land, it will be our families in 40 years' time that will live the consequences, not people who will move after 5-10 years”.

“I do not wish to be required to cooperate with neighbours or community”

The above quotes indicate the way in which farmers require autonomy over management decisions and have long term interests in their land. These observations also show the reservations felt about local public involvement, indicating a need to manage the channels through which local priorities are presented at a farm level.

As one farmer put it a *“farm is a working environment it should be solely for the individual that is managing the business. I do not go into somebody's house and tell them what they should keep in their cupboards or how to manage their life.”*

A small number of farmers (n = 28) said that they do not wish to get involved in any of the ELMs tiers. Only 16% (n = 10) of respondents who haven't been involved in any AES agreed that they do not wish to be involved in ELM, two of whom stated that this is because they are planning to retire within the next couple of years. In general, this indicates that as long as ELMs meets the needs of these farmers, most will consider getting involved.

3.2.2 The Relevance of 25-YEP Objectives

After exploring the relative preferences surrounding the three-tiered approach we also tested initial responses to 25 YEP objectives in terms of how relevant farmers consider these are to their business.

As shown in **Table 1**, many farmers believe that some aspects of the 25-YEP are relevant to their farms, with respondents (n = 411) selecting, on average, 6 answers to this question and 49% selecting 'all of the above' (n = 202). This indicates a broad willingness to work with the objectives, although at the same time shows a possible lack of understanding around some areas. This suggests that Defra may need to consider more targeted engagement on the lower scoring objectives detailed below.

Table 1. Public benefits which are seen as relevant by farmer respondents (n = 411)

Public benefit perceived as relevant	% of farmer respondents (n = 411)
Thriving plants and wildlife	73%
Minimising waste	62%
Using resources from nature more sustainably and efficiently.	60%
Mitigating and adapting to climate change	56%
Clean and Plentiful Water	56%
Enhanced beauty, heritage, and engagement with the natural environment	55%
Enhancing biosecurity	52%
Managing exposure to chemicals	50%
Reducing the risk of harm from environmental hazards, such as flooding and drought	49%
Clean Air	45%

3.2.3 The Public Good Farmers are Willing to Deliver

The public goods farmers are most interested in offering are shown in **Figure 4**. These indicate a broadly positive response to a range of biodiversity and resource efficiency focussed measures. However relevant free text responses highlight the commercial and regulatory constraints having an impact on public good delivery.

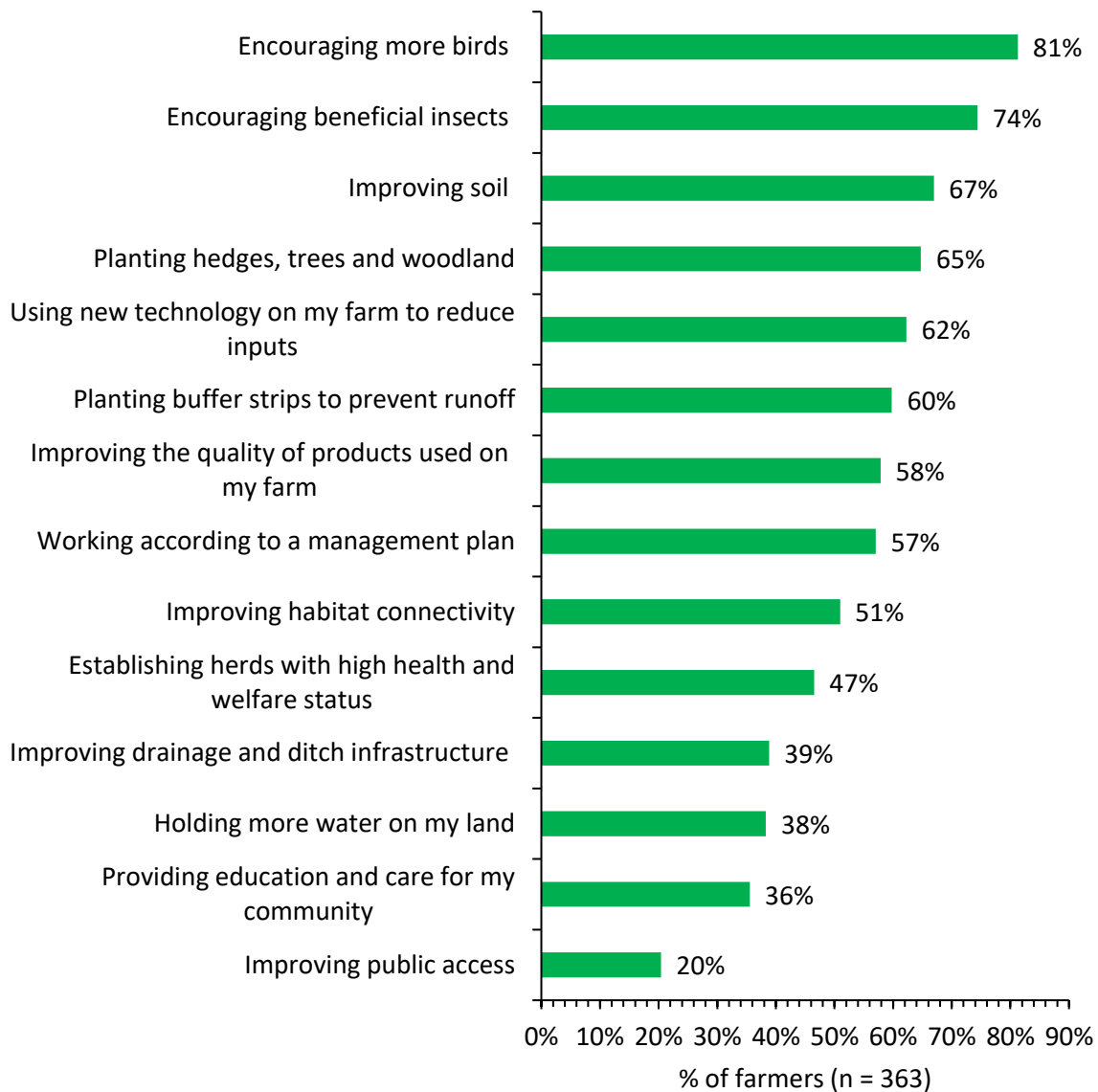
“Currently the market gives absolutely no reward to farmers who 'do the right thing'. In my own past experience of directly supplying multiple retailers, no long-term sustainability benefits are rewarded; everything boils down to price.”

“Farmers are trying to do their best it's the public that need to support British products, there are a lot who just do not care.”

“I want to manage my farm in a sustainable and environmentally friendly manner, but we are competing in a global marketplace with restrictions that are entirely local, such as neonicotinoid seed dressings that have been banned and therefore I can no longer grow oilseeds. We are importing them from countries that use these products.”

“These sorts of public good are not possible without a viable and sustainable food producing agriculture.”

Figure 4. The public goods farmers were most willing to deliver (n = 363)



In terms of direct measures, the least popular option was improving public access, which is likely to be connected to current tensions between the public and farmers due to issues such as livestock worrying, trespassing and littering:

“My management of the land is subject to things beyond my control like fly tipping, crime, vandalism and lack of public understanding.”

“The threat of more public access fills me with terror! Lockdown has shown how many of the public abuse land and nature and have no respect. I was called an ignorant farmer by one person because I advised them not to walk through sprayed crops.”

Several also noted that public access and biodiversity are not compatible:

“My forestry experience tells me you can either have public access or wildlife. You cannot have both. Controlled access is fine.”

“Public access is a major concern to me; not because I have a problem with the public, but because I am very anxious that the uneducated public will cause a lot of damage to environmentally sensitive areas on the farm if they have unrestricted or partly unrestricted access. For example, we have several pairs of lapwing & turtle doves breeding in the quietest areas of the farm and public access to these areas at the wrong time could have disastrous effects. I am concerned that public access could undo a lot of the environmental gains that the schemes seek to improve.”

These farmers suggested that farm walks and ‘controlled’ access may be the most viable way of allowing the public on farms:

“Access should be managed access with interpretation of the countryside by a trained guide. After all, it is my workplace, and I am responsible for anyone on it.”

Further free text responses to this question also highlighted how some farms are already delivering public good and feel worried that they could be penalised.

“We are already doing a number of these. It is important that environmental work that has already been carried out continues to be supported with maintenance payments”.

“We have been pioneers of many of the above worthy endeavours for the last 50 years, undertaken because of our own ideas about farming, soil structure and fertility, and caring for the environment. We purposely have not accessed Government support so we could do things the way we felt suited our little farm best, and this has paid dividends.. The farm is now a well-balanced and environmentally focussed business, with a large proportion of 'new' (the first one now nearly 60 years old) mixed native woodland, restored 'ancient woodland', wildflower meadows and field margins. We have also created a pond, have a high number and variety of birds, including some 'at risk' species, bees and insects and wildlife generally. We make our own electricity via solar panels and export surplus to the grid, etc. So basically I cannot see anything else we could do that would achieve more for the environment without wrecking our carefully balanced enterprise and rendering it unviable. I fear that people in our position will be penalised for having done all the right things too soon, and will be left in limbo or totally unsupported in the future.”

Respondents also raised the important point that measures need to be specified on a case by case basis in accordance with farm needs. For example, it wouldn't be relevant to enhance public access in areas where biosecurity is important. Put simply *“every farm is different, requiring a different balance”* and this needs to be reflected in the range of options available at a farm level.

These views are noteworthy as they highlight the need for the farm to be supported on their own journey, so that they can specify management options relevant to their own specific context. This type of approach should reward continued positive management with some highlighting the need for a maintenance payment to enable this continuity.

These sentiments are reinforced by the following responses, which received some of the most emphatic agreement of the whole questionnaire (n = 365):

- 93% (n = 339) agree that ELMS should reward existing benefits already provided by farmers and land managers.
- 89% (n = 325) also agree active farmers should be awarded a maintenance payment for meeting basic standards under Tier 1.

Finally, it is also worth noting that several farmers highlighted climate change as a factor which needs to be given special consideration.

“Land management help is needed for climate alterations in water management and crop diversification.”

“Urgent requirement for climate change measures to be included, sequestration, energy efficiency and renewable energy production. Actually, very urgent!”

“Climate change is manifestly the most important aspect of land management for the future.”

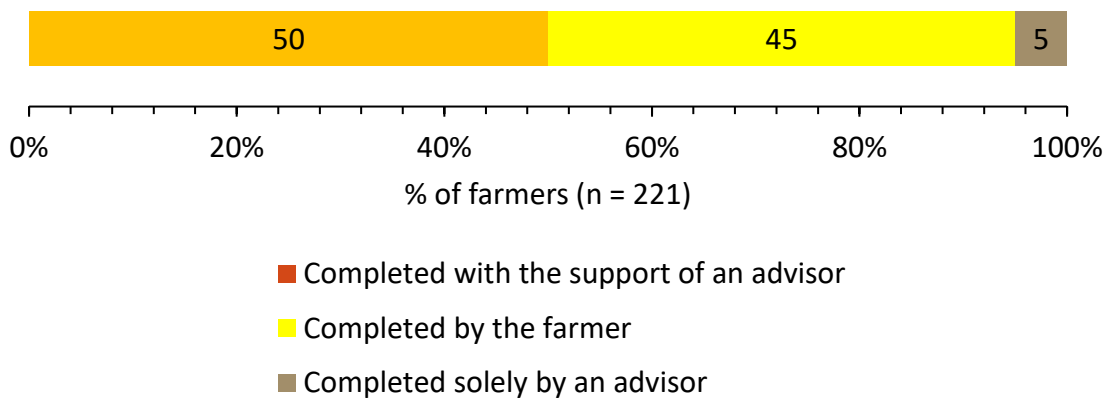
3.3 Working with Others

In Stage 3 of this Trial we will investigate four collaboration scenarios within our focus groups and in order to prepare for this we included several questions on preferences for working with others in the context of advice, support, guidance and knowledge exchange.

3.3.1 Working with an Adviser

Respondents were asked who should draw up a Land Management Plan. In total, 229 respondents gave a single answer, with 95% of farmers either wishing to complete the LMP alone (n = 99) or with the support of an adviser (n = 111). Very few respondents (n = 11) would want an adviser to complete an LMP alone, reiterating the importance of farmers wanting to maintain their individual responsibility for on-farm decisions (Figure 5).

Figure 5. Farmer preferences surrounding adviser involvement when completing an LMP for ELMs (n = 221)



In combination with the open-ended responses gathered, **Figure 5** illustrates the key role advisers will play in developing LMPs. Whilst some farmers were hopeful that the process for developing an LMP would be “simple and easy to understand”, so that they will not need to incur “the additional cost of a professional” (in the words of one farmer, “another bill”), many accepted the likely need for support. One stated that:

“I think that the use of an agent or adviser will be a necessary part of any applications as it is too easy to miss something important when trying to fill forms, just look to the endless problems farmers have had with the last twenty years of subsidy paperwork.”

A further farmer argued that:

“Defra needs to revert to what ADAS was 30-40 years ago, the advisers then came and worked with farmers for the best outcomes for the schemes at the time, sadly we now have there is a lot of conflict between farmers and DEFRA/RPA and NE.”

There was consensus, however, that bureaucracy should be minimal because of the lack of time available to farmers and how this bureaucracy is seen as a barrier preventing farmers from engaging with AES (see Figure 8).

Several respondents stated that they do not currently have enough access to advice and support surrounding existing AES. Whilst larger, typically arable farmers may use a land agent to assist them with their AES applications, smaller farmers are unlikely to have the resources to do so. Where they are located outside certain designations (e.g., outside of a medium- or high-priority Countryside Stewardship water quality area within which Catchment Sensitive Farming operates), these farmers may also be excluded from receiving free advice.

“I have contacted one or two external organisations regarding environmental and access issues and have not received much help or support”.

“We do the agri-environment schemes and I feel they should be more integral to the business but advice on further integration is limited, so it is still only a small part”.

Some farmers also implied that the advisory network surrounding them is fragmented and characterized by a high turnover of advisers:

“Less and less contact [with advisers] and now nobody who really knows us. (...) Often conflicting advice from different people.”

This echoes existing studies (e.g., Sutherland *et al.*, 2013; Hurley *et al.*, 2020), who found that farmers having trusted advisers who have built lasting relationships with them is crucial to long term management change.

Just 7% (n = 23) of farmers believed that advisers should complete the LMPs for them, emphasizing the importance of farmers being autonomous (see Stock & Forney, 2014) and highly involved in decision making:

“I do not want to consult an expert to make a plan for my farm when I know how expensive this could be, additionally I think a distinction needs to be made between the cost of making plans and the cost of executing the work to implement them, setting that aside from the need to earn a living.”

“One must be very careful of 'Experts'. We live in very diverse environmental areas, even when geographically very close, experts over experience does not always work. More weight should be given to local knowledge than an expert, for instance, coming on-farm under the umbrella of ELM's but pushing rewilding” .

This quote aligns with a recent report (Rust *et al.*, 2020), which found that farmers are ‘sick’ of certain types of experts and instead trust their peers and online sources of information. This illustrates the importance of ELMs being designed to incorporate farmers’ experiential knowledge alongside expert knowledge.

“If you need a farm adviser to help complete the plan, it means the requirements are already too complicated. Farmers are quite tuned into the environmental aspects of their land and its locality.”

“Clued up advisers might not be necessary if you get the online advice and maps correct which are relevant to our farms. We can educate ourselves if you keep it simple and user friendly. Farmers within a cluster group can help each other”

3.3.2 Working with other Farmers

One question in the survey asked whether the LMP should “help me coordinate with other farmers” where only around half of respondents agreed this was a good idea (48% n = 384). This general level of interest was also repeated in a further question asking whether respondents feel it is “important for farmers to work in groups to participate in Tiers 2 and 3” (47.3% agree n = 369). Farmers seem to be evenly split with some showing a preference for collaboration and others preferring to go it alone.

“All farmers should have a basic LMP with some "rules" to be granted funding. There is too much emphasis on group working as this will "hold back" enthusiastic farmers.”

This means it is important not to place too much emphasis on farmer coordination, but at the same time making sure this option is available for those willing to participate. This is reflected in the following nuanced statement:

“Co-ordinating activities with other farmers seems desirable for wider impact, but I do not see how a plan can help you do that. likewise understanding of local organisations and communities is not achieved by filling in a form. Finding out the necessary information could be very time consuming and difficult, unless the priorities are

described in the handbook so that farmers can consider them along with the options available. As much flexibility as possible should be built into options so that farmers can both experiment and change their practice as new research come to light.”

Nonetheless for those interested in working with others, several farmers make the point that there should be incentives built into the policy to encourage engagement.

“ELMS should facilitate farmer clusters and landscape scale farming, rewarding farmers with extra money for that coordinating effort”.

Despite this, the following quote indicates that farmers who do not currently receive enough advice and support are unsure as to who they would be able to collaborate with:

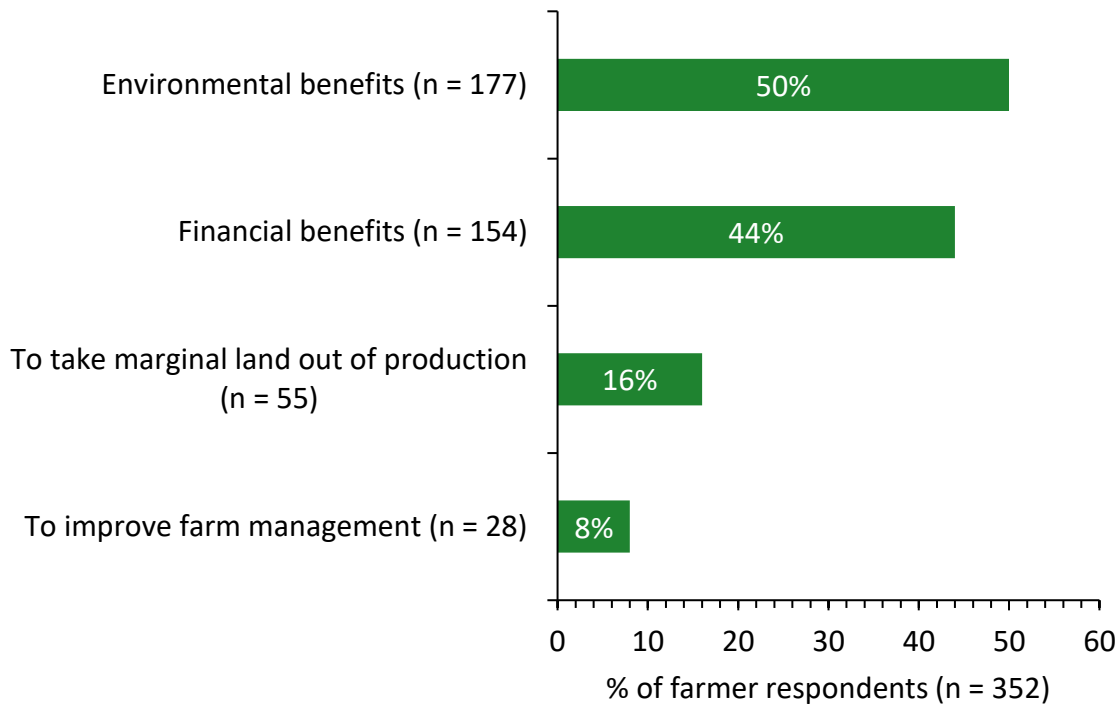
Tiers 2 and 3 rely on the setting up of Producer Groups or other means of facilitating cooperation between farmers (e.g. in a particular area or river catchment). Who will create these? How will they be funded? There's no such group yet for my area.

This provides an interesting view where the farmer shows a preference for industry-led coordination and advice, but also points towards the need for further work to be done by Defra and others to help farmers utilise the pathways to engagement and cooperation that may already be available to them.

3.4 What motivates farmers to participate in environmental schemes?

One of the key aspects of designing the new scheme will be its interest to farmers and land managers. In this final section we explore elements of feedback concerning the motivations of farmers to participate in environmental schemes. The key factors motivating farmer engagement are summarised in **Figure 6**, demonstrating that environmental and financial benefits play a strong role in the decision-making process.

Figure 6. The four key factors which motivated farmer respondents (n = 352) to participate in AES' according to their free-text answers



By ‘environmental’ benefits, most farmers referred to general environmental improvements (n = 105), wildlife (n = 47), habitat creation (n = 17), and conservation (n = 15). When discussing financial benefits, farmers generally referred to the additional income provided by AES, with some also referring to the potential of accessing funding for capital items (n = 10).

Some farmers (n = 55) referred to AES as providing an opportunity to take marginal land out of production as it allows farmers to continue making an income from this land without having to farm it in a way which doesn’t suit the land’s capability. This indicates that farmers are more likely to be receptive to the new scheme in a context where this works alongside their production objectives:

“I think that food production will tend to remain on the most productive soil types and that the more marginal soils and landscapes will increasingly provide environmental gain.”

Or as another farmer explained *“Some land will be better suited to environmental enhancements than others. The value of farmers producing food should not be overlooked - especially on very good land where good yields can be achieved. Better to concentrate on production where yield potential is high and concentrate on environmental enhancement where agricultural productivity potential is not so high.”*

We were also able to display the most frequently used words mentioned by those farmers who provided qualitative answers relating to what motivates them to participate (Figure 7). This word cloud supports the above observations where a primary driver of environmental delivery is the link with financial certainty. The cloud also reinforces feedback concerning the favourability of habitat management, the use of marginal and unproductive areas and the relevance of “friendly support” in a business context.



Figure 7. Word cloud displaying the 50 most frequently used words used by farmers (n = 352) who provided free-text surrounding what motivated them to participate in an agri-environmental scheme.

3.4.1 Exploring factors which could result in a lack of involvement in ELMs

Of the 16% (n = 71) of farmer respondents who stated that they have never been involved in any AES, 13 provided feedback. Farmers who were unengaged with previous schemes were less likely to provide feedback surrounding the schemes than farmers who did engage, illustrating the difficulties which arise when attempting to explore ways of increasing their engagement with schemes. Exploring the views of these unengaged farmers was key to this study as encouraging these farmers to engage with an agri-environment scheme for the first time may have significant benefits. One arable farmer

said that they are not involved in any because they “*fear excessive interference from those with motives and agendas contrary to [the farms’] idea of working*”.

Table 2 displays the most common themes mentioned by farmers who are not engaged in AES. This highlights the importance of schemes being economically viable, inclusive for various farming types (e.g., horticulture, which constituted 20% (n = 14) of farmers who are uninvolved in previous schemes), compatible with principle business activities, proven to work in terms of achieving environmental improvements, and easy to manage. These issues, once addressed, may encourage these farmers to engage with future schemes.

Table 2. Key reasons given by unengaged farmers for not having engaged with any AES in the past.

Reason given for being uninvolved in AES	Illustrative quote
Too complicated	Cut all the paperwork, farmers should be farming.
Too inflexible	Too restrictive to tempt us into using them.
Horticultural	As a Horticultural business, we do not qualify for any of these schemes. We are a Leaf Demonstration Farm but do not receive any financial support towards stewardship.
Scepticism towards the financial benefits of AES	I did review the simplified arable stewardship and considered it a waste of my time and resources because (I’d have to have) some grass buffer and some pollen and nectar mix as buffers, then an areas of wild bird seed covers. In all, I would take out 6.3ha and receive payment of £3200 per year. Once I have bought seed, plant, managed fixed costs it is a nonstarter, I can earn money from farming far easier and not have a clipboard dictating to me over some incidental. If ELMS is anything like the above, I will give it a miss and be ruthless to farm for profit.

We also asked respondents about their more general barriers to making AES accessible, where many overlapping themes have been observed (see **Figures 8 & 9** and **Table 3**).

Figure 8. Barriers to joining agri-environment schemes according to farmer respondents who provided qualitative answers surrounding AES schemes (n = 205)

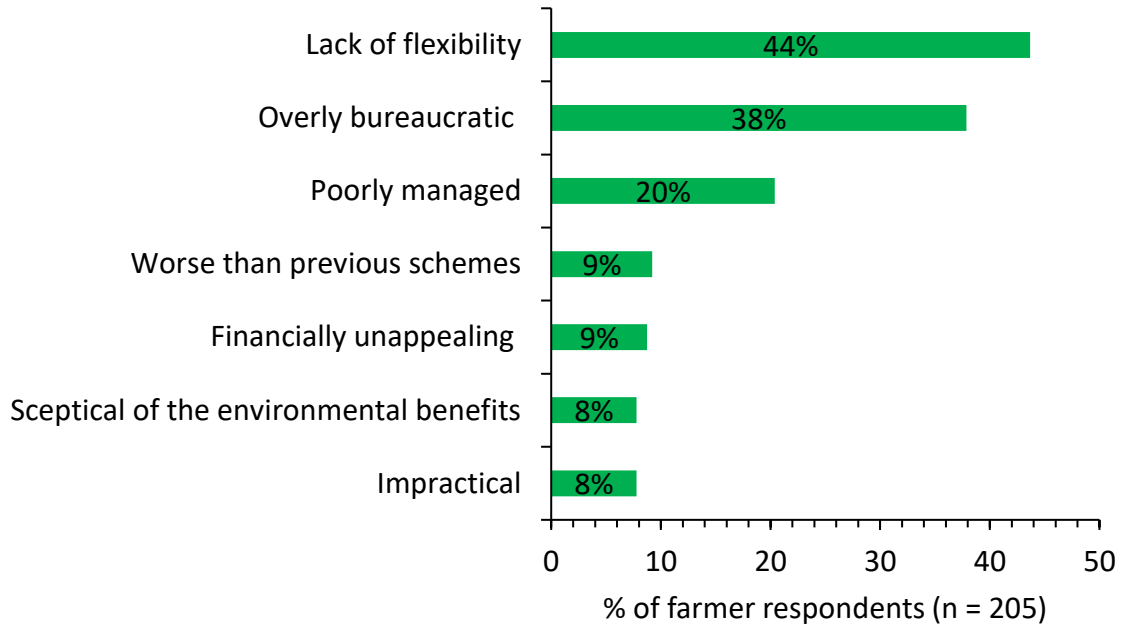


Figure 9. Word cloud displaying the top 25 most frequently used words by farmers when providing negative sentiments towards existing AES



Table 3. Barriers which have affected the accessibility of outgoing AES’. These barriers can provide lessons when considering how the ELMs scheme should operate

Barrier to making AES schemes accessible	Key quotes illustrating the sentiment
<p>Inflexibility</p>	<p><i>HLS scheme not flexible enough. Being tied into the same measures in the same place for 10 years has been very restrictive.</i></p> <p><i>Far too prescriptive. Due to the prescriptive nature of current schemes and the penalty clauses, we would more likely engage in private environmental banking arrangements rather than government schemes.</i></p> <p><i>Too many rules and ties. Was a mistake to join.</i></p>
<p>Excessive bureaucracy</p>	<p><i>Higher Tier is stunningly and unnecessarily bureaucratic.</i></p> <p><i>Extremely complex to apply and administer. Needed specialist just to administer (at 10% of the cost).</i></p> <p><i>The admin of current CSS is beyond belief.</i></p>
<p>Financially inviable</p>	<p><i>Payments received do not reflect costs involved.</i></p> <p><i>Yet to be convinced its financially worth it.</i></p> <p><i>Funding needs to be sufficient to encourage active management.</i></p>
<p>Poor management</p>	<p><i>Inspector combative and little understanding of environmental goals. One of the reasons some farmers have chosen not to renew. If a farmer misuses a scheme for profit, they should be penalised. However, if an environmental option is tweaked for greater conservation benefit to no financial gain, then it is absurd that a farmer could suffer financially.</i></p> <p><i>Contact with Natural England advisers is difficult to get and derogations limited and difficult to obtain.</i></p>

The most common negative sentiment surrounding current AES' was that these schemes lack flexibility, whereby the measures farmers can adopt are perceived as overly prescriptive, with farmers unable to adjust their agreements midway through a contract, or where farmers perceive penalties as too rigid and inconsiderate of farmers' circumstances and situations. There was also a recognition by farmers that farming is heterogeneous, thus the use of prescriptive measures limits the potential of these schemes.

In terms of bureaucracy, several farmers stated that existing AES are overly complicated to apply for and manage, with high administrative burdens:

"The administration by Natural England and the RPA on these schemes has been woeful - it is far too complex - no wonder take-up has been so poor."

"Extremely complex to apply and administer. Needed specialist just to administer (at 10% of the cost)".

Farmers believe outgoing AES' are poorly managed in several ways. Some exhibited distrust of the RPA and NE, largely due to payment delays or negative experiences with staff (e.g., *too many people with too many A levels trying to improve things!!!! what a waste of taxpayers' money, I will not renew, I would rather loose £20,000 and do the job properly!*; *'Why have Natural England's "boots on the ground" been removed in favour of the RPA's "pie in the sky?"*), whilst others believed they are unable to access enough information and advice to support their applications.

The findings of our survey echo the conclusions reached by Hurley et al. (2020) from their empirical research into so-called 'hard-to-reach' land managers in the context of Environmental Land Management. Though we prefer to use the term 'unengaged', since 'hard-to-reach' has been used to blame farmers when others may be more responsible for poor communication (e.g. distrust of Defra, lack of listening in the past from policy-makers and bad experiences of being involved), the Hurley et al. (2020) study identified the following reasons for low engagement with AES:

1. Lack of time
2. Too much bureaucracy
3. Lack of trust and use of trusted intermediaries
4. Digital divide (e.g. poor broadband connectivity) preventing farmers from engaging in scheme design or delivery which is often digital by default.
5. Bad experiences of late payments or punitive fines for administration mistakes
6. Lack of incentives for certain sectors (e.g. horticulture) to be involved

3.4.2 Testing for significant associations between the ‘hard to reach’ and various factors to identify how to make ELMs accessible for these farmers

Chi-squared testing revealed some significant associations between unengaged farmers and several characteristics (**Table 4**). The finding that unengaged farmers are significantly more likely to either want an adviser to complete their ELM management plan on their behalf or to support them when completing it indicates that these farmers may need additional support to farmers who are already familiar with the process of applying for AES.

The finding that farmers who are unengaged in schemes or only adhere to cross-compliance require ELM to be flexible highlights the importance of farmers feeling independent and autonomous and reiterates the quotes gathered from these farmers who said that the use of prescriptive measures was a reason for not previously engaging.

Table 4. Significant associations between unengaged farmers and several farmer characteristics and answers to particular questions

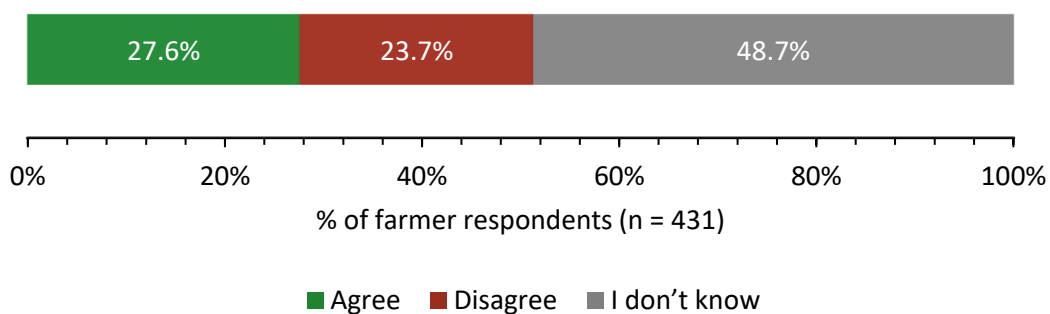
	Significance for farmers unengaged with any schemes (n = 71)	Significance for farmers who only adhere to cross-compliance (n = 46)	Nature of the association
Type of farming	p = <0.0005	Non-significant (p = 0.068)	Horticulture/beef/sheep/‘other’ farmers = more unengaged
Environmental management	p = < 0.0005	N/A	Farmers who are unengaged in any AES are more unlikely to go beyond cross-compliance
Willingness to be involved with ELMs	P = <0.0005	P < 0.0005	Unengaged farmers = more unlikely to be interested in getting involved with ELMs
Agreement with ‘An ELMs management plan should be completed by an adviser so the farmers just needs to know what to do’	p = 0.002	P = 0.001	Unengaged farmers = more likely to want an adviser to complete an ELMs management plan on their behalf rather than doing it themselves

	Significance for farmers unengaged with any schemes (n = 71)	Significance for farmers who only adhere to cross-compliance (n = 46)	Nature of the association
Agreement with 'An ELMS management plan should be completed with the support of an adviser	P = <0.0005	Non-significant (p = 0.200)	Unengaged farmers = more likely to want an adviser to provide support when completing an ELMS management plan
ELMs should be flexible	p 0.002	P = 0.005	Unengaged farmers = more likely to argue that the ELMS scheme should be flexible

3.4.3 Farmer uncertainty and its implications for engagement with ELMS

Similar numbers of farmers agreed and disagreed that they feel optimistic about farming. The most frequent answer was 'I don't know', indicating that farmers are unsure as to how optimistic they can be under current circumstances, likely due to the ongoing uncertainty surrounding what ELMS and other post-Brexit agricultural policies will entail.

'We feel optimistic about our future in farming'



Another way of indicating whether farmers are feeling optimistic about farming is to determine whether they plan to take on any more agricultural land in the coming years. Answers to this question (n = 439) were mixed, with 23.5% (n = 103) agreeing that they may take on more acreage, 37.8% (n = 166) disagreeing, and 38.7% (n = 170) saying they are unsure whether they would consider this.

Farmers who were unsure as to whether they feel optimistic about farming had some key characteristics which set them apart from farmers who knew how they felt about the future. **Table 5** provides an overview of the significant associations found. The finding that farmers who were uncertain about the future were also unsure as to whether they believe food production is becoming less important is interesting as it indicates that these farmers need advice and support as they navigate the next few years.

Table 5. Significant associations between farmer characteristics and how optimistic they feel about the future

Characteristic	Significant association (95% CI)	Nature of the association
Farm size	$\chi^2(10.130, 4) = p 0.0038$	Unclear (farms 100-249ha) were the most likely to be uncertain of their futures
Agreement with whether ELMs should only reward additional benefits	$\chi^2(6.568, 2) = p 0.0037$	Farmers unsure about whether they're optimistic about farming were more likely to be unsure
Agreement with whether they believe food production is becoming less important to their farming businesses	$\chi^2(6.943, 2) = p 0.031$	Farmers unsure about whether they're optimistic about farming were more likely to be unsure

Some significant associations were found between whether farmers were uncertain about growing their farm business and other answers within the survey (Table 6).

Table 6. Significant associations between farmers uncertainty about whether they will grow the acreage of their farms in the next 10 years and other answers provided in the survey

Characteristic	Significance (95% CI)	Nature of the association
Optimism towards their future in farming	$\chi^2 (58.774, 6) = <0.0005$	Farmers who feel optimistic were significantly more likely to be considering growing their acreage
Farm tenure	$\chi^2 (20.097, 9) = 0.017$	Farmers who wholly or mostly own are more likely to be considering growing their acreage
Farm size	$\chi^2 (42.403, 12) = <0.0005$	Smaller farmers (<49ha) appear less likely to be considering growing their acreage
A belief that food production is becoming less important to their farming business	$\chi^2 (15.211, 4) = 0.004$	Farmers who are unsure about whether they will grow their acreage were more likely to disagree that farming is becoming less about food production

The qualitative findings indicate that smaller farmers may feel particularly uncertain about their futures due to the view that their needs are not being considered:

"I feel that small family farms are being forgotten/made to feel less important (incl by NFU) than the big agri-businesses and it is overlooked that people like myself farm more or less on their own with minimal income and therefore cannot afford to employ agents /consultants/secretaries to deal with the endless paperwork/red tape. Feels like the only option is to give up farming and sell up to those bigger than myself. (...) Whereas I feel small farms which were once the norm I see little evidence from NFU/government that those setting the rules and regulations give us a second thought, bigger is not always better for the environment."

4. Discussion and Recommendations

In this survey we received an extensive number of detailed responses from commercial farmers and growers representing every major farming type in South East England. With such a rich data set it has not been possible to report on every single element of feedback. We've therefore focussed on the key areas being investigated in our trial, concerning Land Management Plan design, farmer engagement and collaboration. Nonetheless, the robust dataset, comprising 441 responses, enables conclusions to be made with reasonable certainty.

4.1 Summary and Discussion

4.1.1 Land Management Plan Design

The principle aim of this survey was to inform the design of a land management plan template to be actively trialled on twenty farms across the region. The results presented in Section 3.1 identify 24 key areas that farmers would be willing to see recorded in an LMP. Particularly high preference was expressed for the plan to be flexible (86% in favour), help to generate a list of feasible options (83%) and take account of previous environmental work done on the holding (79%).

Free text responses clarified that flexibility within the LMP should allow for farmer experimentation, be locally relevant, and non-prescriptive. Responses on flexibility are also aligned with concerns about administrative complexity and the burden of record keeping, typified by the statement *"I'd prefer ELMS to focus on the positive environmental issues, not the things I can be penalised for if I make a mistake, which keep me awake at night."* The fear of entering agreements because of concerns over being fined for administrative errors, plus the complex bureaucracy, have been consistently raised as key issues in previous research (e.g. Hurley *et al.*, 2020). Many respondents also highlight the need to recognise the role of agriculture in producing food.

Farmers show a high degree of preference that "environmental Information in the LMP should help me identify the opportunities on my farm" (78% in favour). We interpret this to mean that environmental information need only be sufficient to identify the opportunities and should not be too detailed. This is also clarified in the high preference statement that the LMP should *"include records on woodland and hedgerow locations"* (81% in favour), which we interpret as a vote in favour of high-level area or feature based recording instead of more detailed survey information (which only received 33% preference in favour).

Taken together with the moderately high preference statements (receiving scores over 50% in favour), a picture emerges of how farmers would like to see the LMP set out to include:

1. High value or high potential (enhancement) areas;
2. Mainly with maps and actions
3. Identify risk areas
4. Set out details of local environmental priorities; and
5. Record a range of core farm features such as woodlands, hedgerows, watercourses, wetlands, ponds, soil type and condition, fertiliser use.

In context with the strong desire to keep it simple, we suggest that the LMP should not seek to include any more complex detail than these basic, high level aspects.

Finally, in this section we also explored the types of administrative approach that farmers would favour, where 70% identified a preference for a points-based scheme over area based, results based, credit based or reverse auction approaches. The free text answers to this question indicate that farmers would prefer not to see a competitive element within the bidding process therefore *“encouraging all farmers to be involved.”*

Answers to this question also returned to the theme of simplicity emphasising the strong desire amongst farmers to make the scheme as light touch as possible *“Just give us the outline framework, and we will do the work.”*

Stage 2 of this trial will investigate these preferences in more detail in a directly applied context.

4.1.2 Response to Current Policy Design

In Section 3.2 we analysed farmer responses to the proposed three-tiered approach, 25 YEP objectives and willingness to deliver ‘Public Goods’.

Farmers are in favour of a simple and widely accessible Tier 1 focus to the LMP, but one which also gives access to Tiers 2 and 3 by the same pathway. There should not be a “one size fits all” but instead, responses indicated in favour of a modular design so that all farms, big or small, can tailor their ambition according to their specific circumstances.

Farmers also raised concerns about the perception of too much complexity and too much exposure to unwanted attention from local interest groups. These factors were raised as drivers against willingness to participate in Tiers 2 and 3, with one farmer suggesting it would be *“unreasonable to allow them too much influence.”* This highlights how there will be a need for Defra to carefully manage and filter the channels through which local priorities are presented at a farm level.

Turning to the 25 YEP, many farmers believe that some, but not all objectives are relevant to their business indicating a broad willingness to respond positively. Nonetheless some objectives such as clean air and environmental hazards were seen as less relevant in comparison to others such thriving plants and wildlife, waste reduction and efficient resource use. This has policy relevance where farmers should either be encouraged to deliver against the aspects they are most strongly engaged with, or Defra should consider more investment in engagement and knowledge exchange in the areas farmers see as less relevant.

Finally in this section, we also considered willingness to deliver certain 'Public Goods'. Whilst there was a strong positive response in favour of delivering a wide range of public goods, this also generated extensive free text commentary expressing anxiety over existing relationships with the public. This is typified by one response stating, "*[f]armers are trying to do their best it's the public that need to support British products, there are a lot who just do not care*". This suggest that in policy measures going forward, there should be demonstrable acknowledgment of the effort and value provided by the sector.

This theme of acknowledgement was also expressed by some early adopters who feel there is a risk of being penalised, losing out on financial support "*for having done all of the right things too soon*". Sentiments reinforced by some of the most emphatic responses of the whole questionnaire:

- 93% agree that ELMS should reward existing benefits already provided by farmers and land managers; and
- 89% agree active farmers should be awarded a maintenance payment for meeting basic standards under Tier 1 (n = 365)

Our recommendation is therefore that ELMS needs to be supportive and enabling, acknowledging the good will behind actions delivered by farmers. Farmers are in favour of a maintenance payment as it provides financial certainty, but this is aligned with the way in which farmers feel they are perceived by the public in general.

4.1.3 Working with Others

Later stages of this trial will investigate a number of collaboration scenarios and in this regard, we asked several questions on the theme of 'working with others'.

In terms of working with an adviser, responses were nuanced recognising that it is often necessary "*as it is too easy to miss something important when trying to fill forms*". However the dominant view was that farmers either wish to complete the survey alone or with (only light touch) support from an adviser.

The overriding preference throughout the survey is that ELMS should be “simple and easy to understand” limiting the need to incur *“the additional cost of a professional”* or in the words of another farmer *“If you need a farm adviser to help complete the plan, it means the requirements are already too complicated.”*

Others noted difficulties in getting the right forms of advice, particularly in the context of making environmental decisions more integral to the business, highlighting the need for better extension service availability regardless of spatial targeting. Some farmers also implied that the advisory network surrounding them is fragmented and characterized by a high turnover of advisers. This is a well-known factor, where a long-term relationship with a trusted adviser is crucial to on farm decision making. For the purposes of this study, this suggests Defra should attempt to achieve a balance between advice availability (particularly around the integration between business planning and environmental delivery) whilst ensuring the overall policy is still light touch, so that administration and delivery are not over professionalised.

Responses to questions on working with other farmers were equally nuanced, with an even split between a preference for collaboration and others who prefer to go it alone. Some suggest there is too much emphasis on group working and this potentially holds back enthusiastic farmers who are autonomous in their outlook. Some farmers noted how the need to experiment and adapt is not necessarily compatible with building consensus and agreement amongst a group.

For those interested in working with others, several farmers make the point that there should be incentives built into the policy to encourage engagement *“ELMS should facilitate farmer clusters and landscape scale farming, rewarding farmers with extra money for that coordinating effort”*. Some also mentioned preference for industry-led organisations, such as producer organisations to play a role. Indicating that these types of organisation could accelerate environmental delivery, in the context of marketing position and business development.

4.1.4 Motivation to Participate in Environmental Schemes

In our final section of results, we explored factors that motivate and engage farmers. Figure 8 shows that the predominant interest is simply the environmental benefit alone (50%), however this is necessarily underpinned by the financial benefit (44%). Furthermore, the need to balance productive and unproductive areas of the farm was also an important factor, allowing the farm to play to its strengths in both environmental and production elements.

Previous research has illustrated that farmers are motivated to get involved in AES for several different reasons (Mills et al., 2018). These include financial benefits, but also

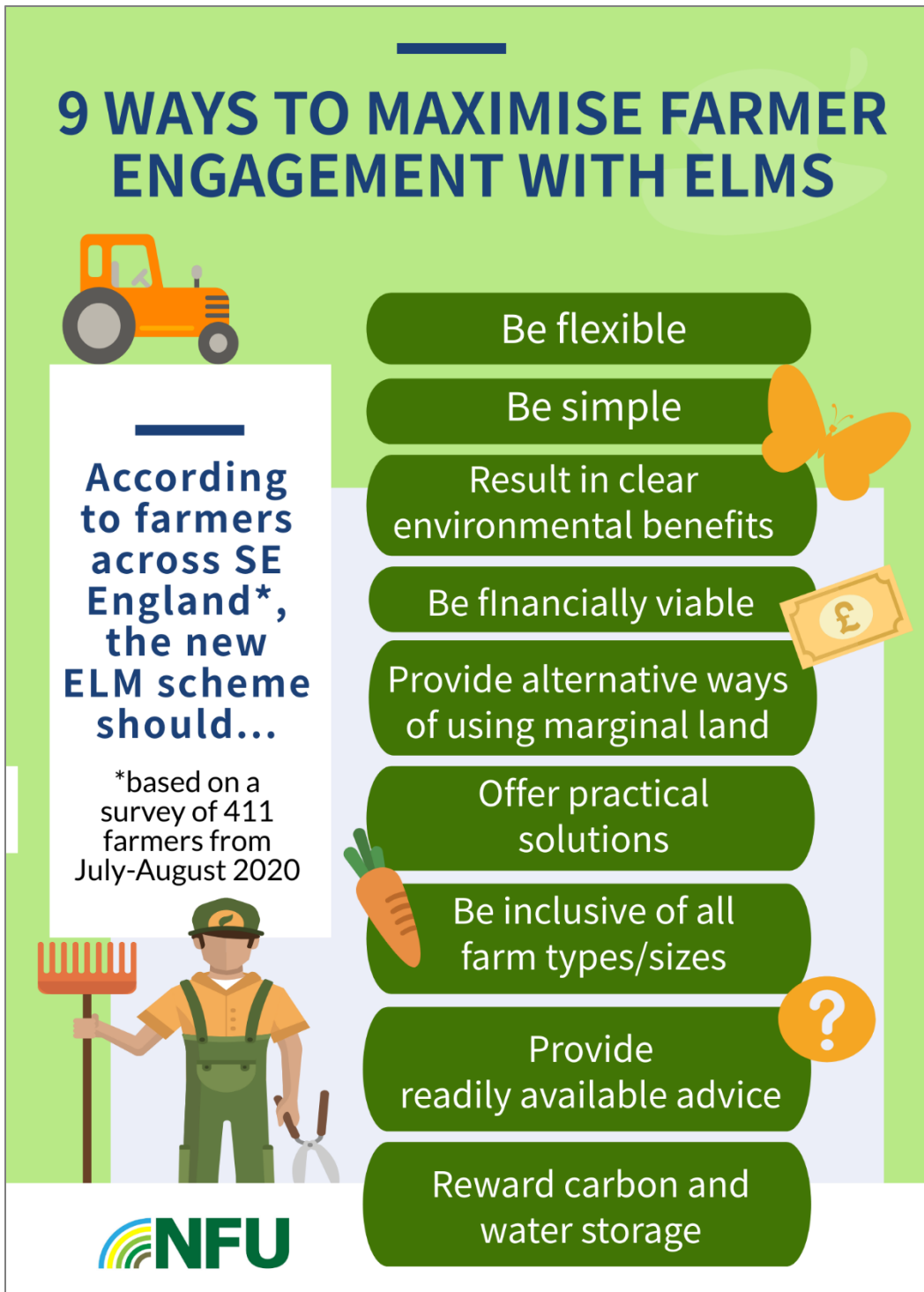
environmental motivations, as well as the desire to improve farm management (Mills et al., 2018). Sometimes environmental management was undertaken even in the absence of subsidies.

In the context of the earlier preference that the LMP should “*help to generate a list of feasible options*” and the need for advice on integrating business decisions, the mention of productive verses unproductive land adds weight to a view that farmers would benefit from tailored business decision support. This is given further emphasis by our observation that unengaged farmers are significantly more likely to rely on an adviser. We take this to indicate that an approach catering for the ‘newly engaged’ in a business-friendly context would be advisable to maximise public good delivery.

In terms of those who have not previously engaged, our analysis highlights the need to be inclusive of various farming types (particularly the horticultural sector), to be compatible with principle business activities, proven to work in terms of achieving environmental improvements, and above all easy to manage. To illustrate these key engagement factors, we have produced an infographic (**Figure 10**), setting out nine ways to maximise farmer engagement with ELMS.

Measures helping to deliver this kind of approach are very likely to counter the very clear criticism we have recorded of the previous ways of working which are inflexible, bureaucratic, have questionable financial benefits and lead to uncertain (if not poor) environmental outcomes.

Figure 10. Infographic highlighting nine ways to maximise farmer engagement with ELMS



4.2 Summary of Recommendations

Following the above analysis, we have a series of six recommendations that Defra should consider taking forward into the design of ELMS.

1. Land Management Plan (LMP) design should be flexible, helping to generate a list of feasible options and taking account of previous environmental work done on each holding. The LMP should also include:
 - a. Information on high value, high potential (enhancement) and risk areas on the holding;
 - b. Simple maps and actions, recording a range of core farm features such as woodlands, hedgerows, watercourses, wetlands, ponds, soil type and condition, fertiliser use; and
 - c. Details of local environmental priorities.
2. LMP design should encourage all farmers to engage by focussing on:
 - a. A points-based system;
 - b. Multi-annual funding certainty; and
 - c. Tier 1 delivery, providing access to Tiers 2 and 3 through simple add-on options.
3. ELMS should be simple and easy to understand where, as a rule of thumb, if you need a farm adviser to help complete the LMP, it means the requirements may already be too complicated.
4. ELMS should facilitate farmer clusters and landscape scale farming, rewarding farmers with extra money for that coordinating effort. However, this shouldn't prevent farmers also going it alone.
5. Recognising that some aspects of the new system will inevitably require guidance, Defra should review opportunities to incentivise industry-led organisations, such as producer organisations to support business relevant decision making within the context of the new policy; and finally
6. Defra should track ELMS uptake amongst traditionally unengaged farmers in line with the engagement factors identified in this report.

References

Defra (2020) New details of the flagship ELM scheme unveiled by environment secretary. [Online]: <https://deframedia.blog.gov.uk/2020/02/25/new-details-of-the-flagship-environmental-land-management-scheme-unveiled-by-environment-secretary/> [Accessed 28/08/2020].

Hurley, P., Lyon, J., Hill, J., Little, R., Tsouvalis, J., & Rose, D.C. (2020) Co-designing the environmental land management scheme in England: the why, who, and how of engaging 'harder to reach' stakeholders. *Pre-print*. [Online]: <https://osf.io/k2ahd/download> [Accessed 23/09/2020].

Mills, J., Gaskell, P., Ingram, j., & Chaplin, S. (2018) Understanding farmers' motivations for providing unsubsidised environmental benefits. *Land Use Policy*, **76**, 697-707.

Rust, N.A., Stankovics, P., Jarvis, R.M., de Vries, J.R., Ingram, J., Mills, J., *et al.* (2020) Have farmers had enough of experts? *Working paper no. 3005*, Newcastle University. DOI: 10.17605/OSF.IO/6W2Y7.

Stock, P.V., & Forney, J. (2014) Farmer autonomy and the farming self. *Journal of Rural Studies*, **36**, 160-171.

Sutherland, L-A., Mills, J., Ingram, J., Burton, R.J.F., Dwyer, J., & Blackstock, K. (2013) Considering the source: Commercialisation and trust in agri-environmental information and advisory services in England. *Journal of Environmental Management*, **118**, 96-105.

Appendix 1 – Survey Questions

Appendix 1 – Farmer Respondent Characteristics

This Appendix summarises the farming, demographic and environmental characteristics reported by the 441 respondents to this survey.

Figure A1. Time spent in farming according to the farmer respondents. Many farmers may have selected ‘over 30 years’ due to coming from a generationally spanning family farm rather than having been personally farming for over 30 years.

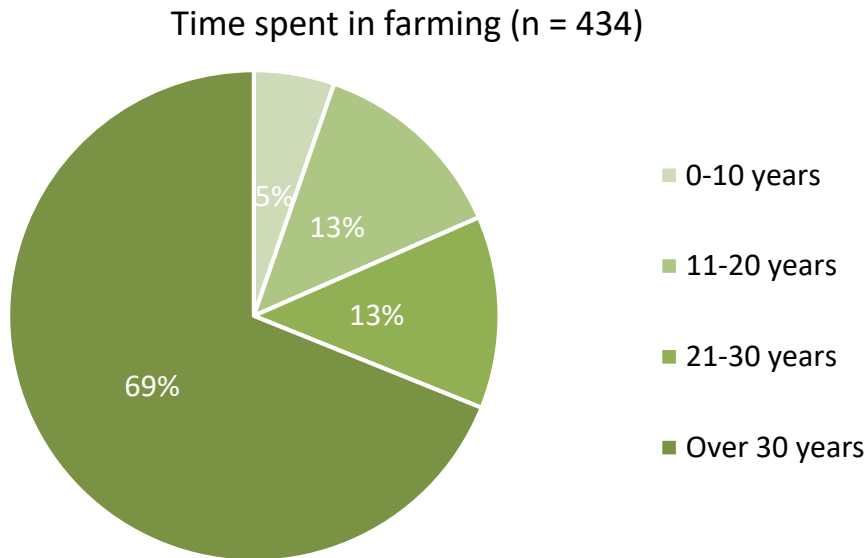
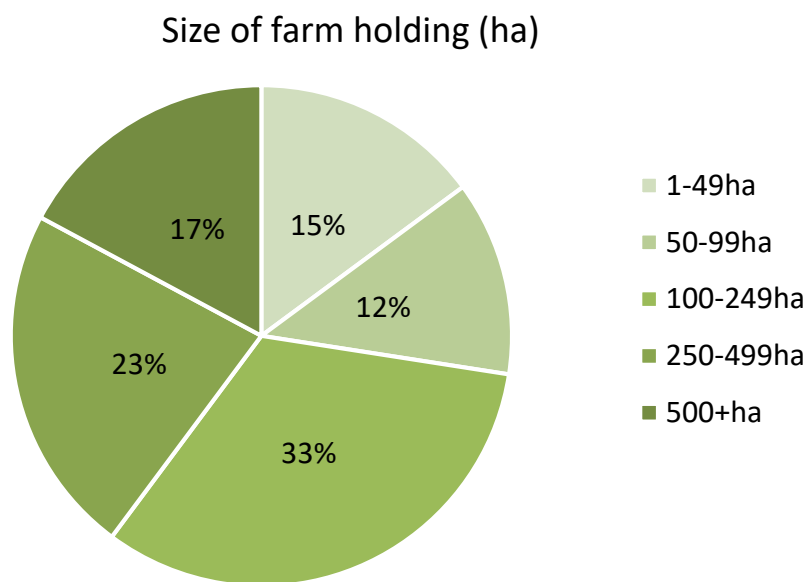


Figure A2 Range of farm holding size amongst survey participants



Most farmer respondents who provided their tenure (n = 433) either wholly or mostly owned their farmland (73%, n = 318), whilst the remainder (27%, n = 115) stated that they were either wholly or mostly rented. This ‘rented’ category is likely to include contract farmers as this was not an option within the survey.

Figure A3 Farm production type amongst survey participants

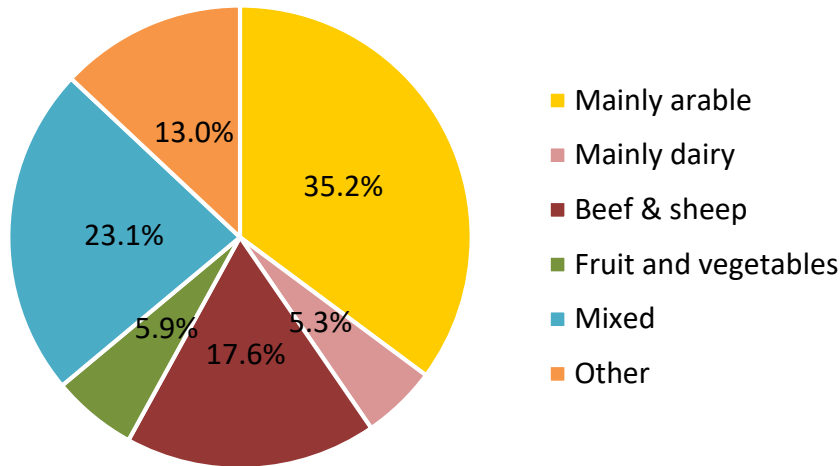
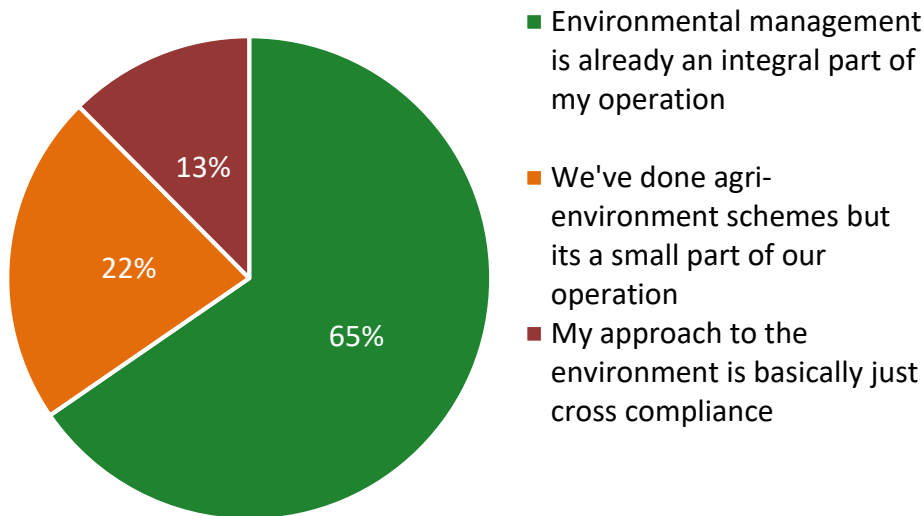
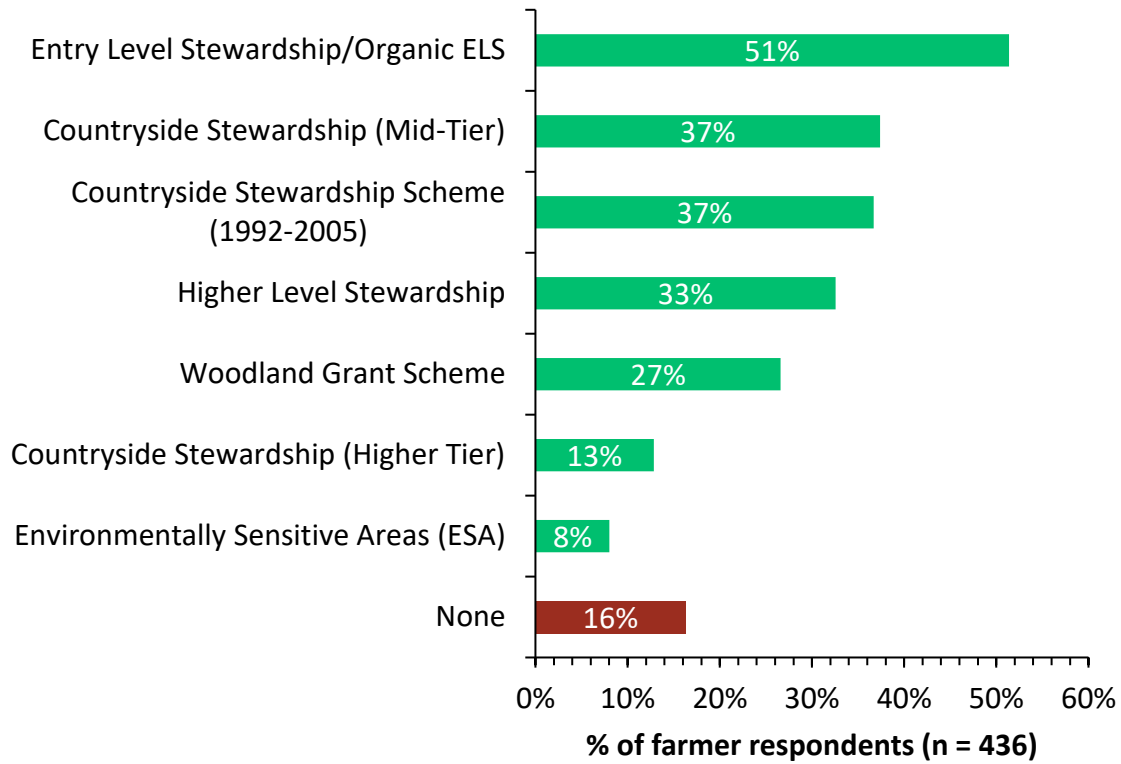


Figure A4: How Integral is Environmental Management to Your Farm?



Note: Farmers were asked to select which statements best reflected their operation. 370 respondents selected a statement whilst 61 provided elaboration instead to give more detail (n=352)

Figure A5. The agri-environment schemes (AES) farmer respondents have been involved in (either currently or in the past).



Appendix 3 – Detailed Land Management Plan Preferences

Table A1 - An ELMS Land Management Plan Should...

Be flexible, so that I can amend as my plans change.	86%
Provide me with a list of options that would work on my land	83%
Take account of the previous environmental work done on my land	79%
Help me plan work over several years	73%
Be completed with the support of an adviser	61%
Be completed by the active farmer	57%
Only relate to environmental management on my farm	53%
Help with other business decisions (e.g. diversification and production options not just environmental management)	52%
Help me coordinate activities with other farmers	48%
Provide details about the production aspects of my business	44%
Help me understand the priorities of organisations and communities in my local area	40%
Simply be a record of my environmental management commitments over the coming year (and nothing else)	15%
Be completed by an adviser so the farmers just needs to know what to do	7%
None of the above	1%

Total Responses: 384

Table A2 - Environmental Information in an LMP should...

Help me identify the opportunities on my farm	78%
Identify high value or high potential environmental areas	68%
Mainly focus on maps of my farm, showing the actions I will deliver	63%
Identify risk areas on my farm (e.g. where I should reduce runoff)	62%
Take account of the value provided by food production businesses	61%
Include details about the wider environmental priorities in my area	52%
The Land Management Plan should be entirely web based, similar to BPS	45%
Use photos to record progress	44%
Provide a visual representation of the farm’s environmental performance	38%
The Land Management Plan should be a mix of online and paper based applications, similar to Countryside Stewardship	37%
Include only limited survey information (e.g. points on a map with a photo and short description)	35%
Provide a written description of the farms environmental performance	34%
Include detailed survey information (e.g. about habitats, species, soils, water)	33%
Benchmark me against other farms so I can improve the farm’s environmental performance	27%
Other (please specify)	10%
None of the above	2%

Total Responses: 380

Table A3 - The LMP should include records on...

Woodland and hedgerow locations and management plans	81%
Watercourses, wetlands and ponds	70%
Records of soil type and condition and any soil management activities (e.g. liming, lifting etc)	66%
Records of fertiliser use and management including NVZ records	65%
Designations such as SSSI, Scheduled Monuments, AONB, NVZ, Water Protection Areas	64%
Chemical use records and management information	61%
Areas of historical interest	54%
Potential enhancement areas (e.g. water storage, biodiversity enhancement)	53%
Records of soil erosion and runoff risk	52%
Species records eg birds, bats, wildflowers	52%
Maintenance of ditch and drainage infrastructure carried out	50%
Whether the habitats on your farm are connected to the wider landscape	50%
Areas with regular flooding or impeded drainage	47%
Water use and water saving measures	47%
Livestock health records	44%
Silage, manure and slurry facilities	39%
Areas of tranquillity and beauty	38%
The educational and recreational facilities on the holding	34%
Farm buildings	33%
Records of fuel use farm machinery and energy use	32%
None of the above	3%

Total Responses: 357