



Department
for Environment
Food & Rural Affairs

Environmental Land Management

Tests and Trials

Quarterly Evidence Report

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We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy and supporting our world-class food, farming and fishing industries. We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.



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Introduction

The purpose of this document is to share the Environmental Land Management Tests and Trials key findings arising from June 2020, to the end of August 2020. At the time of writing we have 60 test and trials underway (see Annex A), with five of these having concluded. It is the second in a series of quarterly reports as we continue to progress the Tests and Trials programme. It collates key learning points from individual tests and trials alongside discussion points from our second round of quarterly Thematic Working Groups. These meetings brought participants together to share their learning and validate results and feedback gathered through surveys and engagement activities with test and trial stakeholders and participants.

This report has been compiled by the Defra Environmental Land Management Tests and Trials Team and is intended as a collation exercise rather than an analysis or evaluation report.

Despite the restrictions and uncertainty resulting from the impact of Covid-19, most tests and trials have continued to make progress this year by replacing face-to-face engagement with alternative methods. These range from online conferencing tools and digital surveys, to YouTube tutorials and virtual farm visits. Several tests and trials have directly supported technology-averse, and/or isolated farmers and land managers throughout restriction periods, thereby helping them to remain engaged in the programme so that we can incorporate their views into our growing evidence base. Where it has been necessary to postpone engagement activities, we have worked with stakeholders to ensure that their tests and trials are deliverable and will remain equally relevant to the programme as policy is further developed over the coming months.

Environmental Land Management tests and trials and the National Pilot will remain key elements of our learning strategy as we prepare for roll-out of Environmental Land Management schemes from 2024.

Headline findings and evidence by priority theme

The following section outlines the findings gathered by each priority theme, with some additional findings drawn together in the final section:

- **Land Management Plan** - what would be included in a plan, how long it should be and what information is needed to support the land manager or farmer
- **Role of Advice and Guidance** - the level and role of advice and guidance that land managers and farmers would need to put together a plan
- **Spatial prioritisation** - to test mechanisms to identify and agree local priorities
- **Collaboration** - to test how different mechanisms of collaboration would work to deliver environmental outcomes
- **Payments** - to test different approaches to valuing environmental outcomes and how these might work in practice
- **Innovative delivery mechanisms** - how these could be rolled out more widely and in what circumstances. For example, trialling payment by results and reverse auctions

A wide range of farmers and land managers from across England have contributed to these findings through workshops, surveys, farm walks and 1:1 interviews. We have engaged with over 3,000 farmers and land managers across a range of sectors to date.

Land Management Plans

We have around 2000 farmers engaged across the 46 live tests and trials that are working to develop and test a land management plan (LMP). The majority of these continue to welcome the LMP approach. In July we conducted a survey with test and trial farmer and land manager participants to seek their views on the LMP. 85% of respondents agreed that the LMP would be a valuable tool to help them identify and plan the public good they could deliver on their land. Respondents described a LMP as a 'plan showing what I intend to do with my land and how I look after it' and as an 'essential tool'.

Key findings

Most of the tests and trial participant farmers agree that recording the delivery of scheme actions and outcomes should be a **key purpose** of the LMP. However, there is no consensus as to whether plans should also include wider farm business information. For example, our LMP survey suggested that just 39% of farmers and land managers felt that the LMP should include information on productivity, animal health, and diversification. This contrasts with recommendations from several tests and trials that farmers should be able to balance the practicality of public goods delivery with food production and business profitability.

Additionally, we have now received a range of **templates and methods** from seven tests and trials to inform the **structure and format** of LMPs. These range from structured questionnaire-style plans and written reports, to scorecards and digital platforms. All of these templates include as a minimum an environmental baseline and a potential public goods delivery assessment – this is in line with land management structure and format recommendations received earlier this year.

Similarly, all templates received to date include a **map** or make use of **mapping platforms** and visual elements in the planning process. This aligns with consistent feedback from farmers and land managers that maps would help them to show where they could deliver public goods on their land, and that templates should be designed with the user in mind. Participant farmers have also reinforced views that LMPs should not be restrictive and should allow for a degree of flexibility.

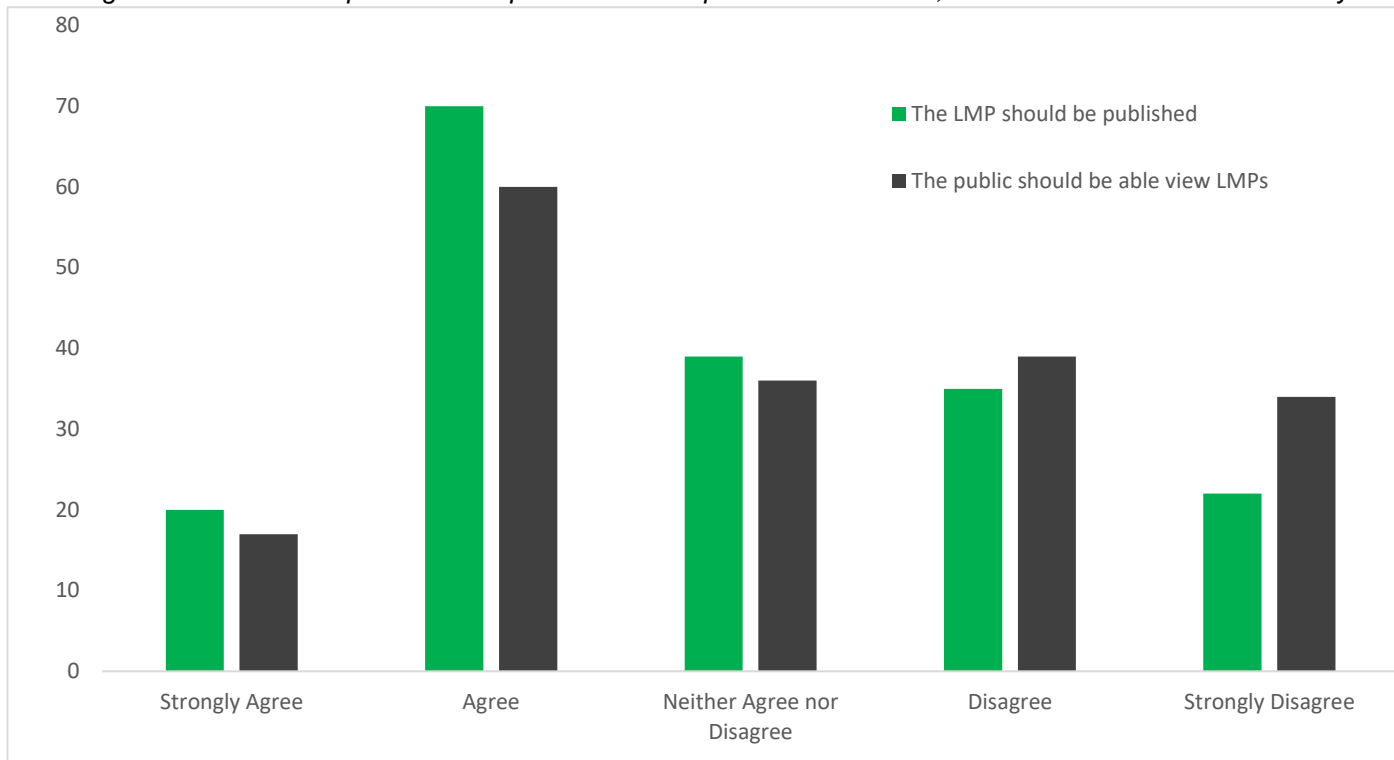
We have received mixed feedback regarding the incorporation of **certification schemes** into LMPs as a method of demonstrating environmental credentials. Five tests and trials have suggested that existing members of schemes could pre-populate LMPs with standardised data to streamline the application process. However, participants in one Country Land and Business Association (CLA) test raised concerns that small farms could be disadvantaged if the schemes weren't relevant and that existing certification schemes do not always represent sustainability. The Soil Association interviewed representatives from six certification bodies, all of which were willing to collaborate with Defra. However, it appears that the data across the schemes is inconsistent and combining data sets may be challenging. The Soil Association propose a further role of certification schemes in monitoring: for those farmers that are members of a certification scheme, the annual audits they complete could help them to monitor their performance against delivery of their public goods, thus reducing the amount of time the farmer spends completing assessments of their land.

In regard to **monitoring** of the LMP we have received feedback that **self-assessment** approaches may be too time-consuming to be effective. The Sustainable Food Trust tested a self-assessment protocol with 25 farms across England. Feedback from these farmers, alongside those participating in the Cranborne Chase Area of Outstanding Natural Beauty (AONB) test, suggest that the time taken to complete monitoring is a barrier to conducting self-assessment. Also, participant farmers raised concerns that timing and frequency of monitoring could disadvantage some agreement holders. They proposed instead that monitoring should be carried out over time to give a fair representation of the farm. In addition to this, Ordnance Survey, which is supporting 4 tests and trials, found that they could not analyse much of the data collected by farmers as it did not contain all the information required, and was not always accurate. OS has found that this issue is easily resolved with the use of trained advisers as a part of a verification and data cleansing process.

Equally, **Digital apps and tools** may also have a role in monitoring, with participants of the Lanhydrock Estate test expressing confidence in photo upload features which automatically geotag the location where a picture is taken. Such features could streamline some of the monitoring and inspection of the LMP. However, as outlined in the previous quarterly report, paper mapping options must always be available for farmers who are not able to use or access online tools.

Finally, participant farmers and land managers have continued to share a range of views regarding the **publication** of LMPs. Most of farmers and land managers agree that the LMP should be published after their first Environmental Land Management payment - recognising that ‘publishing what is being done, for public payment, is a good thing’. However, some farmers have reservations about the level of information published stating that they would feel more comfortable if sensitive business information and personal details, or location of threatened or rare species were redacted before publication. Concern was also raised that the publication of maps could encourage trespassing or poaching. Figure 1 shows the results from the LMP survey.

Fig 1: Overview of responses from questions on the publication of LMPs, taken from a DEFRA LMP Survey of



199 farmers and land managers across 25 tests and trials, July 2020.

Forward look

We are expecting further templates and approaches to be submitted over the coming months and there is ongoing work within the LMP theme to develop a strategy for sharing LMP templates more widely so that they can be evaluated by farmers and land managers from a wide range of sectors and geographies. This will be reported on in future quarterly evidence reports. We are also testing with farmers how LMPs could be used as a tool to demonstrate monitoring and compliance.

Advice and Technical Guidance

We have 43 tests and trials that are working with a range of farmers and land managers to test what advice and guidance would be needed to help farmers and land managers identify and deliver public goods. We are looking at the role of adviser, including the format of advice, stages advice may be needed and how we quality assure that provision.

Advice key findings

Many tests and trials have continued to state that there is a **role for advice** throughout all Environmental Land Management schemes, although the amount and type of advice required will vary between individual farmers, sectors and geographies. One Forestry Commission test asserted that most land managers will require **specialist sectoral advice** for more **complex agreements**, such as those for commons, SSSIs, and circumstances featuring regulatory consents. However, Thematic Working Group members have suggested that “generalist” advisers, based locally, with a good understanding of scheme ambitions, could provide support for farmers and land managers when making initial applications. For instance, farmers in the Peak District National Park’s test felt that at the beginning of the application process they would need support with identifying public goods, understanding the business implications of joining the scheme, and help with using IT and internet. This aligns with findings from the previous report which stated that a lack of knowledge of public goods was a major barrier to making successful applications.

Conversely, we have received reports that some land managers could produce simple, overarching LMPs **independently**, such as those with experience of previous schemes and initiatives. 77% of 197 LMP survey respondents agreed that it is the role of farmers and land managers to produce their own LMP. This aligns with findings from the Lanhydrock Estate test in which participant farmers were confident using an App to assemble an LMP without support.

There is still no consensus on who should provide **funding for advice**, and in which circumstances. Some tests and trials have suggested that Defra should pay for advice under local nature recovery and land landscape recovery schemes as the cost benefit of public goods delivery is higher. Participant farmers in the Peak District National Park test asserted that they would not be able to afford the specialist advice (e.g. ecologists) required for these schemes. They felt they could be disadvantaged if the Environmental Land Management scheme did not provide support in these circumstances.

Some participant farmers have expressed interest in **peer-to-peer** learning and demonstration if it were coordinated through an organised group with a facilitator. Several farmer participants in the South Downs National Park’s test took a peer-to-peer approach in which experienced land managers introduced the Land App to fellow members of cluster groups.

Technical Guidance key findings

There is appetite for a comprehensive **guidance package** to support farmers through the LMP process. This package could include sample plans, videos and workshops, all hosted on a public facing website to ensure quality LMPs are produced. The Forestry Commission has suggested that such guidance resources could also be incorporated into the LMP template or application process.

One test has requested guidance on the **audit process** stating that this would help farmers identify where variances would impact them and encourage data collection and record keeping. Others have highlighted in workshop discussions that guidance must be suitable for practical application and not purely developed based on theory. Farmers and land managers supported the use of short 'how to' videos.

Forward look

In the coming months we will receive further information from sectors such as woodlands, forestry, and commons on what advice provision might be required. Additionally, several tests and trials will be investigating how we might administer adviser training programs ahead of the National Pilot. They will explore what the key knowledge gaps for existing advisers are, as well as calculating how many individual advisers we may need for the scheme rollout in 2024.

Spatial Prioritisation

We have 41 tests and trials exploring how, and by whom, spatial prioritisation could be carried out, as well as identifying the most effective scales and mechanisms for targeting environmental outcomes.

The previous report focused on data and mapping tools, as many tests and trials were in their initial stages. Current findings are painting a clearer picture regarding the mechanisms and approaches that could work, at what scale, and who could be involved in the identification and agreement of local priorities.

Key findings

We have received further evidence demonstrating that many farmers and land managers feel there is value in their **involvement** in discussions and decisions on local priorities. As detailed in the previous evidence report, farmers feel that they are best placed to evaluate the appropriateness of delivering actions and benefit from greater ownership and empowerment by being involved in the decision-making process. Four AONBs have confirmed this - finding that farmer involvement guarantees that priorities are relevant, understandable, deliverable and achievable. Additionally, inputs from specialist bodies such as the Environment Agency and Local Authority Archaeology Teams have been reported to be invaluable and a time-saver.

AONB-led trials and Farming and Wildlife Advisory Group (FWAG) South West have reported that their established partnerships and networks streamline the process of identification and agreement on local priorities. This aligns with findings from Royal Society for the Protection of Birds (RSPB) – whilst in some cases the conservation focus of the organisation has dissuaded farmers from working with them, they have also found that their established and consistent presence in trial areas has increased the farming community's trust.

Regarding **structures and mechanisms**, most of our tests and trials are looking at prioritisation processes which adopt a combination of 'top-down' and 'bottom-up' approaches. Several tests and trials are also looking at the role of local governance – including in setting priorities, leveraging blended finance and monitoring delivery.

Twenty-five tests and trials are starting to explore who could lead the prioritisation process, coordinating relevant stakeholders in the area in order to identify priority outcomes, as well as collaboration efforts. Thirty-six farmers from the White Peak strongly support the idea to have a consistent, trusted main point of contact, based locally with local knowledge and understanding, who could help with the prioritisation process and act as a liaison with specialists as required, as well as facilitate discussion and collaboration between farmers.

Thirteen farmers from mixed farming backgrounds in South Devon compared two types of structures which would aid the planning, coordination and delivery of priorities – small clusters (based on a neighbourly cooperation model) and landscape-scale groups based on a membership model. The group found that the latter model could substantially improve the coordination of delivery of nature's recovery and other public goods on farmland.

The Broads Authority has found support for a local delivery board which would have a range of responsibilities, including setting, monitoring, and assisting the delivery of local priorities. The board would be made up of a wide variety of stakeholders, including farmers and local NGOs. We will be testing the role of the board further.

We have received mixed feedback on the **scale** at which priorities should be set. Whilst some tests and trials are finding support for spatial targeting at regional scale, others prefer local administration and prioritisation, which would tailor priorities to specific landscapes. The Broads Authority has found Environmentally Sensitive Areas to be most useful for focussing on the unique habitats and management practices relevant to their participants. They have stated that county scale priorities would be too generalised for their outcomes. However, five AONBs have found that carrying out spatial prioritisation beyond their designated boundaries is useful for enabling their knowledge and approaches to be shared more widely. They also support nesting spatial priorities at different scales, allowing for priorities that are appropriate in a sub-catchment to be identified from larger national and sub-regional priorities. Although, the Cuckmere and Pevensy Catchment Partnership has found that taking a whole-catchment approach enables a holistic assessment of potential Environmental Land Management interventions that address both field scale and wider catchment priorities. They have reported this as beneficial for addressing habitat connectivity, air and water quality, natural flood management and health and wellbeing benefits through wider access to the environment.

When reporting on the **availability of data**, we have continued to receive reports that data availability, accessibility, and consistency vary dramatically, and that local datasets are of particularly poor quality. The South Downs National Park has since suggested that data accessibility could be improved by establishing a comprehensive list of all datasets available for farmers to use. This would show where they are held and would streamline the process of searching for data and help to ensure that opportunities are not missed. At the same time, some tests and trials are drawing on existing plans to identify local priorities, such as AONB and National Park Management Plans, or regional priorities such as flood mitigation. National Character Area profiles have been found helpful by some for identifying high-level priorities, but not detailed enough for land managers to identify priorities at holding level. They have been criticised for not allowing any refinement of priorities based on local knowledge/datasets, and for not covering all public goods.

Several different tools and platforms are being trialled or developed in order to present data and support the prioritisation process. These include the LandApp, which has been praised for its usability. One problem initially identified is that there were issues in showing in importing and editing large external datasets. These meant that an alternative method for creating final maps, through

using GIS, had to be used. The Land App team are working with tests and trials to overcome these kinds of barriers.

Three tests and trials have expressed support for UK Habitat (UKHab) mapping as a method for collecting natural capital data. UKHab can be adapted to a vast range of sectors and geographies and considers food production and farm business data as well as natural capital assets. UKHab has been easily integrated with mobile apps, tools, and software, and the uniform classification codes have been analysed and used to inform spatial targeting.

We are beginning to narrow down what the requirements of a digital platform are. Some have called for the inclusion of food production and provisioning services, which are key to keeping the farming population engaged. One way of facilitating this would be to allow for compatibility with UKHab, which includes food provision habitats such as cropland and productive grasslands.

Many participants find combining publicly available public datasets with farmers' knowledge as an essential requirement; as well as it being easy to update by the user. The latter feature could include a straightforward process to load Ordnance Survey licensed field boundary information. Most participants from four farmer groups working with the South Downs National Park praised the option to add geotagged photographs in the Land App as an easy way for land managers to input information.

Farming and Wildlife Advisory Group South West is successfully allowing farmers to ground truth data and upload information by using the mapping tool ArcGIS, which is cloud based; another test found GIS too complicated and has used the programming language R instead.

Thirty-six farmers in the White Peak have claimed that a platform integrated with an app that can send notifications and reminders, either through the app or via SMS, would be helpful. A review of existing apps by the Cuckmere and Pevensy Levels Catchment Partnership and members of the local community have called for a centralised App which automatically provides national data sets at a variety of scales.

Whilst we previously reported that an adviser might be required to aid farmers in the interpretation of data and how this applies to holdings, a farmer-led trial in Cornwall covering 11 holdings found that all but two farmers were confident to use an online platform themselves without the help of an adviser. Participants argued that the farmer should be in control of their own easy to use digital platform, with an option to delegate this to their own trusted adviser.

Forward look

Several tests and trials are looking to define who should be involved in the prioritisation process. A variety of models are under review and we anticipate further information from tests such as the Broads Authority in due course. Their participants have expressed support for a local delivery board which would have a range of responsibilities. We will be testing this further over coming months.

We are also starting to explore the role of a convener, who would lead the prioritisation process at county scale. We are currently developing one proposal aimed at trialling the role of a convener in Hampshire and developing a further test and trial to test the role in Gloucestershire. The convener will liaise with all relevant stakeholders in the area in order to identify priority outcomes and coordinate facilitators, while being assisted by a steering group.

Collaboration

We have 17 tests and trials working with around 700 farmer and land managers, exploring how they might collaborate within the new Environmental Land Management scheme. These tests and trials will gather information and evidence on which mechanisms and incentives might be necessary to encourage farmers and land managers to work together more successfully. We are also seeking to understand current barriers to collaboration. By demonstrating the benefits of collaboration through tests and trials we also hope this will help to overcome existing barriers for farmers and land managers to collaborate effectively.

Key Findings

These tests and trials are exploring the **models and mechanisms** for collaboration and how they could deliver environmental outcomes in different sectors and geographies. There is a continual consensus that most farmer groups will require some form of facilitation, regardless of size, sector, and focus. However, farmers in one RSPB test have suggested that facilitated groups should still follow a 'bottom-up' co-design approach in which members maintain a sense of ownership over their work and facilitators play a supporting role only. These 13 farmers have suggested two models of collaboration: the first small farm clusters and the second a landscape-scale collaboration. In the former, small farms are enabled to take part in collaborative action by being linked administratively with others, for the purposes of the scheme, into a cluster. The latter specifically focuses on a larger, facilitated group of farmers coordinating delivery of public goods at scale across a landscape. This was based on participants' previous experience of successful community collaboration at scale for species recovery.

Equally, recent feedback from two tests and trials suggest that digital mapping and data sharing Apps can be useful **tools** for collaboration. For example, participants in the South Downs National Park's test of The Land App agreed that it helped them to visualise their farm in the context of the wider landscape and to see links across holdings. They also felt that the app gave them the ability to take ownership of plans, thereby enabling a bottom-up approach to collaboration.

We have received further reports from 5 tests and trials involving more than 200 farmers that financial support is a **key incentive** for collaboration. The RSPB stressed that it will be easier to get groups ready for Environmental Land Management if Defra can outline funding commitments well in advance of the scheme launch. However, it is not yet clear how much funding groups and individuals will require. One test has suggested that, as a minimum, there should be enough funding to cover facilitation and administrative/management costs of the organisation leading on collaboration. In addition to this, they recommended that farmers should be able to select and be paid for a collaboration option in their scheme agreements to cover the cost of participation time and membership.

We have received consistent findings to suggest that many farmers fear they could be penalised for the inaction of individuals within a collaborative agreement. Two test and trials have reported that this assumption is a major **barrier to collaboration**. Farmers in the North York Moors NP test suggested that there could be collaboration enforcement to encourage continued collaboration. We have also received feedback from two national park trials that farmers are concerned that short-term tenancies are a barrier to collaboration as they inhibit delivery of environmental outcomes. Farmer participants in the Peak District NP test highlighted that there can be a reluctance for established farmers to collaborate with short-term tenants as there may not be

enough time to demonstrate environmental outcomes. This aligns with feedback from Dartmoor NP that tenant farmers have been disadvantaged in previous schemes due to increased uncertainty and a lack of time to deliver outcomes.

Finally, 29 farmers and land managers from 2 T&Ts from across England have identified further **benefits** that collaboration can bring. These include increased social capital, business profitability and improved environmental outcomes. Other test and trials have discovered that working together can improve social contact and knowledge sharing. Some said they found peer to peer support and building a sense of community contributes to a sense of health and wellbeing.

Forward look

Over the next few months tests and trials will start to ground truth some of the collaboration models already put forward. We hope to identify what works where, and whether these models present barriers for certain sectors or geographies. Also, whilst many tests and trials have identified that collaboration funding would be welcome, we still lack clarity on exact costings. This is a known gap which we may explore through future phases of tests and trials.

Payments

The tests and trials under this theme focus on the financial incentives needed for land management actions, payment levels for different outcomes, methods of calculating rates and payment frequency and triggers.

Key Findings

The emerging consensus in the previous evidence report was that **payment rates** calculated by the income forgone plus costs approach do not provide a strong enough incentive for farmers to join a scheme. Many participant farmers have continually stated that they have not been compensated sufficiently under previous schemes for the activity they have undertaken, particularly where capital costs are incurred. Several tests and trials are working with farmers to assign preferred payment rates. Farmer participants in the Lanhydrock Estate test reviewed a range of management actions and highlighted where they felt they had not been adequately rewarded under Countryside Stewardship. They then suggested how much they would need to be paid under Environmental Land Management. A side-by-side comparison of suggested Environmental Land Management rates and existing Countryside Stewardship rates (calculated according to income forgone plus costs) is provided in table 1.

Environmental Options		Payment Range Assigned by test Participants	Countryside Stewardship Rate
Soil & Water	Sow a quick establishing single species cover crop post-harvest (winter cover crop)	£150-220/ha	£114/ha
	Sow a quick establishing mixed multiple species cover crop post-harvest (winter cover crop)	£200-220/ha	
	Plant in-field grass strip in arable field (any shape). No inputs. Can be grazed	£735-1000/ha	£557/ha
	Establish a zero-input grass buffer adjacent to a ditch/water course 12-24m	£500-£700/ha	£512/ha
	Zero application rates in waterside fields	£250/ha	£131/ha
	Sow multi-species diverse grass leys; to include mix of 5 grasses and 5 forbs, including legumes and some deep-rooted species.	£500-650/ha	£309/ha
Hedgerow	Plant standard tree in hedgerow	£10 - 14.75/tree £200/tree	£8.80/tree
Tree Planting	Plant single trees in field (for shade, protection)	£100-250/tree	£8.80/tree
Other Biodiversity	Arable wildflower margin / wildflower meadow. Nectar flower /pollinator/wildflower field margins or as a whole field break-crop in rotation. (i.e. zero fertiliser or pesticide inputs; annual cutting, dung permitted)	£550 -700/ha	£539/ha £511/ha £550/ha
	Arable winter bird seed mix field margin (4-6m) or as a whole field break-crop rotation	£840/ha	£640/ha

Table 1: payment rates suggested by farmer participants in the Respryn Bridge Natural Capital test, coordinated by Lanhydrock Estate.

In contrast, we have received further evidence to suggest that a points-based approach could be a preferred option to **determining payments**. Participants in a Country Land and Business Association test agreed that points-based systems are simple, easy to use, and familiar. They felt that this approach provided a strong incentive to adopt more sustainable farming and forestry practice as it gave them the ability to choose realistic options that suited their circumstances. However, participants were clear in stating that a points-based approach should not be results-based due to risk and complexity.

Views on **results-based payment approaches** remain varied amongst 175 farmer and land manager across three test and trials. Enthusiasm for results-based approaches appears to correlate with familiarity - participants in the Dartmoor National Park, where there have been previous initiatives involving payments by results have shown a strong preference for the approach. Also, a survey of the Natural England payments by results participant farmers showed that opinions of results-base approaches remain universally positive. Most of these farmers felt that this approach is the fairest basis for payments, and they would be more likely to apply for a future scheme with this structure.

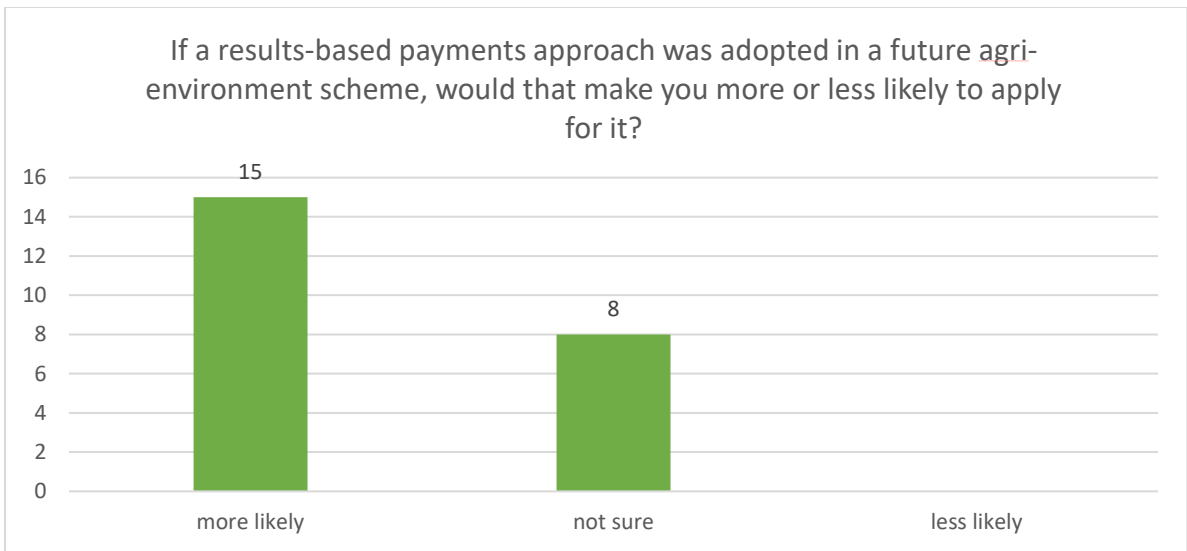


Figure 2: results from a survey of 31 farmers in the Natural England payments by results trial.

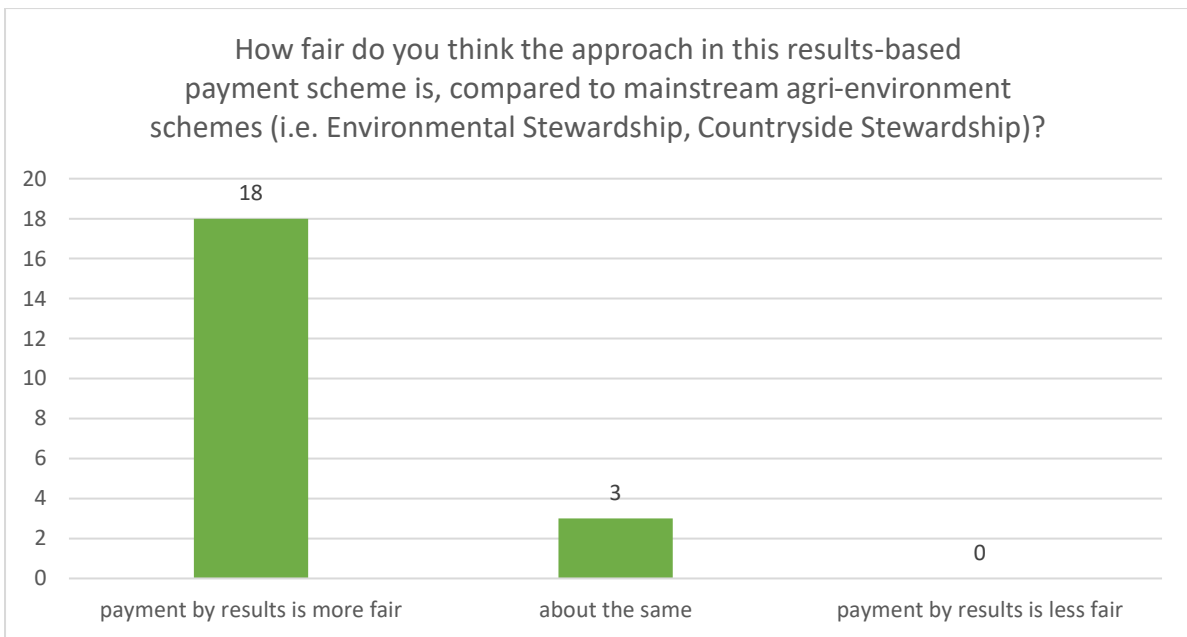


Figure 3: results from a survey of 31 farmers in the Natural England payments by results trial.

However, in the previous evidence report we highlighted concern among tests and trials that **external factors** (such as extreme weather, climate change, market volatility) could pose too much risk to farmers under **results-based schemes**. Thematic Working Group participants have recently raised this issue again - highlighting that such risks would reduce scheme uptake and delivery of environmental outcomes. Natural England are currently investigating mitigations for these risks. They are testing component-based payment tiers with a minimum basic payment linked to delivery of basic results and additional higher payments linked to increased performance above the base level, can address these concerns.

A mixed approach involving combined basis of payments was suggested during the previous quarterly period with participants favouring an outcome based top up payment. There has been further support for this approach during this quarter from participants of the Lanhydrock Estate test and trial who favour a 'hybrid model' involving payment based on actions, with an additional 'bonus' payment for delivery of a successful outcome.

Tests and trials continue to define the **actions and outcomes that Environmental Land Management should pay for**, identifying:

- opportunities for environmental enhancements and protections that have been missed in the past, such as management of small woodlands, which have been historically undervalued as an on-farm resource.
- access opportunities to be funded; such as capital cost and maintenance funding for infrastructural improvements increasing access (e.g. car parking), compensation payments for land lost to increased public access and path provision and funding for additional legal liabilities incurred by having permissive access on land.

Finally, we have continued to receive feedback from test and trials that the **frequency of payments** needs to be regular and reliable throughout the lifetime of an agreement. Three tests and trials have suggested that annual or bi-annual payments would be preferable. They highlighted the importance of having a stable, fixed-date payment schedule to enable scheme users to effectively plan for their business.

Forward look

An increasing number of tests and trials are now able to provide us with suggested payments rates which they feel would be most appropriate in the future scheme. In the next report we will collate these suggestions to build a clearer picture as to what farmer and land manager participants require, when and at what frequency.

Innovative Delivery Mechanisms

The majority of test and trials contributing to this theme are long-term trials of over 12 months in duration. Several of these have experienced severe disruptions due to covid-19 restrictions. Therefore, we only have initial findings at this stage.

Key Findings

Emerging findings show how local plans can impact on the delivery of environmental outcomes in the context of innovative delivery mechanisms. In particular, the interplay between regulation and Environmental Land Management. This is evident in the EnTrade **reverse auction** trial which has stalled as a result of **conflicting regulatory requirements**. The delivery partner, Wessex Water, is already signed up to local catchment targets to reduce nutrient leaching. As a result, they have been engaged in ongoing discussions with regulators to determine how the reverse auction would fit within the delivery of the targets and the regulatory framework that would apply. Conflicting regulations have also been raised as a concern by the National Trust and Green Alliance. They have stated that having the right people involved at each stage of the design process is critical in ensuring emerging risks are identified and sensible mitigations are implemented. They have also suggested that farmers should be able to apply to one universal scheme to avoid confusion and increase uptake. Any conflicting regulations or scheme design challenges should not be visible to the user.

The Natural England payments by results trial has continued to demonstrate that **results-based approaches** can deliver environmental outcomes compared to current agri environment schemes.

Over half of the 31 farmers involved in the trial are changing their land management practices to achieve better results – aspiring to move up through a set of payment tiers. Results from arable habitats have consistently been better than in conventional schemes, even when the Environmental Stewardship or Countryside Stewardship land is managed by the same farmer. This has been statistically significant in all 3 years for the plots of Winter Bird Food; Pollen and Nectar plots exhibited somewhat less difference but still performed better than plots managed using a prescription-based approach. However, two other tests and trials highlighted concern among farmers that results-based approaches carry too much risk and the complexity of the scheme could be off-putting.

However, participants in the July Thematic Working Group raised concerns regarding **monitoring of payment by results agreements**. They feared that the burden of monitoring would need to be outsourced at significant cost as **self-assessment** would be too time-consuming and off-putting for many land managers. In contrast, the Natural England payments by results trial has reported that self-assessment has incentivised farmers to take ownership of the delivery of environmental benefits on their land. They did, however, concede that perceptions of self-assessment vary depending on individual circumstances - farmers with a greater number of fields in an agreement appear to find it easier to incorporate assessments into their routine than those with only one or two fields in the scheme.

There is clear evidence emerging that the **private sector** has an interest in paying for some of the environmental outcomes that Environmental Land Management intends to deliver. Through the mechanism of reverse auctions water companies and rivers trusts in five individual trials are paying farmers to implement actions to improve water quality and implement flood management measures. In addition, a consortium of food and drink companies in the Tamar catchment in Devon have funded farmers to implement interventions, such as wild bird feed and maize management to improve soil quality.

Forward look

National Trust's Payments for Outcomes test concluding in the Autumn, will provide us with evidence on whether payment by results can be applied at a whole farm scale to a range of public goods.

Additional findings

Thematic Working Group participants have repeatedly highlighted that a **simple, flexible mapping system** is critical to the success of Environmental Land Management. There is widespread agreement that it should be free, open-source, and easy to use so that all scheme users are able to benefit from it, as well as regularly updating data sets at all scales. Thematic Working Group participants have recommended a cloud-based system to enable farmers to update habitat and public goods databases from the ground up.

Many participant farmers are open to the idea of using **mobile Apps** to save time during mapping, planning, and monitoring exercises. Some have suggested that a platform integrated with an App that can send notifications and reminders would be an asset as it would enable them to keep all of their agreement details in one place.

There is an emerging consensus among tests and trials that **food provision** should be included as an asset in LMPs and prioritisation exercises as this will create trust and buy-in amongst the farming community. Farming and Wildlife Advisory Group South West have achieved this using UK Habitat classifications.

Conclusion

Despite the challenges and restrictions imposed by the Covid-19 pandemic, our Environmental Land Management tests and trials have continued to supply a steady flow of evidence over the past three months. We have started the process of building a collection of common findings and will be able to highlight conflicting evidence as, and when, it arises. This growing bank of evidence and views is supporting us in our decision-making for the National Pilot and future schemes roll-out.

We are working across Defra group to review evidence gaps and emerging issues that can be met through future phases of tests and trials.

The learning from tests and trials adds an explorative, on-the-ground evidence source to understand farmer and market behaviour to help shape and inform scheme design and help us identify barriers and enablers to success.

By testing and trialling elements of the new scheme, Defra is looking to work together with farmers and land managers to harness their ideas, gain their feedback and build something that works for the diverse needs of the agriculture sector, whilst also improving our environment.

Annex A: summary of current tests and trials (as at the beginning of September 2020).

Early Tests and Trials

Organisation	Title	Themes
Environment Agency and Lake District National Park Authority	Cumbria Pioneer	LMPs, SP, Collab.
Natural England, with UNESCO Biosphere, Forestry Commission and Environment Agency	North Devon Pioneer	LMPs, A&G, SP, Payments IDM
Natural England and the Yorkshire Dales National Park Authority	Payment by Results (PbR)	A&G, Payments, IDM

Phase 1 and 2 Tests and Trials Underway (as at the end of May 2020)

Organisation	Title	Themes
23 Burns Collective	23 Burns Collective.	LMPs, A&G, SP, Payments, Collab.
The Broads Authority and Partners	Maximising public goods delivery within the Broads.	LMPs, A&G, SP, Collab., Payments
Buglife	Testing Monetary Incentives for delivering Landscapes for Pollinators.	LMPs, A&G, Collab., Payments
CLA	Wildlife Estates.	Collab., A&G, LMPs
CLA	Incentivising sustainable farming and forestry practices that deliver public benefits.	Payments, LMPs
Lanhydrock Estate and Cornwall and Isles of Scilly LEP	Respryn Natural Capital Project "A bridge between Economic and Environmental Delivery" - Complete	LMPs, SP, Collab. Payments
Cotswolds Conservation Board and Cotswolds AONB	Researching and piloting the need for local payment rates and options to achieve outcomes in the Cotswolds. - Complete	LMPs, A&G, Payments, SP, Collab.
Dartmoor National Park Authority	Dartmoor National Park Trial.	LMPs, A&G, SP, Collab., Payments, IDM
Exmoor National Park Authority	Using natural capital to deliver the 'broadly accessible scheme' in upland and pastoral landscapes.	LMPs, SP, Payments

Farming and Wildlife Advisory Group (FWAG)	Multi-functional land and water management on the Somerset Levels.	A&G, SP, Collab. Payments IDM
Farming and Wildlife Advisory Group (FWAG) and Partners	Developing a natural capital recording tool.	LMPs, A&G, SP, Collab.
Foundation for Common Land	Development of a Commons Proofing Tool.	LMPs, A&G, SP, Collab.
Forestry Commission	Urban woodland creation.	LMPs, A&G, SP
Forestry Commission	Agent Land Management Plans - Complete	LMPs, A&G,
Linking Environment and Farming (LEAF)	LEAF Demo Farms and LEAF Marque as an Environmental Land Management platform.	LMPs, A&G
NAAONBs (National Association for Areas of Outstanding Natural Beauty)	Farming for the Nation: AONBs as test beds for a new Environmental Land Management System.	LMPs, A&G, SP, Collab., Payments
National Trust (Cornwall)	Developing a farmer-led Nature Recovery Network.	A&G, SP, Collab.
National Trust (Yorkshire Dales)	Payments for Outcomes for a whole-farm approach.	LMPs, A&G Payments, IDM
National Trust (Shropshire)	Stepping Stones Whole Farm Plans.	LMPs, A&G Collab.
National Trust and Green Alliance (Cumbria)	Test the Natural Infrastructure Scheme concept through integration with LENS and EnTrade (the 'Eden Model').	SP, IDM
Northumberland National Park Authority	Curlew Contracts.	LMPs, SP, Collab., Payments, IDM
Ordnance Survey	Evaluate Data Requirements	LMPs, SP
Peak District National Park Authority	Using the White Peak National Character Area (NCA) for testing and trialling Environmental Land Management approaches.	LMPs, A&G, SP
RSPB	Developing and testing a local collaborative Environmental Land Management offer to support and maintain species recovery in South Devon.	SP, Collab.
RSPB	Investigating the potential for reverse auctions to deliver the recovery of priority species.	A&G, Payments IDM
RSPB	Developing and testing self-assessment of environmental land management options.	LMPs, A&G

Small Woods Association	Addressing under-management of small woodlands in England.	LMPs, A&G Collab.
Soil Association and Partners	Testing the Public Goods Tool for Environmental Land Management.	LMPs, A&G Collab., IDM
South Downs National Park Authority (A)	South Downs Farm Clusters - Complete	LMPs, A&G, SP
South Downs National Park Authority (B)	South Downs Land App Trial - Complete	LMPs, SP, Collab.
Sustainable Food Trust	Harmonisation of standards.	LMPs, A&G, Collab.
Gloucestershire Wildlife Trust and Partners	A facilitated, farmer-led approach to the delivery of environmental public goods on a landscape scale	LMPs, A&G
Cheshire Wildlife Trust and Liverpool John Moores University	A natural capital base, farmer-led model of the delivery of environmental public benefit on a landscape scale in the uplands - Cheshire Wildlife Trust.	LMPs, A&G SP
Beds, Cambs and Northants (BCN) Wildlife Trust	Delivering a catchment-based nature recovery network - The Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire.	LMPs, A&G SP
Staffordshire Wildlife Trust	Farmer-led collaboration to deliver a landscape plan - Staffordshire Wildlife Trust.	LMPs, SP, A&G
Kent and Sussex Wildlife Trusts	Delivering Environmental Land Management schemes at a landscape scale through Farmer Clusters - Kent and Sussex Wildlife Trusts.	LMPs, A&G, SP, Collab.
Cornwall Wildlife Trust	Development of a Natural Capital assessment tool and App.	LMPs, SP, A&G
North York Moors National Park Authority	Building on the success of previous schemes to achieve better collective outcomes.	SP, Collab., Payments IDM
Game and Wildlife Conservation Trust (GWCT)	Practitioner-led farm monitoring.	LMPs, A&G
Clinton Devon Estates	Catchment Co-design in East Devon: testing collaborative approaches to landscape planning and ecosystem service delivery.	LMPs, A&G, SP, Collab. Payments
En Trade/ Wessex Water	Natural Capital Reverse Auctions .	Collab., Payments, IDM
Cuckmere & Pevensy Levels Catchment Partnership	Cuckmere & Pevensy levels Land Management Pilot.	LMPs, A&G, SP, Collab., IDM

Natural England	Catchment Sensitive Farming.	LMPs, A&G
Environment Agency (EA)	Developing markets in environmental Outcomes.	Payments, IDM
The Trails Trust	How to incentivise green infrastructure access and biodiversity creation.	LMPs, A&G, Collab. Payments
NFU West Midlands	Test approaches to natural capital delivery in a network of mixed farming businesses.	LMPs
Sylva Foundation	Woodland Creation Software.	LMPs, A&G, SP, Payments
Barningham Farmers Group	Innovative cross-holding, collaborative system for planning and delivering environmental management.	LMPs, SP, Collab.
The Organic Research Centre and Agricology Network	A knowledge exchange partnership to communicate farming best practice and facilitate change .	A&G
Shropshire Wildlife Trust	Connecting the Clees.	LMPs, A&G, SP
Aqualate Castle Holdings	Farmer-led Catchment Land Management Plan.	LMPs, A&G, SP Collab.
Brown and Co	Develop partnerships between agriculture and polluter industries to realise, promote and attribute a monetary value to land management practices promoting carbon capture and storage through a polluter pays principal.	A&G, Payments
NFU South East	Farmer Group Plans - How to achieve more, bigger, better, more joined up plans.	LMPs, SP Collab.
Black Sheep Countryside Management	To develop the next generation of collaborative initiatives.	A&G, SP, Collab.
Agricultural Industries Confederation	Evaluation of Animal, Crop Nutrition and Agronomy Advisers.	A&G
Landworker's Alliance and Growing Communities	A Horticulture Environmental Land Management Scheme.	A&G, Payments, LMP
Lancashire Wildlife Trust	Trialling how Environmental Land Management and net gain could help to deliver the Nature Recovery Network in peri-urban areas.	Collab., Spatial Prioritisation, Land management Plan, Payments
PlantLife	Co-designing and developing an interactive online tool to aid creation of ecological opportunity maps.	LMP, A&G, Collab., Spatial Prioritisation
Pollardine Farm	A farmer-driven approach to wildlife corridors.	IDM, A&G., Payments, LMP