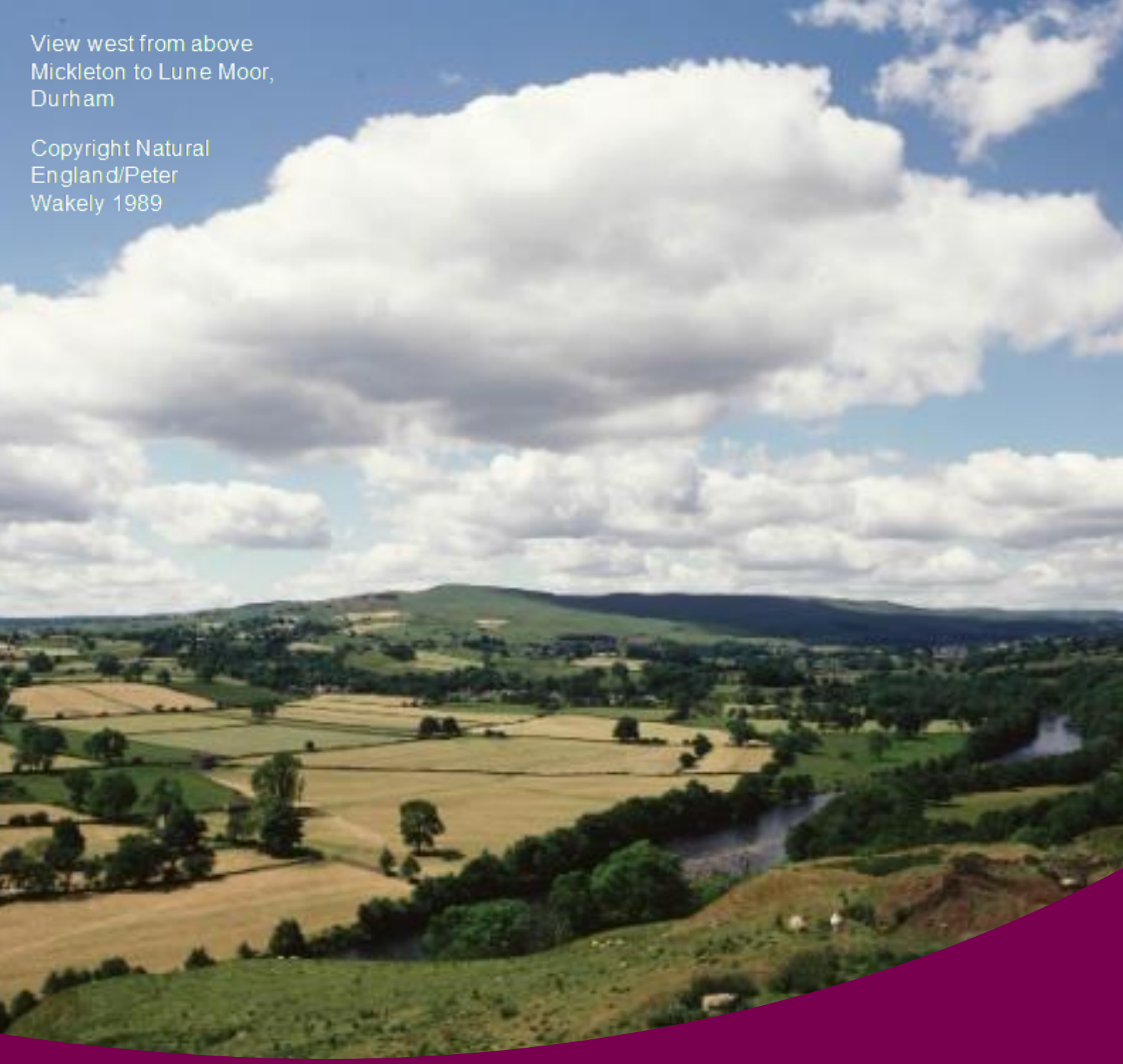


View west from above Mickleton to Lune Moor, Durham

Agri-Environment Evidence Annual Report 2024-2025

A summary of recently published project reports

November 2025

Natural England Research Report NERR165

www.gov.uk/natural-england

NATURAL ENGLAND

About Natural England

Natural England is here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

Further Information

This report can be downloaded from the Natural England Access to Evidence Catalogue. For information on Natural England publications or if you require an alternative format, please contact the Natural England Enquiry Service on 0300 060 3900 or email enquiries@naturalengland.org.uk.

Copyright

Catalogue code: NERR165

Report details

Authors

Becky Morrell and Isobel Bramer

Natural England

isobel.bramer@naturalengland.org.uk

Project Manager

Becky Morrell and Isobel Bramer

Keywords

Agri-Environment Schemes, Monitoring, AES Options, AES Agreement, AES Implementation, AES Impact, AES Design, AES Delivery, Countryside Stewardship, Environmental Stewardship, Environmental Land Management, Landscape, Climate Change, Historic Environment, Evaluation, Educational access, Woodland, Hedgerows, Ponds, Nature Connectedness, SSSI, Agri-Environment Evidence Programme, AEEP

Acknowledgements

Thanks to Andrew Cole, Emma Waite, Erica Wayman, Usha Waygood, Katharine Groves, JJ Buckle and Natural England and Defra colleagues for their input and support. Finally, a big thank you to all the contractors and organisations who led and delivered the individual evidence projects.

Citation

Morrell, B. and Bramer, I. 2025. Agri-Environment Evidence Annual Report 2024-2025. A summary of recently published projects. Natural England Research Report, NERR165. Natural England.

Executive summary

This annual report highlights recent work from Natural England's Agri-environment Evidence Programme. It features ten projects published in the past year, providing evidence relevant to various Agri-Environment Scheme (AES) objectives. The projects are grouped into three categories:

- **Evaluating effectiveness of scheme options** – Four studies assess the impacts of specific AES options on habitats and people.
- **Evaluating scheme design and delivery** – Four studies examine how schemes are designed and implemented, and their national or cross-cutting impact.
- **Public perceptions and farmer engagement** – Two studies explore public views of AES and how the schemes influence farmers' connection to nature.

This report presents recent findings but is not a comprehensive review of all AES evidence. It does not aim to summarise overall impact or effectiveness, but rather to share new insights that should be considered within the wider evidence base.

Evaluating effectiveness of scheme options

The monitoring and evaluation presented in this report evaluates specific AES options and how these deliver outcomes for habitats and people. The evidence shows the positive impact of scheme options, but also the potential for improved outcomes with future adaptation.

A 2022-2023 national survey found that hedgerows managed under AES options were in better structural condition than those outside schemes. However, the long-term national decline in the extent of hedgerows continued. In a national survey of ponds, only one third reached 'Good' quality status suggesting around two thirds of ponds were degraded in some way. In a baseline survey, woodland improvement options had high levels of management implementation, while a future survey will show impact of this management over time. Overall, the evidence on the impact of AES on habitats was strongest when monitoring design enabled robust comparisons. This highlights the need for future monitoring to be well integrated with national datasets with regular data collection.

Moving beyond habitats, a review of the educational access options identified many benefits for both pupils and teachers attending educational visits on farms. Benefits included increased knowledge and engagement in food, farm and environmental topics. However, there were barriers to visits for schools including the cost of travel, a lack of awareness of sites, and time pressures to deliver the curriculum.

Evaluating scheme design and delivery

In addition to evidence on specific options, four studies examined the design and delivery of schemes and the impact of schemes on national and cross-cutting topics. Overall,

findings indicated that scheme design and delivery contributed to a range of scheme objectives, but there remains potential to enhance outcomes further.

Two projects evaluated specific elements of Countryside Stewardship (CS). First, the historic building restoration grant pilot scheme showed high levels of satisfaction with 93% of agreement holders saying they would use the option again. The greatest benefits of the grant were cultural services including the preservation of restoration skills. Second, the facilitation fund provided social and wellbeing benefits for group members and resulted in changes in agricultural management and AES implementation.

Schemes were also evaluated for their contribution to national and cross-cutting topics. AES were found to deliver adaptation benefits for Sites of Special Scientific Interest (SSSI) by reducing non-climate pressures, however the options could provide even greater adaptation benefit. Responses of butterflies to AES showed consistent evidence that schemes were having a positive impact across the country. Areas with greater butterfly-relevant AES uptake were associated with greater butterfly species richness and abundance. By integrating data from citizen science and scheme monitoring, the project was able to increase precision in estimates of AES impact on butterflies.

Public perceptions of schemes and farmers' connection to nature

Previous monitoring has focussed on understanding farmer perception of AES. However, less is known about public perceptions of AES, particularly relating to their impact on different landscapes. This report shows participants broadly accepted most changes that AES can bring where it helps to achieve multiple benefits in the landscape, including for wildlife. Communicating the benefits and purpose behind AES options and changes in the landscape seem to be key to wider acceptance by countryside users.

Finally, research sought to understand the relationship farmers have with nature and how this influences agreement holder uptake and delivery of AES. Whilst the study was conducted with a small number of participants, the pilot study found agreement holders have both positive and negative experiences with nature. Some evidence suggested that agreement holders with a strong sense of nature connectedness were more inclined to undertake environmentally positive practices.

Future evidence projects and conclusions

The monitoring and evaluation of AES continues beyond the projects published in this report. Evidence published over the next 12 months will be highlighted in the 2025/2026 annual report. Current projects cover a wide range of topics, including a review of previous monitoring evidence, a resurvey of HLS and CS agreements to understand how they deliver multiple different objectives, and how schemes contribute to landscape character.

The projects summarised in this report highlight how AES can support a range of habitats and species. However, results show that there is potential to improve options to further enhance their delivery and their environmental, social, and economic outcomes. The

projects also highlight the social benefits of AES through public engagement with the natural environment and supporting agreement holders to coordinate across a landscape. Consistently across studies there was potential for improved advice, guidance and support to further increase the effectiveness of scheme options.

Contents

1. Table of Abbreviations

Phrase	Acronym
Agri-environment Scheme(s)	AES
Agri-environment Evidence Programme	AEEP
Agricultural landscape type	ALT
Breeding bird survey	BBS
Countryside Stewardship	CS
Countryside Stewardship Facilitation Fund	CSFF
Department for Environment, Food and Rural Affairs	Defra
Educational access	EA
Environmental Improvement Plan	EIP
Environmental Land Management	ELM
Environmental Stewardship	ES
European Union	EU
Favourable condition status	FCS
Historic buildings restoration grant pilot	HBRGP
Higher Level Stewardship	HLS
Invasive non-native plant species	INNS
Landscape-scale species monitoring of agri-environment schemes	LandSpAES

Phrase	Acronym
Natural flood management	NFM
Non-governmental organisation	NGO
National Park(s)	NP(s)
Plantations on ancient woodland sites	PAWS
Priority habitat	PH
Potential management interventions	PMI
Resist-Accept-Direct	RAD
Return on Investment	ROI
Site(s) of Special Scientific Interest	SSSI(s)
Special Educational Needs and Disabilities	SEND
Sustainable Farming Incentive	SFI
Traditional Farm Buildings	TFB
Woodland condition assessment	WCA
Wider countryside butterfly survey	WCBS
UK butterfly monitoring scheme	UKBMS

2. Background – Agri-Environment Schemes in England

Agri-Environment Schemes (AES) encourage farmers and other landowners to protect and enhance the environment on their land. Schemes do this by paying agreement holders for the provision of environmental services, including the protection of historic features and landscape character. Commonly, schemes offer a range of management actions and one-off capital items to deliver positive environmental outcomes. Currently, the three primary AES are:

Sustainable Farming Incentive (SFI) which incentivises practices across a broad range of environmental land management activities.

Countryside Stewardship: Higher Tier (CSHT) which entails more specific and ambitious environmental land management options.

Landscape Recovery which focuses on restoring and enhancing nature at a landscape scale by connecting landowners and managers.

Overall, these three schemes are part of **Environmental Land Management (ELM)** - the umbrella term used to refer to the schemes that have replaced those delivered under the EU's Common Agricultural Policy.

This report also includes evidence of AES agreements which started before the transition to ELM. The two primary schemes included in this report are:

Environmental Stewardship (ES) - opened to applications between 2005 and 2014 with agreements since extended so that some Higher Level Stewardship (HLS) agreements are still live across the country.

Countryside Stewardship (CS) - started in 2016. Until 2024 the scheme consisted of two main elements, Mid-Tier (MT) and Higher Tier (HT), alongside Wildlife Offers (simplified, focused forms of MT agreements), capital grants (for water quality, air quality, and boundaries, trees and orchards), historic buildings grants, woodland support grants and CS Facilitation Fund.

3. Agri-Environment Evidence Programme

In 2024, the Agri-Environment Evidence Programme sought to monitor and evaluate existing AES, including Countryside Stewardship and Environmental Stewardship. The programme is delivered by independent contractors, and managed by Natural England on behalf of Defra, with input from staff across Defra, the Forestry Commission, Environment Agency and Historic England. Natural England's scheme monitoring work focuses on terrestrial habitats, while Environment Agency focuses on freshwater habitats, natural resources and reducing the risk of flooding and pollution.

The programme delivers evidence to:

- Evaluate the delivery of AES and their effectiveness in achieving their intended policy objectives.
- Inform current and future agri-environment policy, scheme delivery and development.
- Fulfil domestic reporting requirements.

4. Purpose of this Report

This report summarises findings from projects in Natural England's Agri-Environment Evidence Programme, published in 2024 and 2025. Natural England works with Defra to understand these findings and incorporate them into AES development and operational delivery. Key messages are shared internally to inform Natural England staff and help ensure the organisation remains evidence based. This report is also intended to be shared with key partners who contribute to and have an interest in the performance of AES. To highlight key findings from the projects, this report uses evaluation questions which can help structure findings. The evaluation questions used in this report, build on those used in the previous annual report (Waygood 2024). The research summarised in this report contributes to the following evaluation questions:

Are the actions/options delivering as intended?
Describe the direct and indirect social, economic and environmental impacts and outcomes of the schemes.
Describe whether the schemes made a difference and how.
How did scheme participants access and share learning? How efficient and effective was scheme funded support/learning (one-to-one, one-to-many) and wider knowledge exchange?
Describe the scheme and programme level contribution to the goals of the Environmental Improvement Plan 2023.
Describe the influence and contribution of externalities on the outcome and impact of the schemes.
Describe the positive and negative unintended effects of the ELM schemes.
Describe how the schemes have influenced the productivity, sustainability and resilience of the relevant sectors (agriculture, horticulture, forestry)?

Each project referenced in this report has a unique code which is used to identify it. A list of the project codes, their titles, links to the reports and the contractors who delivered the research are below:

Project code and link	Project title	Contractors
LM04115	An analysis of the impact of the Countryside Stewardship woodland improvement option WD2: the potential of field monitoring of option-managed woodlands and existing data sets to evaluate option efficacy.	British Trust for Ornithology (BTO)
LM04121	An evaluation of Agri-Environment Scheme impact on hedgerows in England	UK Centre for Ecology and Hydrology (UKCEH)
LM04130	Public perceptions of the impact of agri-environment schemes on the landscape	Countryside and Community Research Institute (University of Gloucestershire), Land Use Consultants (LUC), The Research Box
LM04134	Evaluating the impact of AES on pond quality	UK Centre for Ecology and Hydrology (UKCEH)
LM04141	Assessing the impacts of the countryside stewardship (CS) historic buildings restoration grant pilot scheme (HBRGP)	Countryside and Community Research Institute (University of Gloucestershire)
LM04143	Establishing the influence of nature connectedness of agri environment scheme uptake and delivery	ICF consulting services

Project code and link	Project title	Contractors
LM04144	Assessment of the effectiveness of Agri-environment Schemes in reducing vulnerability of Sites of Special Scientific Interest to climate change	Mott MacDonald, Reading Agricultural Consultants
LM04169	Facilitation fund- synthesis of group reports	Fera Science
LM04170	Modelling landscape-scale response of butterflies to Agri-environment schemes	UK Centre for Ecology and Hydrology (UKCEH)
LM04193	Developing evidence to support better outcomes from the educational access option	Evolved Research and Consulting (ERC)

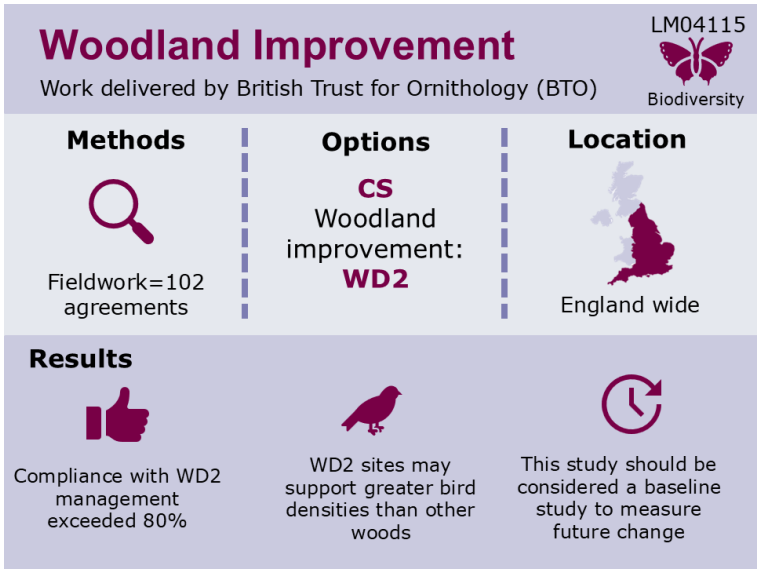
5. Recent findings

5.1. Evaluating effectiveness of scheme options

This section of the report summarises evaluation of different options which protect and enhance a wide range of habitats. Specifically, it shows the impact of options on woodlands, ponds and hedges. Additionally, this section summarises evaluation of the educational access option, which enables agreement holders to host educational visits from schools on their farm. Collectively these projects showed the value of detailed field surveys to investigate the outcomes delivered by scheme options.

Effectiveness of woodland improvement option – LM04115

Woodlands are important habitats for biodiversity; however they face numerous threats including inappropriate management, fragmentation and climate change. The woodland improvement option (WD2) in Countryside Stewardship (CS) aims to bring more woodland into appropriate management to address threats and issues. Under the option there are different management interventions which can be tailored to individual sites. These interventions include improving the condition of Sites of Special Scientific Interest (SSSI), improving the condition of woodland Priority Habitat (PH), restoring Plantations on Ancient Woodland Sites (PAWS), mitigating deer impacts and conserving woodland birds and red squirrels.



This project aimed to establish a baseline for specific biodiversity management objectives. As the sites monitored here under WD2 were not compared to sites not under WD2 management, the results of this project should be viewed as a statement of current condition, or a baseline to be compared to in the future. The project surveyed 102 CS agreements, which included the WD2 management option and a range of management interventions (PH, PAWS, SSSI, deer, birds and red squirrels).

Management implementation

On WD2 sites, implementation of management closely matched that set out in management plans. Specifically, visual surveys suggested that over 80% of management interventions set out in management plans were implemented on ninety-one agreement sites. The exact level of implementation could be higher or lower as surveys were only visual and only recorded presence/absence of evidence of management.

Woodland condition
Baseline surveys showed SSSI woodlands had more signs of crown dieback and tree mortality than other woodlands. The report suggests this may have been because SSSI woodlands have older trees and more standing dead wood which makes mortality more visible. Future surveys will show how woodland habitat condition changes across sites under WD2 management.

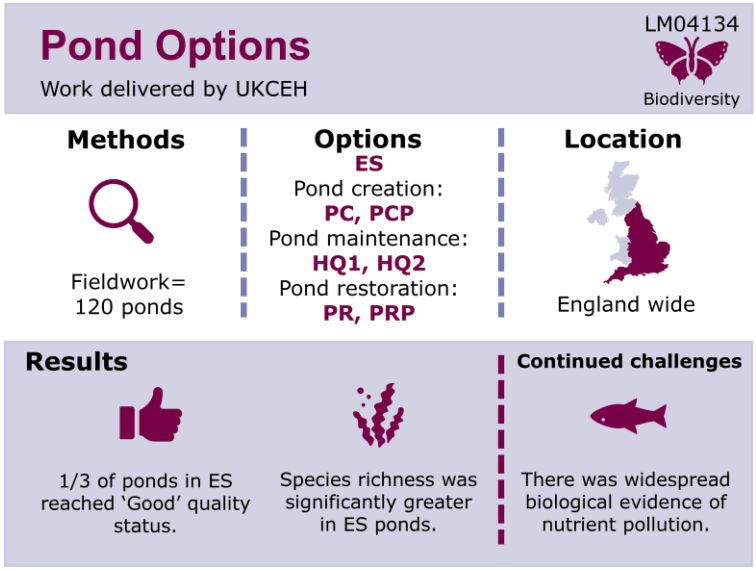
Birds
The survey of WD2 sites explored how they compare with woodlands in the wider landscape. Overall, WD2 sites supported greater densities of woodland bird species than random non-WD2 woodlands in the landscape, as surveyed by breeding bird survey (BBS). Specifically, WD2 sites had greater densities of assemblages of woodland specialists, woodland generalists and all woodland species. WD2 sites had four times higher SSSI woodland breeding bird assemblage index scores than BBS in surrounding landscape. Although WD2 sites and BBS use different methods, comparisons of bird abundance and species richness with measures of woodland condition provide moderate confidence that the results were related to the condition of the woods and not just methodological differences.

Mammals
The baseline survey included assessments of deer impact and presence of Red and Grey Squirrels. Deer impacts were generally low to moderate, with low deer impact on nearly 50% of sites and high impact on less than 30% of sites. Overall, 57% of potential Red Squirrel WD2 sites supported the species, while Grey squirrels were recorded at 97% of sites. A future survey will be important for understanding the impact of WD2 on mammals. Specifically for Red Squirrels, this may be best achieved by supporting WD2 inclusion within the established Red Squirrel monitoring framework.

Evaluation Questions	
Are the actions/options delivering as intended?	Across 102 agreements, implementation of management closely matched that set out in management plans (over 80% implemented as planned). This was surveyed using a visual qualitative assessment of presence/absence and some sites may have complied with management, but the features may not be visual.

This study has provided a baseline against which to measure future change. It has not been able to detect, or to test for, changes in woodland condition or biodiversity under WD2. Overall, surveys indicated high levels of management implementation, with over 80% of management interventions set out in management plans being implemented across ninety-one agreements.

Effectiveness of pond options – LM04134



Ponds, like woodlands, face numerous threats. Ponds are specifically threatened by pollution, isolation, inappropriate management and shading. Pond options in AES are designed to protect and enhance pond biodiversity. However, there has been no systematic assessment of their effectiveness. This project therefore evaluated the long-term impact of these options on pond biological quality.

In total, 120 ponds were surveyed in 2021 that had been maintained, restored or created as part of Environmental Stewardship (ES) between 2009 and 2016.

Pond Quality
Only one third of the surveyed ponds reached 'Good' quality status suggesting around two thirds of ponds were degraded in some way, with less plant species than would be expected of minimally impaired ponds and widespread evidence of nutrient pollution. On average 16 species were recorded per pond. Overall, there was no difference in pond condition between ES options to create, restore or maintain.

Overall, the survey showed that ponds in AES options were likely to be in better condition when:

- Located in protected areas
- Fed by groundwater (not from streams, ditches or water run-off)
- Without heavy shade from trees
- Surrounded by wetland, watercourses or woodland
- Lightly or moderately grazed by livestock

Surveyed ES ponds found:

- 180 wetland plant species were recorded (35% of all wetland plant species in the UK).
- 17 plant species of conservation concern were present.
- 6% of sites supported Water Vole (species of principal importance).
- Half the ponds qualified as habitats of principal importance.

Non-Native plants
A total of 22% of the ponds contained Schedule 9 invasive non-native plant species (INNS). In 6% of the ponds, INNS covered more than 20% of the pond area.

Areas for improvement
Suggestions for ways in which future agri-environment schemes and their guidance might be used to improve pond quality includes encouraging:

- Greater focus on maintaining water quality and minimising pollution in AES pond options, e.g. by introducing buffer zones, and reducing inflow from potentially polluted water sources such as ditches and drains.
- Reduction of fencing around ponds in grazed grasslands as studies suggest that stock grazing and poaching, particularly at low and moderate levels, can be beneficial for ponds.
- Continued or increased application of AES pond options to ponds in semi-natural land cover.
- More effective targeting of options that aim to maintain ponds of high wildlife value, including making the qualifying criteria clearer and better adherence.
- Reduction of heavy tree shade over ponds.

Evaluation Questions	
Are the actions/options delivering as intended?	Only 1/3 of surveyed ponds options were classified as Good quality, suggesting 2/3 were degraded in some way. Quality did not differ between ponds created, restored or managed by ES.

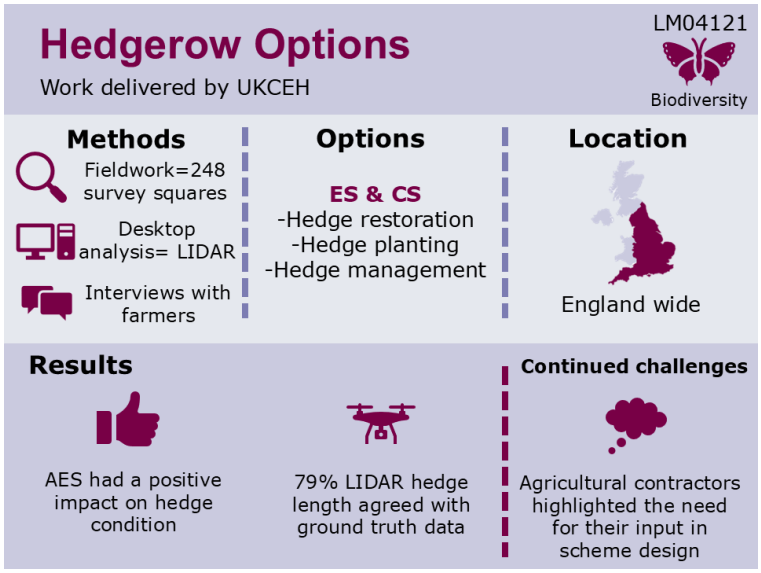
In conclusion, whilst 33% of ponds under scheme had good quality status, 67% of ponds under scheme were degraded, indicating that improved pond management in schemes is still required.

Effectiveness of hedgerows options – LM04121

Like ponds and woodland, hedgerows are important habitats providing ecosystem services, including connectivity in the landscape and carbon storage. Hedgerow management has been a key aspect of AES since they were first introduced and has attracted high levels of uptake and investment. This project aimed to understand how this level of uptake and investment has impacted hedgerow condition and extent.

Condition and extent

Within and outside AES management, the percentage of managed hedges in good structural condition increased 12% between 2007 and 2022/23, from 43% to 55%. Specifically, AES had a positive impact on hedge structural condition. In 2022/23, a greater proportion of hedges under AES management options were in good structural condition (63.5%) than hedges not in AES (46.8%).



Despite the positive increase in structural condition over time, there was no change in the extent of managed hedges between 2007 and 2022/23. The long-term trend from 1984 to 2022/23 showed significant decreases in managed hedge extent and increases in lines of trees, which over time can lead to a loss of woody features from the landscape. However, there was some evidence that newer AES are beginning to support more restoration and planting of hedges, although this is currently inadequate to reverse the long-term national decline.

Hedge management

The field survey found that managed hedges under AES were managed differently to those not under AES. There were differences between how hedgerows within AES were managed in comparison with hedgerows outside of AES, although only small proportions of managed hedges were managed with both cutting and laying across all groups. The majority of managed hedges were managed with just cutting, and participants with no hedges in current AES managed a higher proportion of hedges with just cutting than those with hedges in AES, while the reverse was true for the use of just laying or coppicing. Participants with AES hedges were also more likely to have restored a hedge, indicating that those in AES are implementing more effective long-term hedgerow management practices, supported by funding.

Uptake of hedgerow options

The project looked at AES uptake to understand the long-term rise and fall in hedgerow management under schemes. Although there are caveats to the uptake data, the project showed:

- Management: There has been a long-term decline in extent of managed hedges under management options, with extent in 2022 two-thirds lower than in 2012.

- Planting: There was a 10-fold increase in managed hedges under planting options between 2007 and 2022, with a significant increase since 2017, although planting option uptake generally remained low. There was a particular increase in the east and northeast, which historically had fewer managed hedges.
- Restoration: From 2007 to 2022 there was a 14-fold increase in the length of managed hedges under restoration options, with maximum restoration figures between 1-8% of managed hedgerows. This increase was more pronounced in westerly regions and in some upland areas.

Survey of attitudes

The farmer survey indicated a desire from farmers to maintain their hedgerows both for farming purposes (to contain stock and improve welfare) and for wildlife. However, they reported an ongoing need for adequate financial costs for planting, establishment, restoration and ongoing management of hedges. Agricultural contractors, who are generally responsible for hedge management, reported numerous challenges with the prescriptions and highlighted that this group had not felt adequately consulted. Their issues with prescriptions included impacts on machinery, time taken, land access issues due to timing and business viability.

The surveys also highlighted the potential advantages of investing in farmer/contractor training. Broadening the knowledge base on hedge rejuvenation and restoration, effective planting and subsequent management could play a key role in achieving Favourable Conservation Status (FCS) for hedgerows (Staley *et al.* 2024).

The project also examined if lidar could be used to assess hedgerow extent and condition, as it could provide consistent national data and enable cheaper and easier resurveys of hedgerows to be conducted. Lidar analysis was validated using pilot fieldwork carried out in 2022, repeating the Countryside Survey 2007 in 37 survey squares. Lidar was successful at identifying linear feature presence and length with good agreement with the Countryside Survey 2007 data at around 79% match. However, there were limitations to using lidar data including classification in urban areas, woodland areas, on either side of lanes, and inaccuracies in hedgerow width and height.

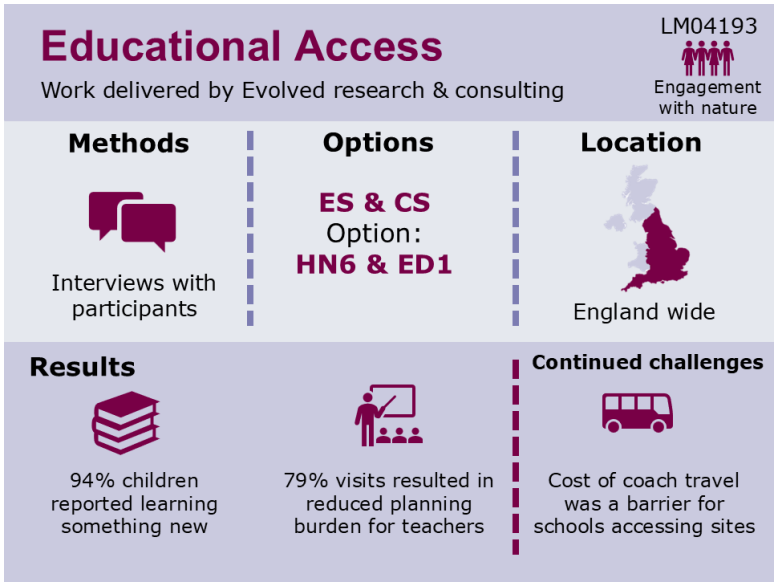
Evaluation Questions	
Describe whether the schemes made a difference and how?	AES had a positive impact on managed hedge structural condition with hedges in schemes being higher and wider, and managed using different methods. There is some indication that newer AES are supporting restoration and planting, however the scale of change is so far insufficient to substantially impact on the current extent of hedges.
How did scheme participants access and share learning? How efficient and effective was scheme funded	Participants felt they would benefit from training in hedgerow management or knowledge exchange, including passing on research evidence and practical guidance from experienced managed hedge

support/learning (one-to-one, one-to-many) and wider knowledge exchange?	restorers to broaden the knowledge base on managed hedge rejuvenation, restoration, and effective planting and subsequent management.

Overall, the results indicated that managed hedge condition improved between 2007 and 2022/3, and that AES had a positive impact on structural condition. Whilst managed hedges in England fall well short of meeting FCS for habitat quality (95% of features in good condition), there are positive signs that engagement with AES will help to progress towards this target. Management and restoration to improve quality remain a priority for hedgerow conservation and policy.

Evaluating the educational access option – LM04193

In addition to options that support important habitats, AES have options to enhance engagement with the natural environment. The Educational Access (EA) options (Countryside Stewardship ED1 and the now closed Higher Level Stewardship HN9) enable land managers to provide school visits to farms. This project built upon previous research which examined best practice in non-residential outdoor learning (LM04133), using surveys and interviews with sites offering EA visits, schools who do and do not visit EA sites, and observations and reflective discussions with pupils.



The scheme provides the opportunity for schools to engage with farming and the environment, and learn about food production, conservation, landscape and historical features. The study identified successful outcomes from EA visits for pupils and teachers, with 94% of children learning something new and 100% said they found the visit enjoyable. Outdoor learning experiences enable pupils to become more engaged with nature, provide learning from new experiences and can also positively influence pupil wellbeing. EA visits enable pupils to develop self-awareness, self-management and relationship skills, and to develop an appreciation of food, farming and the environment. Outdoor learning gives many benefits to children including providing context to classroom learning, improving mental health and providing opportunities to cater for different learning

styles, especially for pupils with Special Educational Needs and Disabilities (SEND). 80% of visits are delivered by site owners.

What made visits successful?
Successful visits resulted from providers delivering hands-on farming or conservation-based activities, showing their own skill and passion for the subject. The most effective learning opportunities took place when site staff set clear expectations for the visit, provided a suitable level of challenge to all pupils, and were supported by school staff in the facilitation of activities, including with behaviour management.

Teachers also reported a reduced planning burden when providers deliver the activities on visits. Following participation in EA visits, teachers benefit from increased confidence in outdoor teaching and improved wellbeing from spending time in nature, away from the school environment. The best post-visit learning opportunities either involved in-depth learning focused on a particular subject (e.g. Key Stage 4 biology), or cross-curricular learning opportunities that covered multiple primary curriculum objectives.

What are the barriers to success?
Barriers to EA visits for schools include the cost of coach travel, a lack of awareness of EA sites, time pressures to deliver the curriculum and lack of time in the school year for an additional trip. These barriers mean that schools are missing out on the unique learning experiences provided by EA. The study also found that although most teachers delivered at least one follow-up activity after the visit these were often isolated, suggesting that visits are not fully embedded within school curriculums. This may be exacerbated by teachers' lack of understanding of the links between visits and the curriculum. The EA visits commonly covered science and geography curriculum topics, but there is scope for many more subject areas to be covered.

Areas for improvement:
Suggestions to increase EA uptake include: better advertisement of the scheme to potential agreement holders, creation of a tool to help schools find EA sites, subsidies for school transport to the sites to overcome the cost barrier for schools, and opening the EA option to a wider range of providers including wildlife sites.

Suggestions to support the delivery of more successful visits include: developing resources to support the delivery of content from subjects that are not commonly delivered on EA visits, creating guidance to support teachers in weaving together pre- and post-visit learning and producing guidance to aid understanding of the field to fork journey.

Finally, suggestions to enhance EA delivery for providers include: developing a network of EA providers to share best practice, developing relationships with local schools and collaborating to plan repeat curriculum-focussed visits, prioritising a pre-visit verbal discussion with teachers to understand the visit's purpose, prioritising hands-on learning activities and adapting to different needs including accessible activities for SEND pupils.

Evaluation Questions	
Describe the scheme and programme level contribution to the goals of the Environmental Improvement Plan 2023.	The options contribute to the goal of enhanced engagement with the natural environment, specifically the action increasing the number of young people who connect with nature.
Describe the influence and contribution of externalities on the outcome and impact of the schemes.	The main barriers to providers being able to host school visits were the cost of coach travel, a lack of school awareness of sites, school time pressures to deliver the curriculum and lack of time in the school year for an additional trip.

The educational access option provided benefits for school children, 100% of which said they found the visit enjoyable. It also provided benefits for teachers who reported increased confidence with teaching outdoors. However, challenges associated with the option include high transport costs and a lack of awareness of sites. The project has identified several areas for further improving the option in future iterations of ELMs.

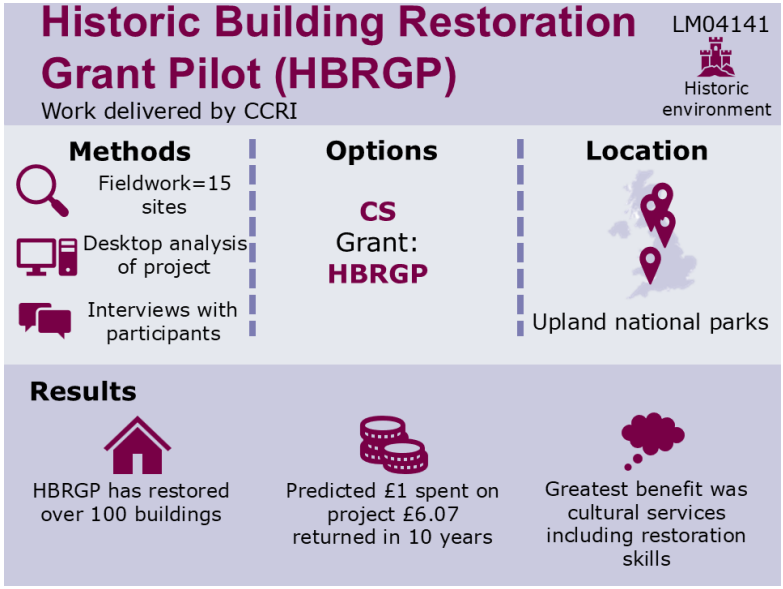
Scheme options in conclusion

In conclusion, the projects examined have evaluated the effectiveness of options within ES and CS. The evidence shows that hedgerows are in better condition in scheme than outside AES, while woodland baseline surveys show appropriate management under woodland improvement options. However, the projects indicate that habitats still require greater improvement, for example only a third of ponds under ES reached ‘Good’ quality. Beyond habitats, the educational access option provides social benefits and can enhance engagement with the natural environment. Overall, the evidence on the impact of options was strongest when monitoring design enabled robust comparisons. This highlights the need for future monitoring to be well integration with national datasets with regular data collection.

5.2. Evaluating scheme design and delivery

This section of the report includes evaluation of overall scheme design and delivery through considering: the success of new pilot schemes in CS, the impact of bringing agreement holders together for coordinated action, the contribution of schemes in addressing cross-cutting topics, specifically vulnerability to climate change, and the national impact of AES on butterflies.

Evaluation of historic buildings restoration grant pilot scheme – LM04141



In addition to funding revenue options which typically span several years, AES also provides one-off capital grants with specific aims and purposes. The historic buildings restoration grant pilot (HBRGP) scheme was a standalone capital grant scheme within CS that was run as a one-off pilot. HBRGP aimed to bring traditional farm buildings (TFBs) back to life in five upland National Parks (NPs), Dartmoor, the Lake District, Northumberland, the Peak District and Yorkshire Dales, enhancing cultural heritage features, landscape character, wildlife, and public engagement with the environment. The scheme included funding to develop a management plan and subsequently covered 80% of costs towards building restorations, specialist surveys and project management work.

Scheme uptake

The pilot scheme was very popular, receiving 338 expressions of interest, followed by 98 initial applications, of which 71% resulted in a completed restoration project. The HBRGP scheme has added over 100 restored buildings to the landscape.

Impact evaluation

The scheme was assessed using a return on investment (ROI) model, based on 15 case studies across five upland NPs, which assessed the monetary value and social, economic, cultural, and environmental impacts of the HBRGP scheme. The average investment across the 15 case studies was £222,293 per project. Average returns on investment of £1 predicted by the ROI model was £4.55 over five years, rising to £6.07 over 10 years.

The greatest benefits generated from HBRGP were cultural services including improvements in knowledge and skills among different sets of stakeholders involved with the restoration project, wellbeing benefits associated with engagement in the restoration, a sense of place and belonging, landscape impacts, and enhancement of local distinctiveness. There were small benefits generated from habitat and biodiversity improvements. Lastly, regulating services benefited from reduced emissions of carbon due to building restoration compared to the higher carbon emission associated with new buildings (both materials & activity).

Process evaluation

In addition to understanding the uptake and impact of the capital grant scheme, the project also evaluated the scheme processes which included understanding applicants' experience. The majority of applicants' experience of the process was positive: 93% of agreement holders would use the HBRGP option again. However, issues arose from confusion on the scheme purpose, financial issues and risks, difficulties obtaining permission to restore buildings, timelines to complete work, seasonal working, building industry capacity and COVID-19. The interviewees considered it essential to have a good Management Plan for successful outcomes for the restoration.

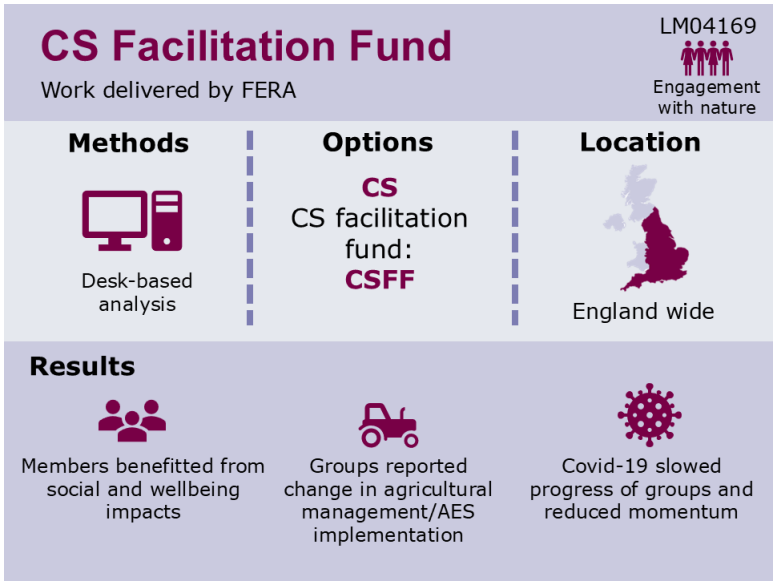
Areas for Improvement

The report identified how the scheme could increase positive outcomes, for example including improving ecological outcomes (e.g. by installing nesting boxes), ensuring those involved in the project understand the need for evaluation, and involving the local community with the restoration to enhance benefit for the community.

Evaluation Questions	
Describe the direct and indirect social, economic and environmental impacts and outcomes of the schemes.	Social: Improvements in knowledge and skills among different sets of stakeholders involved with the restoration project, changes in wellbeing associated with engagement in the restoration work, and changes in sense of place and belonging, landscape impacts and enhancement of local distinctiveness. Economic: Using a model to predict average return on investment from 15 case studies, the model predicts for every £1 invested a return of £4.55 over five years and £6.07 over 10 years. Environmental: Carbon emission benefits of reduced emissions associated with building restoration compared to new buildings (both materials & activity).

In conclusion HBRGP was able to deliver cultural, landscape and engagement benefits. However, opportunities to improve delivery were identified which could further improve outcomes from the capital grant in the future.

Evaluating the countryside stewardship facilitation fund (CSFF) – LM04169



The Countryside Stewardship Facilitation Fund (CSFF) is a mechanism to deliver co-ordinated land management and environmental improvements at the landscape scale. CSFF provides funding to bring farmers, foresters and land managers together to improve the environment in their local area. This is through helping to coordinate activities and increase knowledge exchange and training. There have been five CSFF application rounds between 2015 and 2020, with funding lasting for 3-5 years. This project studied facilitation fund groups to evaluate what groups had delivered and their plans for the future, building on four previous CSFF evaluation phases (LM0473, LM0479, LM04101 and LM04127).

This project included a synthesis of information from the first five cohorts of CSFF (groups created from 2015 to 2020) and reviewed 108 annual reports and 11 final reports. The reports documented 1,141 events including workshops, training events, talks, farm walks and group meetings. The training covered a wide range of themes including farm management, soil mapping and monitoring and farm business management. Groups' objectives covered a wide range of themes including biodiversity (97%), water quality (72.2%), resource protection (63.9%), flood risk management (48.1%), land and historic environment (46.6%), natural flood management (22.6%), and carbon storage/sequestration (12.8%).

Successes

- Social and wellbeing impacts – groups provided support, especially during Covid-19 and the ELM transition, strengthened the resilience of members and provided social and networking platforms for new landowners.
- Agricultural management – groups reported evidence of change in management and implementation of AES or similar interventions. This will be expected to deliver environmental benefits at the parcel level (e.g. use of cover crops) and across the landscape (e.g. connectivity of AES interventions within and between farms).

- Knowledge exchange – training activities provided opportunity for knowledge exchange within and outside groups.
- External networks – groups bridged the gap between people in the group and those in government. It provided bottom-up design and resource for top-down initiatives where policy can be trialled.

Challenges

- Restrictions due to Covid-19 resulted in activities being delivered online which had some benefits (recording meetings, access to a wider range of people, greater flexibility, reduced cost of hiring a venue) and some challenges (access difficulty due to rural broadband connection and computer skills).
- A few groups referred to CSFF financial processes, the amount of paperwork facilitators are required to complete and low attendance for events (due to farming calendar and unpredictable weather).

Areas for development

The current CSFF model provides group-based training and enables aggregated delivery. A challenge is the inability to provide one-to-one advice to members. Providing tailored advice would enhance the success of shared objectives. Other improvements which could be implemented include:

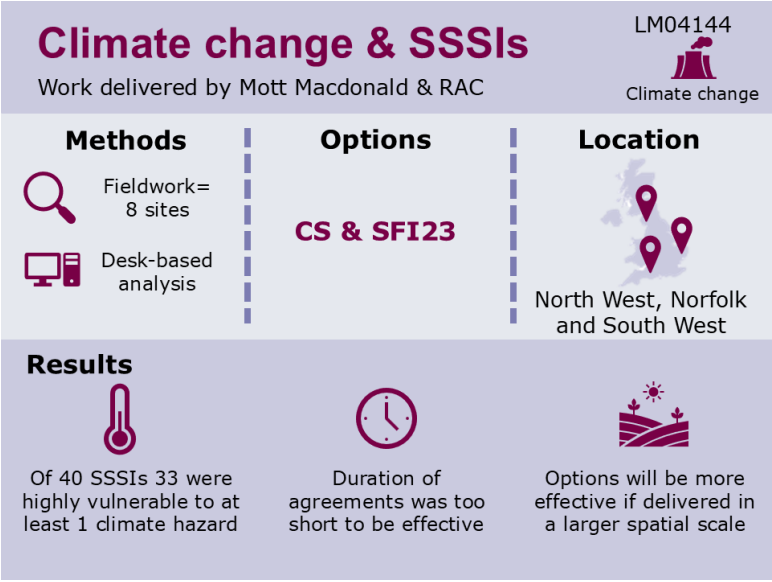
- Provide a support network for facilitators from the inception of CSFF groups.
- Build upon the foundations of CSFF groups interacting and creating networks in previous application rounds.
- Ensure there is a clear and prompt claims process for facilitators.

Evaluation Questions	
Describe the direct and indirect social, economic and environmental impacts and outcomes of the scheme	Social: CSFF enabled networking within groups and externally, brought together land managers and provided a support network for members. Economic: 70 groups secured non-CSFF sources of funding including from government grants, companies, NGOs and fundraising. Environmental: Significant environmental impact would not be expected within the timeframe of CSFF groups, because of the long-term nature of many environmental outcomes. However, CSFF can act as a springboard to achieve long term environmental improvements at the landscape scale and provide wider opportunities to strengthen local resilience.

This project examined reports authored by facilitators who self-assessed their own CSFF groups, so the findings and results should be considered subjective. The reports identified benefits of the CSFF groups including social and wellbeing benefits for farmers and land

managers that are members. They also identified challenges with the facilitation fund including difficulties following the claims process.

Assessing AES effectiveness in reducing vulnerability of Sites of Special Scientific interest to climate change - LM04144



Many actions funded by AES have the potential to help sites adapt to climate change. This project evaluated how effective current and future AES are at adapting and reducing the vulnerability of Sites of Special Scientific Interest (SSSIs) to climate change. This will help identify opportunities for AES to deliver further adaptation benefits, support the future design of AES and ensure that adaptation is being adequately addressed on SSSIs and in the wider landscape.

Designated features within SSSIs may be particularly vulnerable, directly and indirectly, to the physical risks of climate change due to their unique and often vulnerable status (Duffield *et al.* 2021). The project was undertaken in two phases. Firstly an initial, high-level assessment was undertaken of climate risks and the use of AES to support adaptation on 40 SSSIs. Then a detailed assessment examined climate risks and effectiveness of AES at delivering adaptation at eight SSSIs.

AES

Of the 40 SSSIs, the initial assessment deemed 33 sites as having high vulnerability to at least one climate hazard whilst seven sites had no monitored features with a high vulnerability score.

The detailed assessment across eight sites identified potential management interventions (PMIs) to reduce vulnerabilities, which was informed by the Resist-Accept-Direct (RAD) approach (Shuurman *et al.* 2020; National park Service, 2022). The RAD Framework assists decisions on management goals based on resisting, accepting or directing ecological changes resulting from climate change. Resisting the trajectory of change maintains or restores ecosystem processes, function, structure, or composition based upon historical or acceptable current conditions. Directing the trajectory of change actively

shapes ecosystem processes, function, structure, or composition towards desired new conditions.

Although the AES options and agreements at the time of the study were not explicitly set up to adapt to climate change, they did support a ‘resist’ approach to managing climate change. Additional AES options were also identified which could further support a ‘resist’ approach to adaptation.

Some AES options had the potential to deliver adaptation benefit under a ‘direct’ approach by facilitating change in the features or functions that a site supported. In part due to the requirement to deliver favourable condition, there was limited evidence of ‘direct’ options being implemented on the eight sites but multiple examples of where options that were set up to ‘resist’ change could be amended to deliver the ‘direct’ approach if the condition targets for sites permitted.

ELM schemes

The 2023 version of ELM schemes was analysed for their potential to contribute to adaptation on SSSIs. Many species recovery and land management options already contribute to enhancing resilience at a smaller site scale, but the use of Landscape Recovery might be directed to achieve resilience at a larger scale. This is currently difficult to achieve in areas under different land ownership where the aims of land management may differ significantly. Data gathering under AES would provide useful information, e.g. on soil condition and land use, that could be used with remote sensing data to monitor climate change, its impacts and the degree to which measures implemented to deliver resilience under ELM schemes are effective.

Areas for improvement

Areas for improvement which would help increase the effectiveness of AES in delivering climate change adaptation on SSSIs included to:

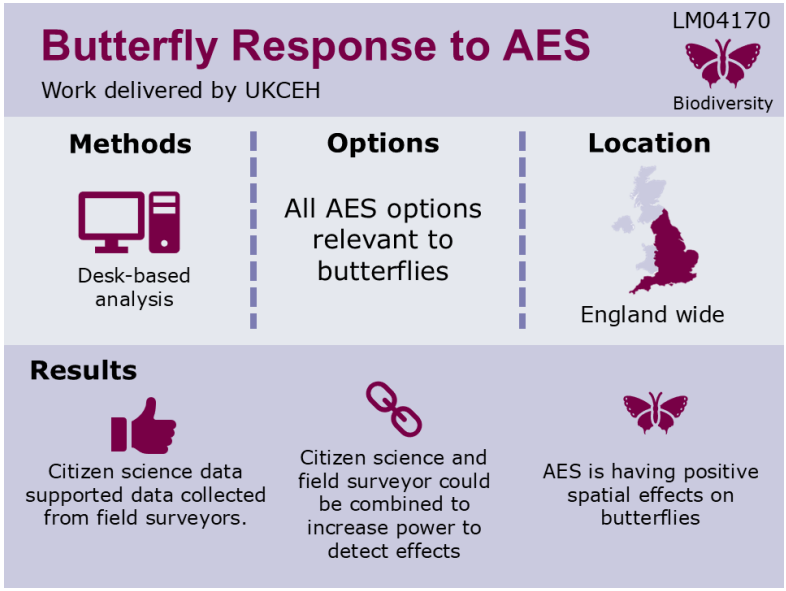
1. Increase the scale and length of AES agreements to deliver AES within and beyond the boundaries of SSSIs and for a longer period in line with the desired outcome time scales. This would help achieve the adaptation benefits for sites.
2. Consider additional actions in future iterations of ELM to increase its potential to contribute to climate change adaptation on SSSIs, such as:
    - Actions that seek to further improve water level and flow management.
    - Landscape-scale species recovery and specific land management actions via Landscape Recovery to achieve resilience at a larger scale.
    - Agreement holder led data (e.g. soil condition and land use) to monitor the impact of climate change and effectiveness of ELM going forward.
3. Include RAD interventions as part of a plan for climate change adaptation on SSSIs and linking these to the targeting and development of AES agreements.

Interventions outside of schemes could contribute to climate resilience such as water level and flow management. Measures could include restoration of historic landscapes like ridge and furrow or installing systems to micro-manage shallow water tables in floodplains and fens.

Evaluation Questions	
Describe the scheme and programme level contribution to the goals of the Environmental Improvement Plan 2023?	The research contributes to the EIP goal 7 mitigating and adapting to climate change, specifically investing in farmers to mitigate climate change related impacts. It also contributes to goal 8, reducing the risk of harm from environmental hazards, specifically rewarding farmers for actions to reduce climate change effects.
Describe how the schemes have influenced the productivity, sustainability and resilience of the relevant sectors (agriculture, horticulture, forestry)?	The project evaluates the schemes' ability to contribute to the sustainability and climate change resilience of protected sites under AES management.

This project identified that AES has the potential to influence and change management of SSSIs to reduce vulnerability to climate change. However, changes to future ELMs are required for AES to better support the land changes required including increasing AES flexibility to allow for management practices to respond to the impacts of climate change and increasing the length and spatial scale of AES agreements.

Responses of butterflies to Agri-environment schemes – LM04170



Previous research has shown butterfly communities respond positively to coverage of AES (LM0465, LM04109). This project used citizen science data (UK Butterfly Monitoring Scheme (UKBMS); Wider Countryside Butterfly Survey (WCBS)) alongside AES monitoring data (AES landscape scale monitoring (LandSpAES - LM0465)), to understand if relationships identified in AES monitoring are also nationally representative. Overall, the project found generally positive associations between butterfly species richness,

abundance and diversity and AES intervention, but these associations depended on the data source and spatial scale of AES intervention.

Based on citizen science data, AES intervention at the landscape (3x3km) scale had a positive impact on butterfly abundance and richness. Furthermore, it was found that increased AES intervention at the local scale (1x1km survey square) had a positive influence on butterfly richness. However, the relationship between butterfly diversity and AES intervention at the local and landscape scale was more variable.

The project also examined combining LandSpAES and citizen science data which demonstrates the increased power to detect effects when integrating similar datasets. Integrating LandSpAES and WCBS datasets identified a positive effect of local AES on butterfly abundance.

Lastly the project examined if butterfly mobility was moderated by local and landscape scale AES, hypothesising that more mobile species would be less influenced by local AES management. The three datasets examined in this study found different effects, the LandSpAES data supported this hypothesis, WCBS found evidence of a positive effect of landscape AES for all mobility groups and UKBMS was more divergent. This may in part be due to the methods of data collection being more similar for LandSpAES and WCBS than UKBMS.

Evaluation Questions	
Describe the scheme and programme level contribution to the goals of the Environmental Improvement Plan 2023?	Strong evidence that high coverage of AES is positively associated with butterfly abundance and richness. This indicates AES are likely contributing to the target to halt the decline in species abundance in England by 2030.

Overall, the results show that AES are having a positive spatial effect on butterflies, and this is supported by using multiple datasets. This increases the confidence of the effect of AES at local and landscape scale on butterfly abundance, richness and diversity and suggests that AES are providing benefits.

Scheme design and delivery in conclusion

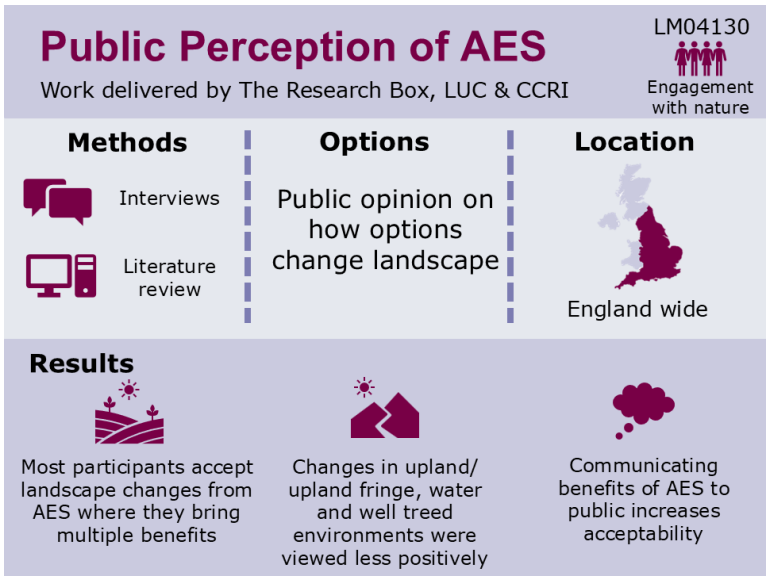
In conclusion, these projects show scheme design and delivery supported positive outcomes, but also consistently showed areas for further development. Evidence showed agreement holders had high levels of satisfaction with the CS pilot scheme for historic building restoration, with 93% saying they would use the scheme again. Bringing together groups of agreement holders through the CSFF had positive impacts on knowledge exchange and social benefits. There was evidence that schemes provided some climate change adaptation benefits, even when not explicitly set up to do this, but there was potential for greater benefit. Finally, greater butterfly-relevant AES uptake was associated

with greater butterfly species richness and abundance. Overall, the findings showed how elements of scheme design and delivery are contributing to a range of environment objectives, but with scope and capacity to further improve the outcomes.

5.3. Public perceptions of scheme and farmers' connection to nature

Finally, reports examined public perceptions of the impact of AES on the landscape, understanding how agreement holders connect with nature, and how this could be used in understanding the impact of schemes.

Public perceptions of the impact of AES on the landscape – LM04130



The impact of AES on landscape character has been a regular element of scheme monitoring and evaluation. Assessments by professional field surveyors have shown that schemes have generally positive impacts on landscape character. However, there is much less understanding of public perceptions of AES and its impact on landscape character. This study sought to understand the views of the public who use the countryside, regarding changes to landscapes aimed at benefitting biodiversity and adapting to climate change.

An online quantitative survey gathered over 500 responses from people who had recently visited the countryside in six different agricultural landscape types (ALT) and urban fringe, woodland and river landscapes. Each locality had photos of local landscapes as they are now and digitally manipulated 'after' images showing potential changes from AES agreements (Figure 1). These were used to explore how participants felt about these changes. This was followed by an in-depth qualitative survey with some of the respondents.

The two surveys found:

- After a brief description of AES, most respondents thought AES was a good/very good idea. Over 75% thought AES would be better for wildlife and climate change. The majority wanted a more wildlife-friendly landscape, even if it was scruffier and less tidy, less accessible and some views were lost - but not if it meant the loss of food production or local character.

- The ‘after’ images (depicting implemented options) were found to be more attractive, especially in the Eastern Arable ALT (79%) but less so in riparian contexts (35%).
- Most changes were acceptable where they helped to achieve multiple benefits in the landscape, including for wildlife.
- Improving streams, river courses and floodplains, and/or creating and managing woodland, hedgerows and meadows, were seen as important landscape features to improve by over 85% of participants.

Figure 1: Showing South- East mixed landscape, before (left) and digitally manipulated (right) to illustrate the potential effect of landscape change from AES. Reproduced from Short *et al.*, LM04130 (2025).
© Natural England.

The results from this project were compared to LUC’s Rapid Survey assessment of the effects of ES options on the landscape (LM0456) to determine if participants’ opinions agreed with those of professionals. The comparison identified a high level of agreement between participants and professional opinion regarding lowland landscapes, where AES leads to noticeable improvements. However, there were lower levels of agreement in three areas:

- Changes to the water environment, partly due to participants’ concerns about accessibility to the water, safety and excessive vegetation.
- Changes in uplands or upland fringe landscapes. This appeared to reflect high levels of appreciation for the landscapes shown in the baseline images and a concern about landscape change in the uplands.
- Tree planting in landscapes where high numbers of trees already exist, which raised concerns about the loss of views and an increased sense of enclosure.

Participants viewed the top four priorities for AES to address as carbon capture (93%), habitat creation/management (92%), flood alleviation (91%) and soil protection/management (90%).

The comparison highlights the need for clear explanation and communication of some AES actions. Also, there is a need to communicate better to the public about the necessity for landscape change due to climate mitigation, adaptation, nature recovery and the changes that are likely to result.

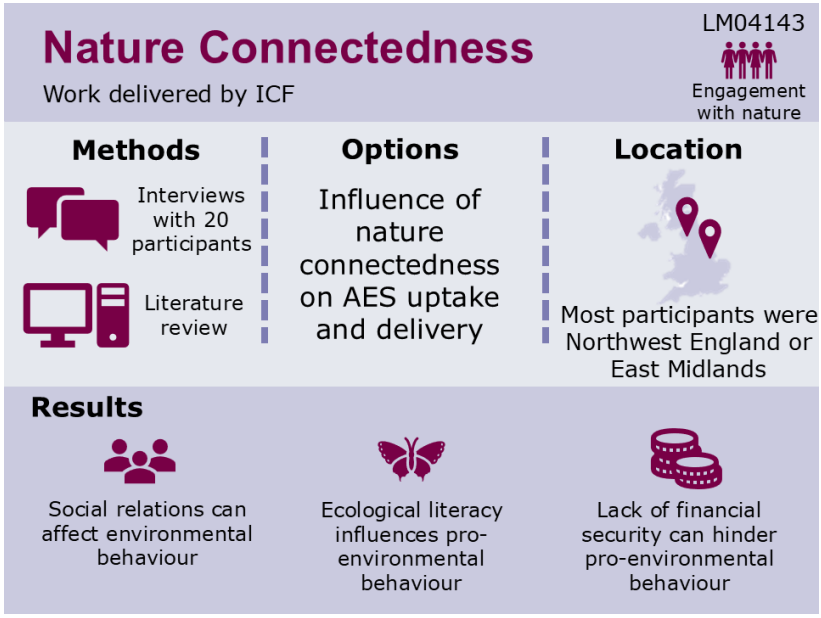
Evaluation Questions	
Describe the positive and negative unintended effects of the ELM schemes.	Agri-environment schemes result in changes to the landscape. Public opinion on these changes (based on a relatively small sample) are generally positive and accepted, but less positive in the upland/upland fringe, water environments and well-treed landscapes.

In conclusion, the participants broadly viewed the changes to landscapes that can be caused by AES positively. Communicating the benefits and purpose behind AES options and changes in the landscape seem to be key to wider acceptance and understanding by most countryside users. The views of professionals generally match those of the participants, except in iconic and more complex landscapes; here, the reasons behind AES options are less well understood. Further research is required to understand the views of those who visit the countryside a little or not at all but would like to; people at different life stages; or with a range of environmental views.

Understanding farmers' connection to nature – LM04143

The environmental benefits that arise from AES are delivered by thousands of farmers and land managers across the country. Therefore, it is important to understand their motivations for engaging with AES. Recent research argues that the more connected to nature a person feels the more likely they are to want to protect it. 'Nature connectedness' is defined as the extent to which an individual feels that they are part of nature. Nature connectedness may therefore be a useful way to understand how land mangers engage with AES and the environmental benefits they provide. This study aimed to understand how farmer and land manager relationships with nature affected their participation in AES.

The study developed indicators to measure these relationships, and the role AES can play. Twenty interviews were conducted with agreement holders. These involved survey questions, open discussions, and farm walks or map work. Advisers provided additional assessments of agreement holders' environmental ambitions.



Key findings from the interviews:

- **Nature Connectedness**: Farmers with strong nature connectedness were more likely to engage in pro-environmental behaviours. However, the term "nature connectedness" was confusing for some.
- **Social Relations**: Strong social networks and trust within the farming community supported environmental practices. However, some farmers felt isolated from the local farming community.
- **Stewardship Principles**: Farmers' sense of responsibility towards the environment and society drove their participation in AES. However, opinions on what constitutes good environmental behaviour varied.
- **Ecological Literacy**: Knowledge about ecological systems and the impact of farming practices on the environment is crucial for promoting sustainable practices.
- **Well-being**: Farmers' well-being, including job satisfaction and quality of life, is linked to their environmental behaviours. Poor financial security can negatively impact their ability to engage in pro-environmental practices.

Areas for improvement and future research

The project was a small pilot to explore the potential use of new concepts such as ‘nature connectedness’. As such it highlighted some potential next steps:

- **Better Definition of Terms**: Clearer definitions of terms like "nature connectedness" are needed.
- **Incorporation of well-being indicators**: Well-being indicators should be included in AES monitoring and evaluation programmes.
- **Guidance and Communication**: Indicators could be incorporated into farm adviser training to help them understand the social world of agreement holders.
- **Further Research:** This was only a pilot study with 20 agreement holders, so a future larger sample size is needed to validate findings.

Overall, the study produced a list of high-level social indicators and sub-indicators that can be integrated into wider AES monitoring and evaluation programmes to identify patterns

and trends in agreement holder values towards nature over the long-term. The study also identified areas to improve AES by incorporating concepts of nature connection into scheme design. This would enable a better understanding of the underlying motivations of agreement holders, and help design more effective strategies to promote sustainable environmental management and contribute to long-term success of AES, enhancing AES design, communication and monitoring. However, due to the small sample size, geographic concentration and differences between in-person and online interviews (which may have affected responses and resulted in participant fatigue) further research is required before the findings are fully implemented.

Evaluation Questions	
Describe the influence and contribution of externalities on the outcome and impact of the ELM schemes?	Some evidence has emerged suggesting agreement holders with a strong sense of nature connectedness are more inclined to undertake environmentally positive practices. The agreement holder's environmental behaviors are influenced by social relations, ecological literacy and well-being.

In conclusion, this project has identified a novel approach to AES monitoring by considering the influence of nature connectedness on uptake of AES. As this study is a small pilot study, further research will enable the concepts of nature connection to be incorporated into scheme design to improve overall scheme effectiveness and delivery.

Public perception and farmer connection to nature in conclusion

In conclusion these two projects examined people's opinions of nature and the environment. The public generally has a positive opinion of the landscape changes caused by AES, particularly when the purpose and benefits of AES were explained. A small pilot study examining the nature connectedness of farmers found some evidence that AES agreement holders with a stronger sense of connection to nature are more inclined to undertake environmentally friendly practices. Both studies highlighted the need to conduct more research with a greater number of more diverse participants.

6. Future Evidence Needs

Projects detailed in this report have addressed in part some of the evidence needs identified in previous annual reports (O'Connor 2023; Waygood 2024), such as engaging teachers and schools to better understand the educational access option (LM04193) and understanding best practice for AES options used on SSSIs to respond to climate change (LM04144). Several of the projects in this report highlighted the need to conduct research with a larger number/more diverse range of participants (LM04130, LM04143, LM04193). Other projects in this report have mentioned the importance of long-term nationally representative datasets including the hedgerow (LM04121) and woodland improvement (LM04115) projects. Also identified are specific future monitoring and evaluation opportunities:

- For effective monitoring and evaluation, AES databases need to be easily interpreted, queried and integrated with external data (LM04121).
- A future evaluation of CSFF when current groups have provided final reports. The research would also benefit from using workshops or structured interviews with both CSFF group members and facilitators (LM04169).
- In relation to educational access, future evaluation should engage schools with a high proportion of pupils who have English as an additional language and to engage with Early Career Teachers and trainee teachers to understand their use of resources and co-design resources that would be useful in supporting educational access (LM04193).

Future evidence projects

Monitoring and evaluation of AES continues beyond the projects published in this report. Projects published over the next 12 months will be included in the 2025/2026 Annual Report. To highlight some of the current work in the Agri-environment Evidence Programme, the projects listed below are currently underway or nearing completion. The projects include evaluations of options and agreements, evaluation of scheme design and delivery, the use of innovative methods and engagement with AES and nature.

Evaluating effectiveness of scheme options in agreements

- The benefits of pond buffers and management of the surrounding land parcel on pond quality.
- Monitoring the effectiveness of AES scheme options for the creation of successional areas and scrub in delivering desired outcomes.
- Monitoring & Evaluation of AB14 harvested low input cereal plots.
- Comparative Monitoring & Evaluation of Dry Stone Walls.
- Maintaining the visibility of archaeological sites on moorland.
- Are HLS and CS agreements delivering a wide range of environmental outcomes?

Evaluating scheme design and delivery

- An assessment of counterfactuals to inform our evidence on the effectiveness of AES in conserving and enhancing landscape character.
- Evidence review for agri-environment scheme interventions.
- Landscape monitoring of the impact of AES on landscape change and resilience, informing spatial prioritisation.
- Evaluation of CS Tree Health grants.

Using innovative methods for monitoring

- Ecoacoustics: Do bush-crickets respond to AES at local and landscape scales?

Evaluating engagement with AES and nature

- Establishing the influence of nature connectedness on AES uptake and delivery in England

7. References

CS2007 Countryside Survey, undated. Countryside Survey England Results from 2007. http://nora.nerc.ac.uk/id/eprint/8283/1/N008283CR.pdf

Duffield, S. J., Le Bas, B., and Morecroft, M. D. (2021). Climate change vulnerability and the state of adaptation on England's National Nature Reserves. *Biological Conservation.* 254. https://doi.org/10.1016/j.biocon.2020.108938.

Environmental Improvement Plan 2023. Available at: https://assets.publishing.service.gov.uk/media/64a6d9c1c531eb000c64fffa/environmental-improvement-plan-2023.pdf (Accessed: 20.01.2025)

Environment Act 2021. Available at: www.legislation.gov.uk/ukpga/2021/30/pdfs/ukpga_20210030_en.pdf (Accessed: 20.01.2025)

LM0456 (2016). Monitoring the contribution that environmental stewardship is making to the maintenance and enhancement of landscape character and quality. LUC and Rural focus Ltd. Final report to Natural England, project LM0456.

LM0465 Staley, J.T., Jarvis, S.G., Redhead, J.W., Siriwardena, G.M., McCracken, M.E., Botham, M.S., Howell, K., Upcott, E., Dean, H., Harrower, C., Ward, C., Conway, G.J., Henderson, I.G., Pringle, H., Newson, S., Turvey, K., Christelow, J., Falk, S., Mondain-Monval, T., Amy, S. and Pywell, R.F. (2022). Landscape-scale species monitoring of agri-environment schemes. UKCEH and BTO. Final report to Natural England, project LM0465.

LM0473 (2018) CS Facilitation Fund Evaluation. FERA. Final report to Natural England, project LM0473.

LM0479 Jones, N., Cao, Y., Adamson, H., Lewis-Reddy, L., Crowe, A., Hockridge, B. (2020). Facilitation Fund Phase 2 Evaluation. FERA. Final report to Natural England, project LM0479.

LM04101 Breyer, J., Medcalf, K., Nolan, T., Mills, J., Morse, A., Gaskell, P., Underwood, S., Kaczor, K. (2020). CS Facilitation Fund Phase 3. Environment Systems Ltd, Countryside and Community Research Institute: Cheltenham and LUC. Final report to Natural England, project LM04101.

LM04109 Jarvis, S.G., Staley, J.T., Siriwardena, G.M., Seaton, F., Redhead, J.W., Ward, C., Upcott, E., Botham, M.S., Henrys, P. (2021) Modelling Landscape-scale species response to agri-environment schemes. UKCEH and BTO. Final report to Natural England, project LM04109.

LM04115 Henderson, I.G., Bellamy, P., Barton, M., Riddle, N., Broome, A., Siriwardena (2025) An analysis of the impact of the countryside stewardship woodland improvement option WD2: the potential of field monitoring of option-managed woodlands and existing

data sets to evaluate option efficacy. BTO. Final report to Natural England, project LM04115.

LM04121 Norton, L., McCracken, M., Maskell, L., Staley, J., Wood, C., Henrys, P., Patton, J., Broughton, R.K. (2024) An evaluation of Agri-Environment Scheme impact on hedgerows in England. UK Centre for Ecology and Hydrology. Final report to Natural England, project LM04121.

LM04127 Short, C., Breyer, J., James, N., Morse, A., Raseta, S., Lewis, N., Mills, J., Grant, M., Yandell-Thomas, M., and Medcalf, K. (2022). Countryside Stewardship Facilitation Fund- Monitoring and evaluation phase 4. Countryside and Community Research Institute: Cheltenham. Final report to Natural England, project LM04127.

LM04130 Short, C., Barkley, L., James, N., Grant, M., Duncan, S., Lawrie, C,, Hammonds, R., Fleming, A., Inwood, H., and Gaskell, P. (2023) Public perceptions of the impact of Agri-Environment Schemes on the landscape. Countryside and Community Research Institute: Cheltenham. Final report to Natural England, project LM04130.

LM04133 Cottrill, R., Molyneux, J., Gill, V., Yanishevskaya, M., Main, H., Van Zanten, B., Greet, S. and Leather, M. (2022). Evaluation of Education Access. Final report to Natural England, project LM04133.

LM04134 Morris, D., Williams, P., Scarlett, P., Edwards, F., Laize, C. (2025) Evaluating the impact of Agri-Environment Schemes on Pond Quality. UKCEH. Final report to Natural England, project LM04134.

LM04141 Gaskell, P., Powell, J., Berry, R., Smith, K., Lake, J. Courtney, P. Malekeniezhad, F. Bundhoo, D. and Chivers, C. (2023) Assessing the impacts of the Countryside Stewardship historic building restoration grant pilot scheme. CCRI. Final report to Natural England, project LM04141.

LM04143 Mills, J., Gaskell, P., Bundhoo, D., Courtney, P., Clare, N., Turner, C., Lobley, M., Nye, C., Wheeler, R., Wilkinson, T. (2025). Establishing the Influence of Nature Connectedness of Agri-Environment Scheme Uptake and Delivery in England. ICF, CCRI University of Exter and Frontier. Report to Natural England, project LM04143.

LM04144 Dixon, K.., Hands, S., Day, H., Danks, P., van Dijk, N. (2024) Assessment of the effectiveness of Agri-environment Schemes in reducing vulnerability of Sites of Special Scientific Interest to climate change. Final report to Natural England, project LM04144.

LM04169 Mondair, K., Gatenby, R., Corcoran, A., Smith, E., Conyers, S., Jones, N. (2024) Facilitation Fund – Synthesis of Group Reports. Final report to Natural England, project LM04169.

LM04170 Jarvis, S.G., Seaton, F., Botham, M.S., Redhead, J.W., Upcott, E., Staley, J.T., (2025). Modelling Landscape-scale Responses of Butterflies to Agri-environment Schemes. UKCEH. Report to Natural England, project LM04170.

LM04193 Gallagher, A., Craig, D., Gallagher, R. (2025). Developing evidence to support better outcomes from the Educational Access Option. Evolved Research and Consulting. Report to Natural England, project LM04193.

Munday, P., Darch, G., Duffield, S., Mansfield, T., Macgregor N., Taylor, S., and Morecroft M. (2018). Assessing the contribution of agri-environment schemes to climate change adaptation. DG_5138754_005. Natural England.

National Park Service. 2022. Resist-Accept-Direct Framework. Available at: www.nps.gov/subjects/climatechange/resistacceptdirect.htm (Accessed 19.11.2024)

O'Connor R. S. (2023). Agri-Environment Evidence Annual Report 2022. A summary of recently published projects. Natural England Research Reports, Number NERR126. Natural England.

Schuurman, G.W., Hawkins Hoffman, C., Cole, D.N., Lawrence, D.J., Morton, J.M., Magness, D.R., Cravens, A.E., Covington, S., O'Malley, R. and Fisichelli, N.A. (2020) Resist-accept-direct (RAD)-A framework for the 21st-century natural resource manager. USGS Report. 2020:20.

Staley, J. T., Wolton, R. & Norton, L. 2024. Definition of Favourable Conservation Status for hedgerows. Second Edition. RP2943. Natural England. Available at https://publications.naturalengland.org.uk/publication/5565675205820416

Waygood, U. A. (2024). Agri-Environment Evidence Annual Report 2023. A summary of recently published projects. Natural England Research Report, NERR138. Natural England.

NATURAL ENGLAND