9040: ASSESSING THE EFFECTIVENESS AND CULTURAL VALUE OF COUNTRYSIDE STEWARDSHIP HS1 AND HS8

Final Report

Title of report	Assessing the effectiveness and cultural value of Countryside Stewardship options HS1 and HS8
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EXECUTIVE SUMMARY

Introduction

The Agriculture Act of 2020 sets out how farmers and land managers will be rewarded with 'public money' for the provision of 'public goods' under the Government's new suite of Environmental Land Management (ELM) schemes. From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings (TFBs), to secure a range of public goods for society.

As AES policies have developed and evolved, from Environmentally Sensitive Areas (ESA) to Classic Countryside Stewardship (CCS), Environmental Stewardship (ES) and Countryside Stewardship (CS), they have incorporated best practice for the management of TFBs learned from evaluations of the previous schemes.

Countryside Stewardship is a voluntary scheme and provides financial incentives for farmers and land managers to look after and improve the environment. Countryside Stewardship replaced ES in 2016. In CS there are two options for the maintenance of weatherproof TFBs. The maintenance of weatherproof TFBs (HS1) with a payment of £3.25 per $1m^2$ and the maintenance of weatherproof TFBs in remote areas (HS8) with a payment of £6.73 per $1m^2$.

Environmental Stewardship is a voluntary scheme that was launched in 2005 and closed to new entrants in 2015. The maintenance of weatherproof TFBs option (D1) was introduced in 2006. The maintenance of weatherproof TFBs in remote locations option (D12) was introduced in February 2010. The D1 option paid £2.00 per $1m^2$ per year, while the D12 option paid £4.00 per $1m^2$ per year.

Now that the ELM schemes are replacing CS, Natural England (NE) is undertaking an assessment of the maintenance options across CS and ES to identify issues which need to be addressed during the remainder of existing agreements, identify areas of success and inform best practice for the development of ELM schemes and establish baseline data for further monitoring.

Project aims and objectives

The aim of the project is to assess the effectiveness of CS and ES weatherproof TFB maintenance options, hereafter referred to as simply TFB maintenance options, with an emphasis on agreement holder engagement with the CS scheme, the most recent AES.

To achieve this aim NE identified 8 objectives for the project:

1) To map and analyse the uptake of CS and ES maintenance options.
2) Consider the potential of the options to deliver health and well-being benefits, including access to cultural and recreational opportunities rooted in community.
3) Determine the accessibility of maintained buildings as part of understanding the wider benefits of the options.
4) Determine if the most appropriate buildings have been selected.
5) Assess the impacts of the wildlife and maintenance protocols on agreement holder actions and behaviour.
6) Investigate farmer attitudes to determine whether better maintenance has enhanced views on and appreciation of the buildings, their position and role in the local landscape, and the craft skills required to repair them.

7) Consider the 'value for money' of the options for the farmer and in relation to the wider natural and cultural capital benefits delivered.

8) Outputs will be used to adapt the options and promote them within an ELM outcome framework to ensure they deliver across the beauty, heritage and engagement (BHE) agenda of the 25YEP.

Methods

The methodological framework was designed to achieve the 8 project objectives. The methodology was structured around seven tasks:

- **Task 1: Undertake a desk-based assessment of CS and ES option uptake**. a full description of the nature and extent of uptake was produced, including CS (HS1, HS8) and ES (D1, D12) option types, the floor area of buildings covered by maintenance options and adoption rates over the duration of the schemes. The pattern of option uptake was geospatially analysed to determine variations between CS and ES agreements. A commentary was provided on the likely causes of gaps in uptake of TFB maintenance options.
- **Task 2: Select a sample of 150 live CS and ES agreements for the agreement holder interview and TFB survey**. Natural England set the parameters of the sample after consultation with CCRI. The focus for the field work was to gain a deeper understanding of the effectiveness of the CS TFB maintenance options with a more general overview of the ES scheme. The project was resourced to undertake 150 farm visits which was divided between 125 CS agreements and 25 ES agreements. The field work took place between January and April 2022 and was adversely affected by the COVID-19 pandemic which resulted in the cancellation of some interviews with agreement holders and building surveys. In total 138 farm visits (92%) were completed with a higher success rate among CS agreement holders (95%) compared with ES agreement holders (76%).
- **Task 3: Undertake a survey of CS and ES agreement holders**. A team of eight fieldworkers supervised by CCRI undertook the farm visits. Each visit comprised an interview with the agreement holder and a site survey of the buildings covered by the TFB maintenance options. Where permission was given, some of the agreement holder interviews were recorded. A synopsis of all the interview was prepared using the completed interview schedule, fieldworker summaries of the open-ended questions and the recordings, where available. For the building survey, each site identified during the agreement holder interview was surveyed and recorded separately. A site was defined as a location where there were TFBs covered by a maintenance option.
- **Task 4: Undertake a survey of buildings under CS and ES TFB maintenance options**. For the building survey, each site identified during the agreement holder interview was surveyed and recorded separately. A site was defined as a location where there were TFBs covered by a maintenance option. A TFB is defined by Defra as a building or part of a building constructed before 1940 for a use associated with agriculture and built using traditional methods using timber, brick, stone, tile or slate. This definition was used for the building survey. Within a site there may be one or more building ranges. A building range can comprise a single building or a group of buildings which are joined together. Separate recording forms were completed for each building range within a site. Of the 138 farm visits, 131 (95%) produced a farm building survey. The detailed analysis that resulted focused on the CS scheme which accounted for 87 per cent of the surveyed agreements (114), 85 per cent of the sites (230) and 88 per cent

of the ranges (435). The survey of ES agreement holders (17) provided information for 40 sites and 59 ranges.

- **Task 5: Produce five in-depth illustrated and five lighter-touch case studies**. Five in-depth illustrated and five lighter-touch case studies were produced to showcase the key processes and outcomes resulting from agreement holder adoption of CS and ES TFB maintenance options. Each case study highlighted different features of the project and its objectives, such as improvements in agreement holder well-being through participation, greater appreciation of cultural heritage and the provision of public benefits, the role advice plays in the choice of appropriate TFBs, recognising barriers and blockages and how to overcome them. The case studies used evidence generated by Tasks 3 and 4.
- **Task 6: Draw upon the findings of Tasks 1 through 5 to consider the effectiveness of the scheme and value for money when considered more broadly and against the full project objectives**. This task drew upon the findings of Tasks 1 through 5 to consider the effectiveness of the scheme and value for money. While the project considers the management of TFBs in the context of Natural Capital accounting, no attempt is made to provide monetary values for the benefit streams generated by the stock as this is beyond the scope of the study.
- **Task 7: Produce project outputs**. The project has culminated in this comprehensive final report, the provision of data and metadata to Natural England from the outputs of Task 1, a webinar, a two-page project summary and an infographic.

Key findings

The key findings of the project are:

- Traditional farm buildings are the most numerous type of historic structure in the countryside. The analysis of CS and ES TFB maintenance option uptake over the duration of the schemes showed that the options were extremely popular with agreement holders and that the spatial distribution of the uptake broadly reflected the nature and character of the national stock of TFBs.
- The evidence collected from the agreement holder interviews and building surveys showed that the TFB options were making a strong positive contribution to the maintenance and enhancement of the TFB stock and sustaining the flow of supporting, provisioning, regulating and cultural ecosystem services.
- The surveys also found positive outcomes for the beneficiaries of the services: the public and the agreement holders themselves. The TFB stock was both highly visible and accessible to the public. It was clear that trade-offs were being made in the provision of some of the benefits, for example between the intensity of use and the capacity for wildlife.
- The interview survey found that most agreement holders were satisfied with the TFB maintenance options and viewed them positively in terms of value for money. Nine out of 10 CS agreement holders said they would choose the options again knowing what they know now (CS 88%, ES 86%) and four out of five felt better able to maintain their TFBs as a result of the scheme (CS 81%, ES 69%).
- Agreement holders related to and valued their buildings in a multitude of ways. Personal, instrumental and intrinsic reasons were important considerations in influencing agreement holder decisions on whether or not to use the TFB maintenance options and also which buildings to enter into the schemes.

- When questioned about their decision making, agreement holders were generally aware of most of the supporting, provisioning, regulating and cultural services provided by their TFBs, even though they did not use the language of Natural Capital accounting in articulating their views. While the reasoning behind the Government's policy of providing 'public money' for the 'provision of 'public goods' is increasingly familiar to farmers and land managers, the feedback received during the agreement holder interviews showed that there was still a degree of uncertainty for some about what these public goods actually were.
- The benefits of TFB maintenance for the historic environment, landscape and wildlife were broadly recognised by agreement holders but the benefits for public and agreement holder health and well-being appeared to be less well appreciated.
- The introduction of the Building Wildlife Assessment Form (BWAF) and Building Maintenance Plan and Log (BMPL) as part of the revised CS TFB maintenance options has helped some of the agreement holders to deliver positive outcomes from their building management, but it has not been an unqualified success.
- From the evidence provided by the BWAF review and the interview survey it was concluded that the wildlife assessment is having most impact as a means of raising general awareness of the benefits of TFBs for wildlife on the holding rather than at the level of the individual building range.
- It was concluded that although three quarters of the building ranges (72%) are in very good or good condition and 92 per cent show visible evidence of maintenance work, the fact that less than half of the agreement holders were keeping their BMPL up to date means that the introduction of the form has only been a partial success.
- The agreement holder interviews and building surveys found that there was, to some extent, a divergence between the agreement holders' understanding and the guidance on what constitutes a maintained, sound and weatherproof building. While the vast majority of agreement holders were maintaining their buildings in a weatherproof condition, essentially by keeping the roof watertight, less attention was being paid to the upkeep of doors, windows and openings in some cases.
- There were also a significant number of building ranges that had been entered into the schemes that, while weathertight, had long-term structural issues which would eventually lead to failure without substantial repairs and restoration. An associated issue raised by many agreement holders was that the option payment levels were insufficient to meet the maintenance costs and there was also widespread support for the re-introduction of capital options for TFB building restoration projects.
- The information on TFBs provided to support CS scheme applications has the potential to provide valuable baseline data on the nature and condition of the asset stock and assist with monitoring change and evaluating outcomes. However, the review of the supporting documentation found that there were some inconsistencies in the organisation and archiving of the information.
- The RPA managed datasets for both schemes are another valuable resource for monitoring change and evaluating the effectiveness of the options. However, there are inconsistencies between the number of agreement records in the datasets and the number of sites and building ranges on the ground. In addition, the absence of a unique identifying number for each record and varying accuracy in the geospatial coordinates for each building range made it impractical to monitor the transition of TFB ranges from ES to CS.

Recommendations

There are nine recommendations that derive from the research:

1) In promoting policies for providing 'public money' for the provision of 'public goods', adopting language that related to the lived experiences and everyday farming lives of the agreement holders could help improve understanding. For example, TFBs could be used as case studies to illustrate different supporting, provisioning, regulating and cultural ecosystem service flows in a range of different circumstances and also to show how trade-offs are made between the provision of different services.
2) The magnitude of the benefits provided by TFBs covered by the maintenance options varied. Increased payment rates could be introduced in return for the provision of additional environmental benefits:
    - The retention and maintenance of special features which are especially vulnerable to change and loss.
    - Older buildings that often have complex maintenance needs or require specialist craft skills which may increase the cost of maintenance.
3) In the agreement application guidance:
    - Provide greater emphasis on the public benefits from TFB maintenance.
    - Remind applicants that Farming and Landscape Statements (FLSs) are available for all National Character Areas (NCAs) to help them identify the historic character of traditional farmsteads and their buildings and how they relate to the surrounding landscape.
    - Expand upon the eligibility criteria, especially the definition of what constitutes a 'sound' building and the standard of maintenance required.
    - Remind applicants that buildings that have previously had a restoration grant are also eligible for the maintenance options.
    - Remind applicants that guidance is available on the repair of TFBs.
    - Emphasise the requirement that a BWAF has to be completed for each building range and repeated in each year of the agreement.
    - Agreement maps should identify the footprint of the building range at an appropriate scale. The current Farm Environment Records (FER), Farm Environment Plan (FEP) and option maps do not accurately identify building ranges within farmstead sites.
4) Consider simplifying the BMPL, including providing a one-page checklist for annual inspections.
5) Consider including an additional category for nesting bird species in the BWAF, such as swallows, martins, starlings, spotted flycatchers and jackdaws.
6) Consider the potential for additional options or blended finance opportunities under the new ELM and rural development schemes to address specific issues identified in this report:
    - Repair of storm damage that requires more work than the maintenance options but not as extensive as a restoration grant.
    - Buildings that are adapted to non-agricultural uses but will continue to enhance the public benefits evidenced in this report. For example, community and educational uses.

- Buildings delivering significant public benefits that are in immediate danger of structural failure or collapse but have an undecided future. Holding repairs until the building's future can be decided.

7) To improve access to the agreement application supporting documents for monitoring and evaluation purposes:
    - Standardise file naming protocols to assist in the identification of relevant information.
    - Standardise directory and folder naming protocols to assist navigation.
    - Review the protocols for providing agreement holder contact details for monitoring and evaluation purposes to reduce transaction costs.
8) To improve the consistency and utility of the RPA datasets for monitoring change and evaluating the effectiveness of option outcomes:
    - Provide each building range with a unique identifying number which can be used in all future schemes.
    - Geospatial co-ordinates should be accurate within 10m of the building range.
9) The CS options are popular among agreement holders and there has been widespread uptake. Overall the options are effective, relatively straightforward to implement and successful in delivering the desired outcomes. Carrying forward the options, incorporating these recommendations, into the new ELM schemes will continue to enhance the flow of benefits evidenced in this report.

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ACRONYMS

Acronym	Description
25YEP	25 Year Environment Plan
AES	Agri-Environment Scheme
ALGAO	Association of Local Government Archaeological Officers
ALT	Agricultural Landscape Type
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BHE	Beauty, heritage and engagement
BMPL	Building Maintenance Plan and Log
BWAF	Building Wildlife Assessment Form
CPRE	Campaign to Protect Rural England
CAP	Common Agricultural Policy
CCRI	Countryside and Community Research Institute
CCS	Classic Countryside Stewardship
CS	Countryside Stewardship
DEFRA	Department for Environment, Food and Rural Areas
ELM	Environmental Land Management
ELS	Entry Level Stewardship
ES	Environmental Stewardship
ESA	Environmentally Sensitive Area
ETIP	Environmental Stewardship Training and Information Programme
EU	European Union
FEP	Farm Environment Plan
FER	Farm Environment Record
FLS	Farmstead and Landscape Statement

Acronym	Description
GHG	Greenhouse gas
HEFER	Historic Environment Farm Environment Record
HEFMP	Historic England Farmstead Mapping Programme
HER	Historic Environment Record
HLC	Historic Landscape Character
HLS	Higher Level Stewardship
LMP	Land Management Plan
LNR	Local Nature Recovery
LR	Landscape Recovery
MHCLG	Ministry of Housing, Communities and Local Government
NCA	National Character Area
NE	Natural England
NP	National Park
OELS	Organic Entry Level Stewardship
OS	Ordnance Survey
PROW	Public Right of Way
PSG	Project Steering Group
RPA	Rural Payments Agency
RRF	Range recoding form
RSJ	Rolled steel joist
SRF	Site recording form
TFB	Traditional farm building
UELS	Uplands Entry Level Stewardship
WHS	World Heritage Site

1 INTRODUCTION

1.1 Background

In 2016 the United Kingdom voted to leave the European Union (EU) and its Common Agricultural Policy (CAP), in a referendum that set in train the most significant evaluation and revision of Government agri-environmental policy in over 40 years. The Agriculture Act, passed in November 2020, sets out how farmers and land managers will be rewarded with 'public money' for the provision of 'public goods' under the Government's new suite of Environmental Land Management (ELM) schemes. Accompanying the Agriculture Act is the Environment Act, passed in November 2021, which outlines the Government's green governance system and long-term ambitions for improving the environment. Together these Acts will help deliver the Government's 25 Year Environment Plan (25YEP), launched in 2018, to 'help the natural world regain and retain good health' and achieve enhanced beauty, heritage and engagement with the natural environment (Defra 2018).

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings (TFBs), to secure a range of public goods for society (Gaskell & Tanner 1998, Fluck & Holyoak 2017, Powell et al. 2019). Gaskell and Owen (2005, p15) describe these public goods as follows:

> *Historic farm buildings are by far the most numerous type of historic structure in the countryside. They are a fundamental and ubiquitous feature in the rural environment and help to define its character and historic interest and provide an important contribution to a sense of place for rural communities and visitors alike. As part of the fabric of our finest landscapes, these buildings provide a substantive asset for the tourist industry, which is now a mainstay of many rural economies, albeit one that is difficult to define and quantify. They also provide a valuable resource for the future diversification of the farming industry and for wider rural development initiatives. In addition, the physical evidence of farm buildings helps us understand how earlier generations responded to local conditions and materials, as well as the market place, in a way that written history cannot, reflecting patterns of landownership and the social and economic development of regions. In their myriad forms and methods of construction, they survive as repositories of the crafts and skills associated with local building materials and techniques. They also illustrate graphically the way that farming practices and technologies developed over time to meet changing circumstances, including the effects of war and peace, surpluses and shortages, new markets and changing patterns of consumption.*

As AES policies have developed and evolved, from Environmentally Sensitive Areas (ESA) to Classic Countryside Stewardship (CCS), Environmental Stewardship (ES) and Countryside Stewardship (CS), they have incorporated best practice for the management of TFBs learned from evaluations of the previous schemes (see ADAS 2003, Courtney et al. 2007, Gaskell et al. 2014, Gaskell & Courtney 2019). Now that the ELM schemes are replacing CS, Natural England (NE) is undertaking an assessment of the maintenance options across CS and ES to identify issues which need to be addressed during the remainder of existing agreements, identify areas of success and inform best practice for the development of ELM schemes and establish baseline data for further monitoring.

1.2 Maintenance of weatherproof traditional farm buildings options under CS and ES

1.2.1 Countryside Stewardship

Countryside Stewardship is a voluntary scheme, managed by the Rural Payments Agency (RPA) on behalf of the Department for Environment, Food and Rural Affairs (Defra), and provides financial incentives for farmers and land managers to look after and improve the environment. Countryside Stewardship replaced ES in 2016 and will be eventually replaced by the Local Nature Recovery (LNR) component of ELM from 2024 onward (Defra 2020). Options for the maintenance of weatherproof TFBs are available under two elements of CS: Higher Tier, aimed at land that requires complex management tailored to individual sites and Mid Tier, which provides a range of options and capital items that help to deliver a broad range of environmental benefits (see Defra 2014, RPA 2019a &b).

In CS there are two options for the maintenance of weatherproof TFBs:

- HS1: Maintenance of weatherproof traditional farm buildings with a payment[1] of £3.25 per 1m^2
- HS8: Maintenance of weatherproof traditional farm buildings in remote areas with a payment[2] of £6.73 per 1m^2

The purpose of HS1 and HS8 is to benefit the environment by helping to maintain weatherproof TFBs, using traditional methods and materials, while enhancing the local landscape and preserving places for wildlife[3]. These options aim to:

- Ensure the preservation of traditional buildings.
- Encourage the utilisation of craft skills and sustainable traditional materials, for example, locally-sourced timber, natural slates and cast-iron rain water goods.
- Aid carbon storage, for example, by extending the working life-time of the building and retaining their embedded carbon.
- Improve roosting, nesting and feeding habitat for Biodiversity Action Plan (BAP) and European Protected Species, such as bats.
- Provide enhanced visibility of historic landscape features and contribute to the wider understanding of landscape, place, history and change.
- Deliver economic value to local communities through employment of local craft workers.

1.2.2 Environmental Stewardship

Environmental Stewardship is a voluntary scheme that was launched in 2005 and closed to new entrants in 2015. The RPA manages existing agreements on behalf of Defra until they reach their agreed end date. The original elements of ES were launched in 2005, comprising Entry Level

[1] Increasing to £4.03 for agreements staring in 2023.

[2] Increasing to £6.86 for agreements staring in 2023.

[3] A more detailed description of both options can be found on the GOV.UK website: https://www.gov.uk/countryside-stewardship-grants/maintenance-of-weatherproof-traditional-farm-buildings-hs1

Stewardship (ELS), Organic Entry Level Stewardship (OELS); and Higher Level Stewardship (HLS). A fourth element, Uplands Entry Level Stewardship (UELS), was launched in 2010.

The maintenance of weatherproof TFBs option (D1) was included as part of the entry level element of ES in May 2006 (Table 1.2-1). As part of the UELS an option to maintain weatherproof TFBs in remote locations (D12) was introduced in February 2010. The D1 and D12 options were non-compulsory, and it was up to the agreement holder to decide if they would like to include some or all of their weatherproof TFBs in their agreements. The D1 option paid £2.00 per $1m^2$ per year, while the D12 option paid £4.00 per $1m^2$ per year.

Table 1.2-1 TFB maintenance options for ES

Option code	Option Description	Date added to ES
ED1	ELS: Maintenance of weatherproof traditional farm buildings	May 2006 addendum
HD1	HLS: Maintenance of weatherproof traditional farm buildings	May 2006 addendum
OD1	OELS: Maintenance of weatherproof traditional farm buildings	May 2006 addendum
OHD1	OHLS: Maintenance of weatherproof traditional farm buildings	May 2006 addendum
UD12	UELS: Maintenance of weatherproof traditional farm buildings in remote locations	3rd edition February 2010
UHD12	UHLS: Maintenance of weatherproof traditional farm buildings in remote locations	3rd edition February 2010
UOD12	Uplands Organic: Maintenance of weatherproof traditional farm buildings in remote locations	3rd edition February 2010

Source: Gaskell et al. (2014)

1.3 Project aims and objectives

The aim of the project is to assess the effectiveness of CS and ES weatherproof TFB maintenance options, hereafter referred to as simply TFB maintenance options, with an emphasis on agreement holder engagement with the CS scheme, the most recent AES.

To achieve this aim NE identified 8 objectives for the project:

1) To map and analyse the uptake of CS and ES maintenance options.
2) Consider the potential of the options to deliver health and well-being benefits, including access to cultural and recreational opportunities rooted in community.
3) Determine the accessibility of maintained buildings as part of understanding the wider benefits of the options.
4) Determine if the most appropriate buildings have been selected.
5) Assess the impacts of the wildlife and maintenance protocols on agreement holder actions and behaviour.
6) Investigate farmer attitudes to determine whether better maintenance has enhanced views on and appreciation of the buildings, their position and role in the local landscape, and the craft skills required to repair them.
7) Consider the 'value for money' of the options for the farmer and in relation to the wider natural and cultural capital benefits delivered.

8) Outputs will be used to adapt the options and promote them within an ELM outcome framework to ensure they deliver across the beauty, heritage and engagement (BHE) agenda of the 25YEP.

1.4 Report structure

The remainder of the report is divided into three sections. Section 2 describes the project methodology and the methods used. Section 3 presents the results from the analysis of the empirical data collected during the project. Section 4 draws out the conclusions and recommendations of the project.

2 METHODOLOGY

2.1 Introduction

This section sets out the methodology and methods used to assess the effectiveness and cultural value of the TFB maintenance options. The methodological framework was designed to achieve the 8 project objectives. The methodology was structured around seven tasks:

- Task 1: Undertake a desk-based assessment of CS and ES option uptake.
- Task 2: Select a sample of 150 live CS and ES agreements for the agreement holder interview and TFB survey.
- Task 3: Undertake a survey of CS and ES agreement holders.
- Task 4: Undertake a survey of buildings under CS and ES TFB maintenance options.
- Task 5: Produce five in-depth illustrated and five lighter-touch case studies.
- Task 6: Draw upon the findings of Tasks 1 through 5 to consider the effectiveness of the scheme and value for money when considered more broadly and against the full project objectives.
- Task 7: Produce project outputs.

The methodology designed for Tasks 1, 2, 3 and 4 was adapted from the methodology used by Gaskell et al. (2014) to evaluate the effectiveness of ES for the conservation of historic farm buildings.

2.2 Task 1: Desk-based assessment of CS and ES option uptake

2.2.1 Data preparation

The RPA maintains and manages separate databases for the CS and ES TFB maintenance options. Natural England interrogated the datasets for both schemes and produced a series of Microsoft Excel files for analysis:

- Countryside Stewardship: 3,274 live agreements with 4,447 TFB maintenance option records.
- Environmental Stewardship:
    - 1,649 live agreements (13%) with 1,758 TFB maintenance option records.
    - 11,223 closed agreements (87%) with 11,669 TFB maintenance option records. The ES dataset for closed agreements was constructed from nine archived datasets which were found to contain a number of duplicate records. These datasets were combined and processed to remove the duplicate records.

Geospatial data processing and analysis was conducted using a combination of the open source GIS software QGIS, and the open-source statistical programming language R. Geodata outputs were generated in an ESRI Shapefile (.shp) format. The full R code written for the project was made available via the code sharing site GitHub. The reason for adopting an open source coding-based approach is to document in detail the exact steps taken to process and analyse the data, and to provide an ongoing, freely accessible resource that others can potentially use to reproduce and/or adapt the work.

Building on the methods designed by Gaskell et al. (2014) a full description of the nature and extent of uptake was produced, including CS (HS1, HS8) and ES (D1, D12) option types, the floor area of buildings covered by maintenance options and adoption rates over the duration of the schemes. Quantitative data were entered into a Microsoft Excel spreadsheet and analysed using the IBM SPSS statistical software suite.

The pattern of option uptake was geospatially analysed to determine variations between CS and ES agreements. An original objective of the project was to understand the pattern of retention and loss where agreement holders have transitioned from ES to CS. However, this could not be achieved as the CS and ES datasets do not have a unique identifiable variable that could link them together to undertake the analysis and the two schemes employed different methods of geospatially locating the option records with ES geospatial coordinates being less accurate than for CS.

2.2.2 Spatial analysis

A spatial analysis of TFB maintenance option uptake was undertaken in relation to four spatial designations:

1) **Agricultural Landscape Types** (ALTs). A description of the TFB resource within the five main ALTs is included as Appendix 1. There are 159 National Character Areas (NCAs). Each NCA represents an area of distinct and recognisable character at the national scale. Their boundaries follow natural lines in the landscape. The NCAs have been combined to create five ALTs that characterise the main agricultural landscapes in England.
2) **Protected landscape designations** consisting of National Parks (NP), Areas of Outstanding Natural Beauty (AONB) and World Heritage Sites (WHS).
3) R**ural Urban Classification**[4] (RUC) which is used to distinguish rural and urban areas. The Classification defines areas as rural if they fall outside of settlements with more than 10,000 resident population. For the smallest geographical areas, the classification assigns them to one of four urban or six rural categories. Those described as "in a sparse setting" reflect where the wider area is remotely populated.
4) **Green Belt**, the aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. The Green Belt in England was estimated to be around 16,140 km^2 at the end of March 2021. An estimated 93 per cent of the Green Belt was undeveloped land in 2018, and this land was primarily used for agriculture (66% of all Green Belt land)[5].

Methods developed by CCRI (see Courtney et al. 2007, Gaskell et al. 2014) to evaluate the accessibility and visibility of TFBs under AES options were adapted to create an accessibility and visibility index for CS TFB maintenance options as part of the GIS analysis of public rights of way (PROW) and other public access:

- **Visibility Index**: This is a proxy index as sightlines were not assessed. It was agreed with the Project Steering Group (PSG) that the definition of a visible site was where the GIS location is within 500m of a PROW, public road, or public access land. A visible site is one that can be experienced as part of the broader landscape setting. Intimate details of the building will not be so apparent (see Figure 2.2-1). This index was ground-truthed during the farm visits and a good match between the proxy index and

[4] https://www.gov.uk/government/collections/rural-urban-classification

[5] https://commonslibrary.parliament.uk/research-briefings/sn00934/

the fieldworker's assessment of the site's visibility was found. Of the 225 sites where the public could approach within 500m, 71 per cent were assessed as having direct sightlines with high visibility and a further 17 per cent had medium visibility. Only 11 per cent of sites were assessed to have low visibility.

Figure 2.2-1 Visible TFB locations within 500m of public access

- **Accessibility index:** An exploratory analysis of data was undertaken using the live CS site GIS dataset downloaded from the Natural England Open Data Geoportal, combined with the bespoke agreement holder dataset provided by NE. The following conclusions were drawn:

- GIS locations did not always accurately represent the location of sites covered by the TFB maintenance options. They can be over 100m away from the building(s) under agreement. HS8 options appear to be least accurate with examples of the geospatial coordinates and the actual buildings being over 250m apart.
- After further checking it was estimated that the majority of buildings covered by the options (c. 80%) were within 50-100m of the georeferenced point.

- Given the potential inaccuracy of some of the GIS locations of the sites under the TFB maintenance options it was agreed with the PSG that the definition of an accessible site is where the GIS location is within 100m of a PROW, public road or public access land. An accessible site is one that can be experienced 'up-close'. Such close encounters with the buildings enable the observer to distinguish the intimate character of the building in terms of its form, construction, materials and openings (see Figure 2.2-2).

Figure 2.2-2 Accessible TFB locations within 100m of public access

The visibility and accessibility analyses were not undertaken for the ES TFB maintenance options as the nearest land parcel, rather than the location of the TFB, is used to generate the geospatial coordinates for the option.

A commentary was provided on the likely causes of gaps in uptake of TFB maintenance options. This was restricted to a general level as a detailed investigation of gaps in ES and CS coverage would require evidence on the national distribution of eligible TFBs, which is not available. However, Historic England's Farmstead Mapping Programme (HEFMP) has surveyed 30 per cent of England

(Figure 2.2-3) and has records for over 85,000 TFB locations (Gaskell & Berry 2021). An attempt was made, at a county level, to estimate the proportion of potentially eligible TFB sites that have been included in CS agreements by undertaking a case study in Staffordshire. The case study compared the uptake of CS TFB maintenance options with the distribution of surviving historic farmsteads, outfarms and isolated single farm buildings (Categories 1, 2 & 3 in Table 2.2-1). Traditional farmsteads subject to the least change (Categories 1 & 2 in Table 2.2-1) are likely to make the greatest contribution to local distinctiveness. This is because they are most likely to have retained their varied styles, building materials and the way that they relate to the surrounding form and patterning of the landscapes within which they developed (Gaskell et al. 2009 p. 8). Fieldwork in the Peak District has shown that the mapping is more than 90 per cent reliable (Knight et al. 2017).

Table 2.2-1 HEFMP categories of farmstead survival

HEMP survival category	HEFMP category description
1. Complete survival	Site is largely unaltered from late-19th century form.
2. More than 50% survives	Some noticeable change to the site, but more than 50% of the buildings surviving
3. Less than 50% survives	Considerable change to the site, with less than 50% of the buildings surviving.
4. House only	Only the farmhouse survives, and all working buildings have been lost.
5. Demolished	All buildings shown on late-19th century map have been lost but site remains a farmstead.
6. Lost	The farmstead site has been completely lost through demolition.

Source: Adapted from Lake & Edwards (2016, p. 28)

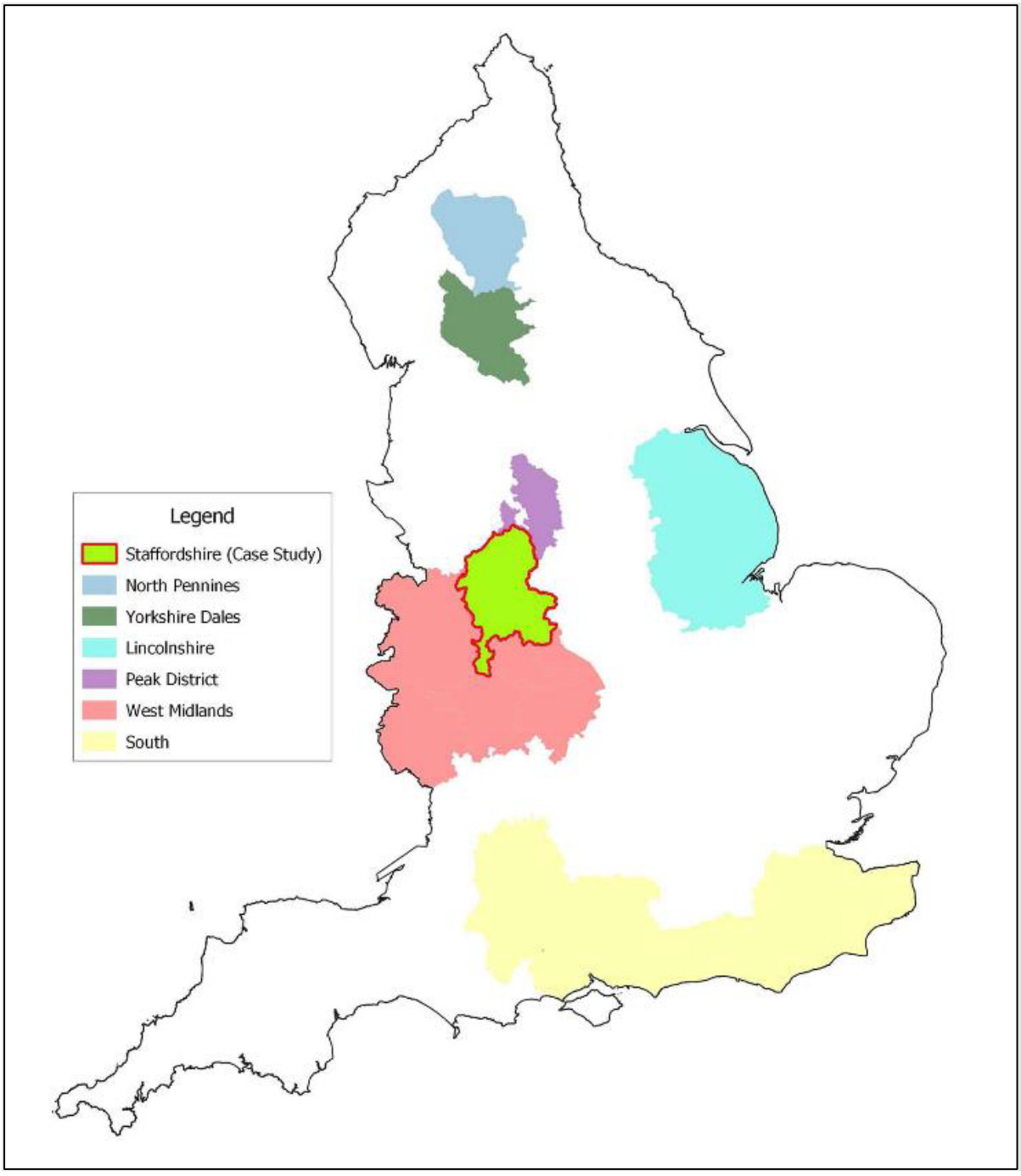


Figure 2.2-3 Historic England Farmstead Mapping Programme survey areas

2.3 Task 2: Select a sample of live CS and ES agreements for the agreement holder interviews and TFB survey

2.3.1 Selection of agreements

Natural England set the parameters of the sample after consultation with CCRI. The focus for the field work was to gain a deeper understanding of the effectiveness of the CS TFB maintenance options with a more general overview of the ES scheme. The project was resourced to undertake 150 farm visits which was divided between 125 CS agreements and 25 ES agreements. It was anticipated that the response rate would be in the region of 50 per cent and a reserve sample of 125

CS and 25 ES agreements was selected as a contingency. Natural England selected a random sample of live agreements from the CS and ES TFB maintenance option datasets with the aim for reflecting the general uptake of CS and ES option across England.

The field work took place between January and April 2022 and was adversely affected by the COVID-19 pandemic which resulted in the cancellation of some interviews with agreement holders and building surveys. In total 138 farm visits (92%) were completed with a higher success rate among CS agreement holders (95%) compared with ES agreement holders (76%) (Figure 2.3-1 & Table 2.3-1).

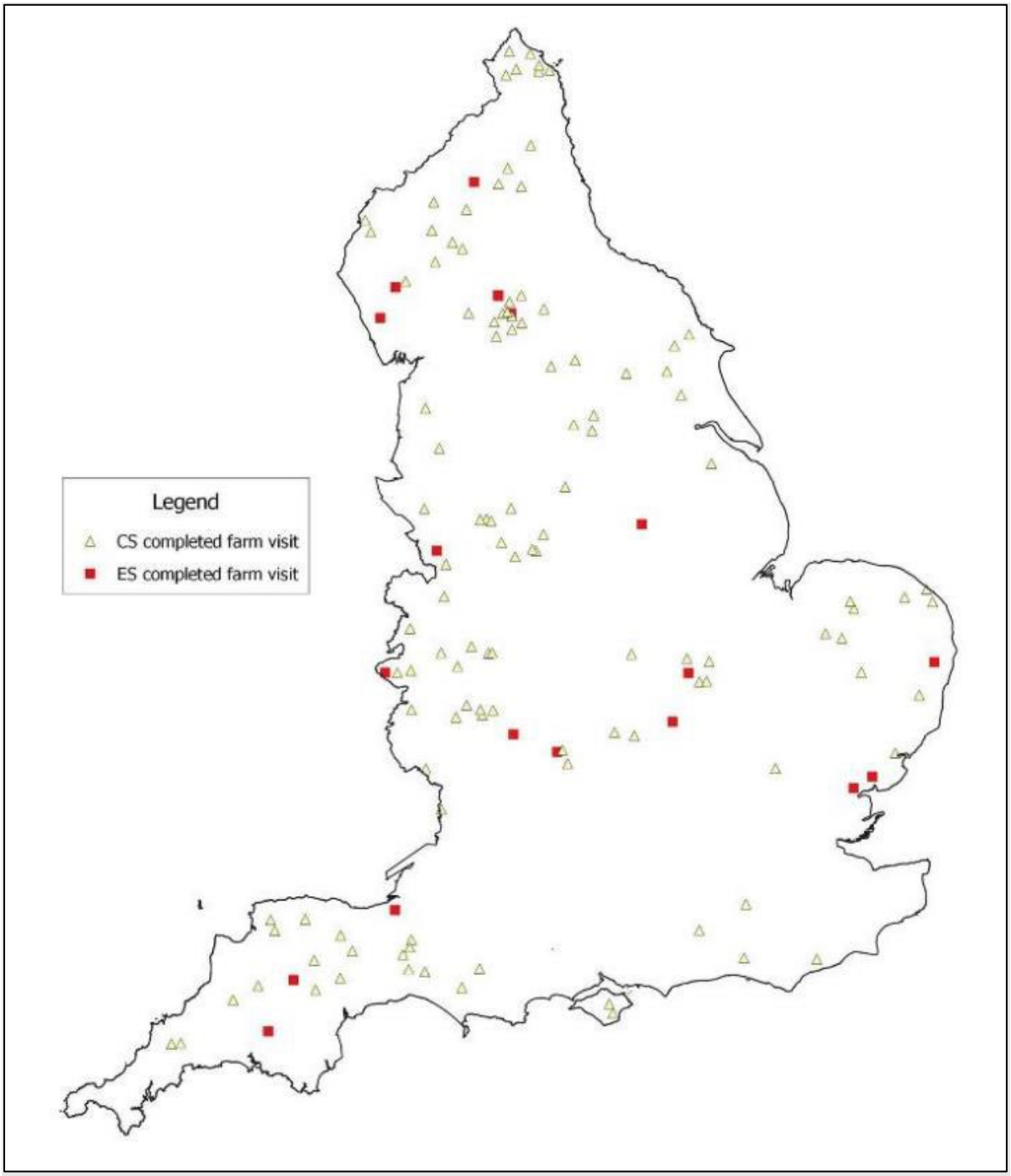


Figure 2.3-1 Distribution of the 138 CS and ES farm visits

Table 2.3-1 Farm visit survey response

Scheme	Sample	Surveyed	Per cent
Countryside Stewardship	125	119	95.2
Environmental Stewardship	25	19	76.0
Total	150	138	92.0

Figure 2.3-2 and Figure 2.3-3 show that spatial distribution of the completed farm visits broadly reflected the national uptake of CS and ES TFB maintenance options, which are dominated by the Upland and Upland Fringe and Western Mixed ALTs (see Figure 2.3-4).

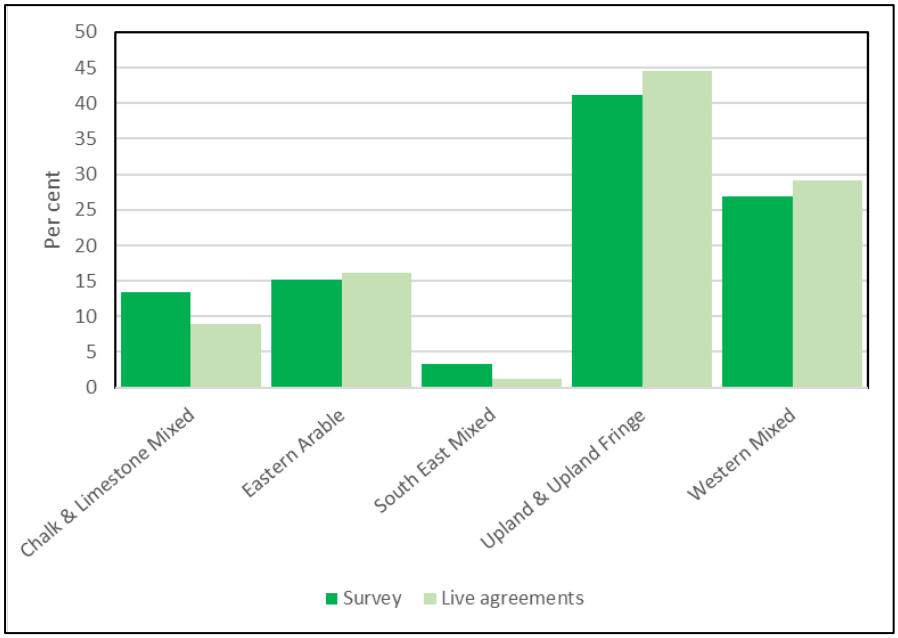


Figure 2.3-2 Distribution of CS TFB maintenance options by ALT

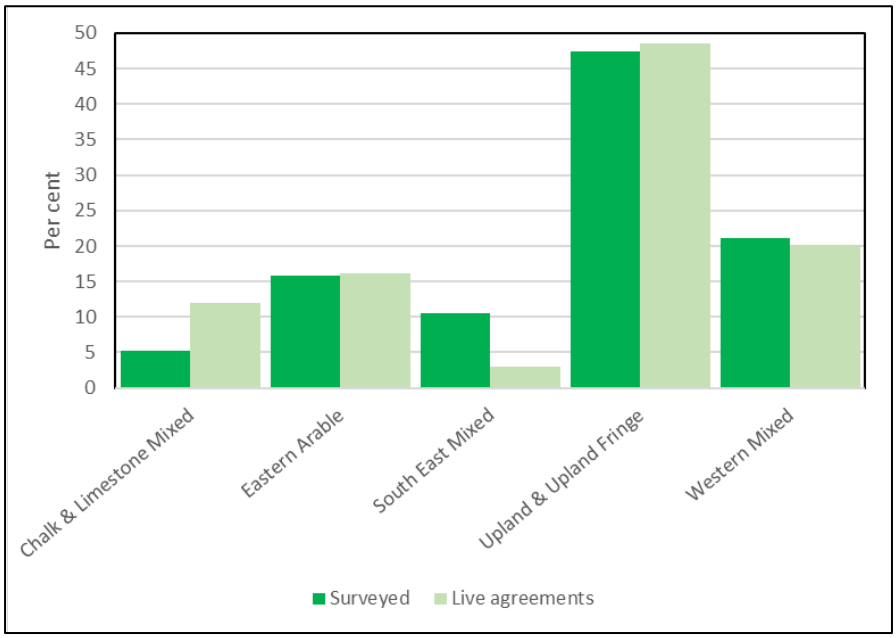


Figure 2.3-3 Distribution of ES TFB maintenance options by ALT

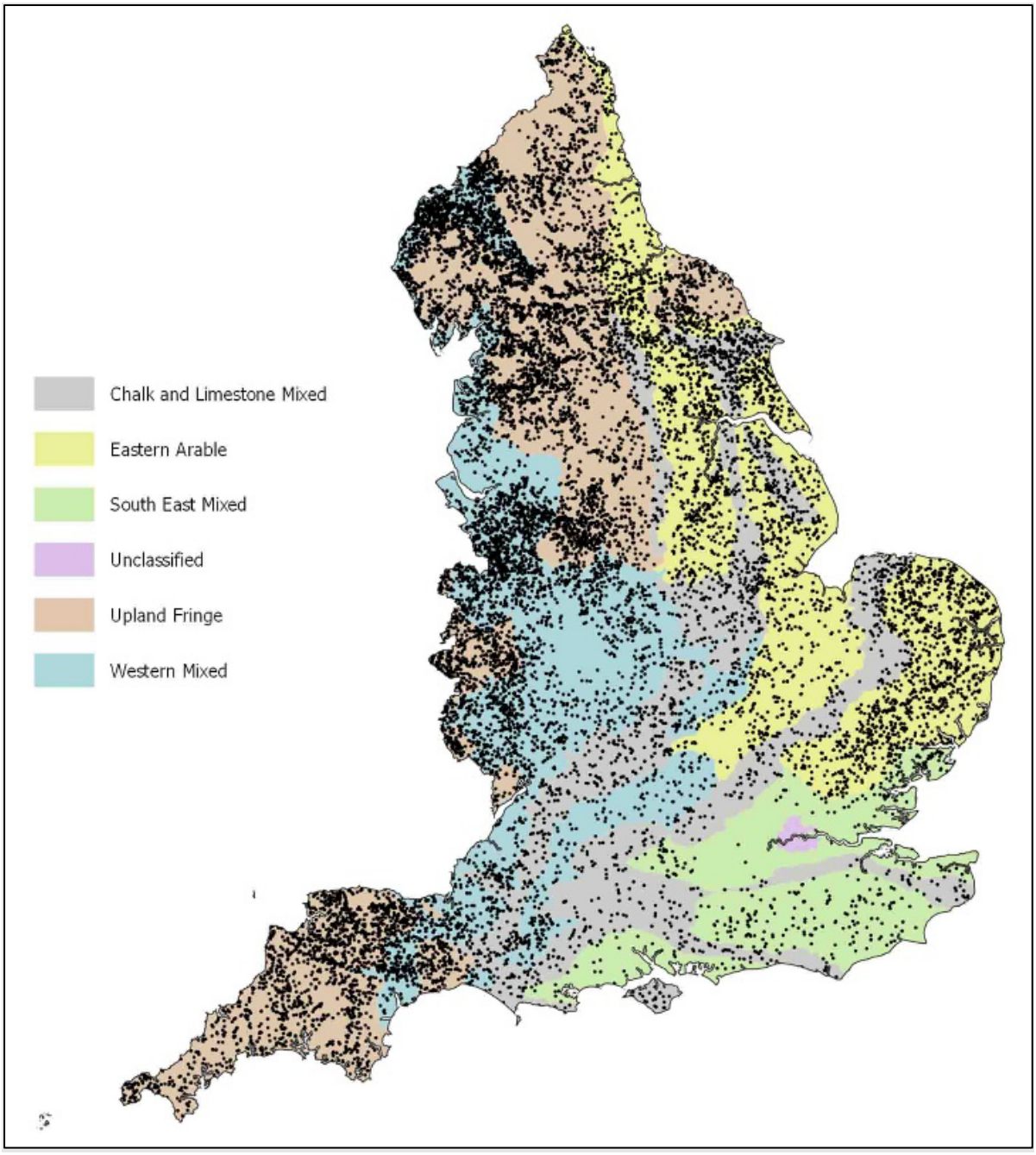


Figure 2.3-4 CS and ES option uptake by ALT

Figure 2.3-5 and Figure 2.3-6 show that the sample over-represented agreements with more than one TFB maintenance option record. In practice this meant that the farm visits over-represented agreements where the agreement holder had entered buildings from more than one site. The farm visits found that, in general, the number of option records for an agreement matched the number of sites on the ground. However, there were occasions where an agreement holder had combined information from multiple sites into a single record. For example, on one farm visit to an ES agreement in the Yorkshire Dales it was found that nine separate field barns had been recorded as a single record. There were also occasions when individual buildings within a farmyard site had been recorded as separate records.

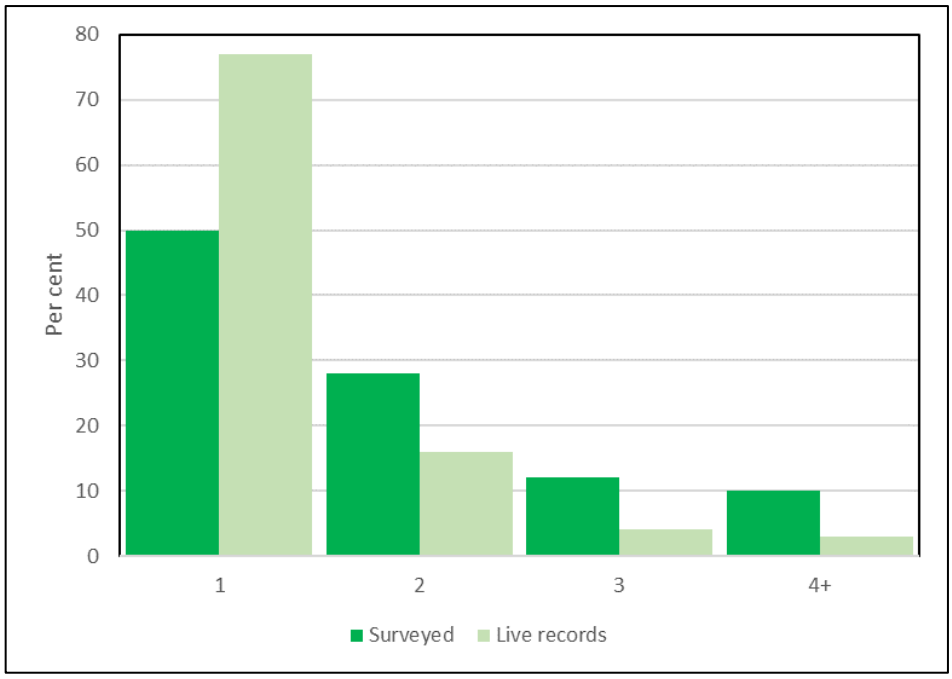


Figure 2.3-5 Number of CS TFB maintenance option records per agreement

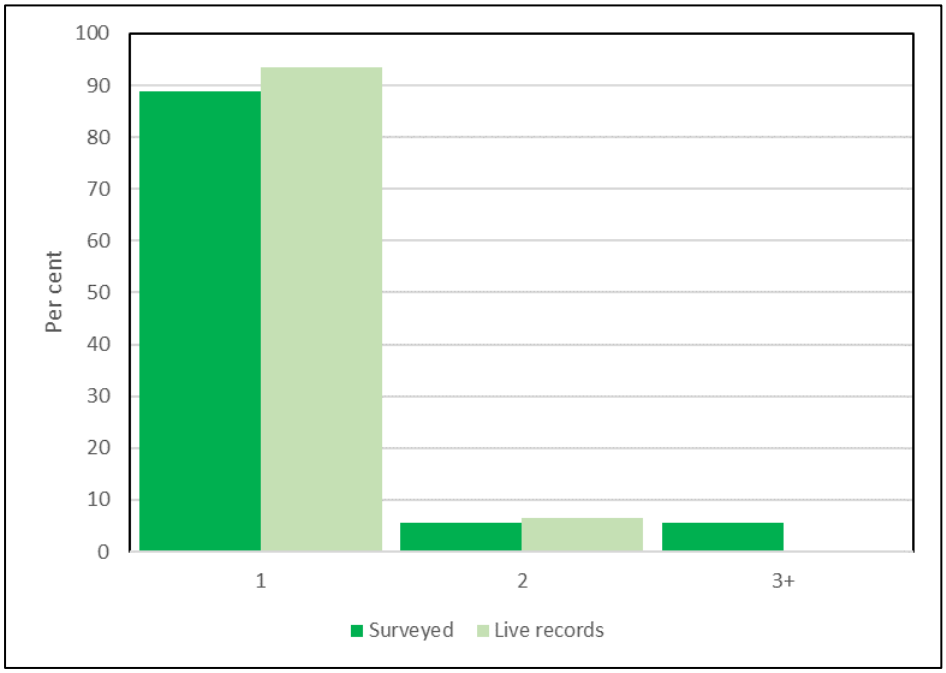


Figure 2.3-6 Number of ES TFB maintenance option records per agreement

Figure 2.3-7 and Figure 2.3-8 show that the completed farm visits broadly reflected the uptake of CS and ES TFB maintenance option types.

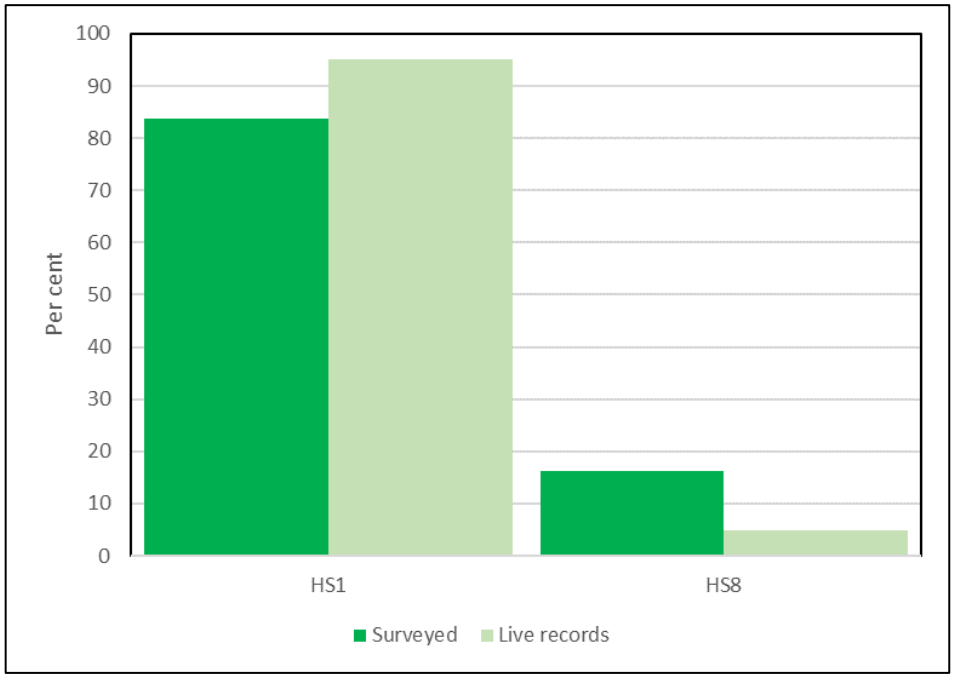


Figure 2.3-7 Uptake of CS TFB maintenance options (HS1 & HS8)

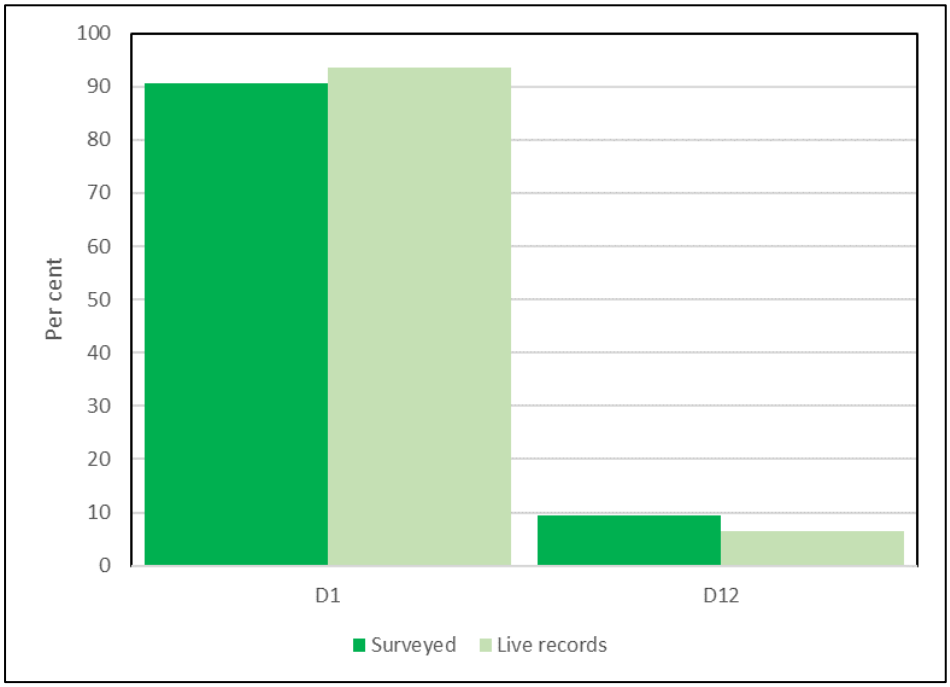


Figure 2.3-8 Uptake of ES TFB maintenance options (D1 & D12)

The majority of farm visits (76%) consisted of an interview with the agreement holder and a building survey. However, mainly due to the adverse impact of the COVID-19 pandemic and inclement weather, it was not possible to conduct an agreement holder interview on 26 of the farm visits (19%) and seven farm visits (5%) were completed without a building survey (Table 2.3-2).

Table 2.3-2 Farm visit data collection

Data collection	CS (%)	ES (%)	Total (%)
Interview & building survey	78.2	63.2	76.1
Building survey only	17.6	26.3	18.8
Interview only	4.2	10.5	5.1
Total	100	100	100

2.3.2 Collection of supporting documentation for agreements

After the CS and ES sample of agreements was selected, NE staff uploaded supporting documentation for each agreement onto a secure web-based workspace (Microsoft Teams Channel) that could be accessed remotely by the contractors. A list of the key documents supplied is shown in Table 2.3-3 and the proportion of agreement holders with documentation is shown in Table 2.3-4.

Table 2.3-3 Supporting documentation for agreements

Document type	Document description
Options Map	Map showing the location of selected weatherproof TFB maintenance options
Farm Environment Record (CS) or Farm Environment Plan (ES)	Map showing the location of all weatherproof TFBs.
Photographs	Photographs showing the condition of the buildings on scheme entry submitted with the application.
Building Wildlife Assessment Form[6] (CS only)	Four-page form completed prior to application that assesses the suitability of TFBs for barn owls, kestrels and bats. To be repeated on an annual basis thereafter.
Building Maintenance Plan and Log[7] (CS only)	Ten-page form used to plan and log maintenance to each building covered by HS1 and HS8 options. To be updated on an annual basis.

Table 2.3-4 Proportion of agreement holders in the sample with documents

AES	Option Map (%)	FER or FEP (%)	Photos (%)	BWAF (%)	BMPL[8] (%)
Countryside Stewardship	63.9	19.3	56.3	49.6	5.1
Environmental Stewardship	93.7	85.7	7.8	N/A	N/A

[6] https://www.gov.uk/government/publications/countryside-stewardship-building-wildlife-assessment

[7] https://www.gov.uk/government/publications/countryside-stewardship-building-maintenance-plan-and-log

[8] A change after the introduction of CS meant that the BMPL did not have to be submitted with the application. This accounts for the low percentage of formal agreement records with these documents.

2.4 Task 3: Survey of CS and ES agreement holders

2.4.1 Introduction

A team of eight fieldworkers supervised by CCRI undertook the farm visits. Each visit comprised an interview with the agreement holder and a site survey of the buildings covered by the TFB maintenance options. The country was divided into regions and each fieldworker was allocated a proportion of the sample and was responsible for consulting the supporting documentation and conducting the agreement holder interviews and building surveys. A 70-page training and guidance manual was prepared for the fieldworkers which explained each stage of the field work, health and safety protocols, how to complete the agreement holder interview schedule and farm building survey forms, and how to enter the information onto the central database.

The fieldworkers undertook a two-day training event in Cheltenham during November 2021. The training event involved class-based sessions on how to prepare for, arrange and conduct the surveys and a field visit to practice using the farm building recording forms. The training event covered nine topics:

1) An overview of the aims and objectives of the project.
2) Familiarisation with the contents of the training manual.
3) Health and safely (COVID-19 protocols).
4) Preparing for the farm visits.
5) Consulting the agreement holder documentation.
6) Contacting agreement holders to arrange the farm visits.
7) Conducting the agreement holder interview.
8) Conducting the farm building survey.
9) Uploading data from the surveys onto the central database.

The training explained that the agreement holder would usually be a farmer and that the buildings covered by the TFB maintenance options would usually be located in a single farmstead, but as farms have increased in size over the years and amalgamated other farms there may be more than one farmstead with buildings in the scheme. Also, and in certain parts of the country, such as the Yorkshire Dales and the Peak District, field barns and outfarms can be dispersed throughout the farm creating agreements with multiple sites. The survey method was designed to account for the fact that there may be more than one site on the farm where buildings are covered by the TFB maintenance options.

2.4.2 Agreement holder interview survey

An introductory letter explaining the purpose of the survey was sent to all agreement holders by email or post prior to contact by telephone to arrange the interview. To encourage a high participation rate the letter stressed that all information provided would be treated in the strictest confidence. The contact letter was accompanied by an information sheet explaining the purpose of the survey and a consent form for agreeing to participate in the project (see Appendix 2).

Before each interview the fieldworker consulted the supporting documentation for the agreement, where available, to become familiar with the sites and TFBs they would encounter. The average amount of time taken to conduct the interview was around 45 minutes, however, many of the agreement holders decided to accompany the fieldworker on the farm building survey and contact time could increase to a couple of hours. On farms with multiple sites the building survey could stretch to half a day or more.

For the agreement holder interview survey NE specified 10 detailed research questions:

- Which building was chosen and what were the agreement holder's reasons for selecting the building?
- Has there been any change in use of the building over agreement time that was the result of the repair work?
- Review of the building wildlife assessment form completed on application – did the applicant find it helpful?
- Has placement of wildlife boxes been successful?
- What does the agreement holder feel about wildlife in the building - has this changed?
- Review of the building log – did the agreement holder find it helpful?
- What have the agreement holders learned from implementing the options?
- What are the blockers to repair (guidance inadequate, lack of skills, lack of suitable materials etc.)?
- Does option use appear to the agreement holder to offer good value for money?
- Has participation in the TFB maintenance options influenced agreement holder feelings about their TFBs?

To answer these research questions the interview schedules for the CS and ES surveys (Appendix 3) were divided into seven sections:

- **Section 1 Background about the buildings**: The purpose of this section was to establish the location of the TFBs on a site plan and if they contained nesting boxes for barn owls, kestrels and bats. An annotated site plan was then used in the farm building survey to identify the sites and building ranges. Four categories of building were identified:
    - TFBs covered by the maintenance options.
    - Weatherproof TFBs not covered by the maintenance options.
    - Non-weatherproof TFBs.
    - TFBs that have been converted to non-agricultural uses.
- **Section 2 Experience of AES**: for CS agreement holders this section explored the use of TFB maintenance options in the previous ES scheme and if any of those buildings are now included in their current CS agreement. For ES agreement holders the purpose of the section was to determine if any TFBs had been entered into a subsequent CS agreement.
- **Section 3 Choosing the buildings to put into the scheme**: This section looked at why the agreement holder decided to join the scheme in the first place, why they chose those particular buildings (differentiating between intrinsic and instrumental reasons) and if they had sought out any information or advice before choosing the maintenance option. It finished by asking if there were any problems with the application process and if they had any suggestions about how it can be improved.
- **Section 4 Use of the buildings covered by the maintenance option**: This section determined the use of the buildings before they were entered into the scheme and what would have happened to the maintenance of the buildings if they had not been included. It also looked at the impact of the maintenance options on the use of the

buildings and concluded by asking the agreement holder what was likely to happen to the buildings once the scheme had finished.

- **Section 5 Maintenance of traditional farm buildings**: In this section information about TFB maintenance was recorded. It looked at the work completed to date and who had undertaken the work. It determined if the agreement holder had found it difficult to maintain the buildings and if any information and advice had been sought. For CS agreements it asked if the agreement holder had used the building maintenance plan and log (BMPL) and how useful they found it and if they could suggest any improvements. The section concluded by asking the agreement holder if the maintenance options offer good value for money for themselves and the tax payer.
- **Section 6 Management of weatherproof traditional farm buildings not included in the scheme**: This section focused on any weatherproof TFBs that were not included in the scheme and asked agreement holder for the reasons behind their decision to exclude the buildings and what their maintenance policy was for such buildings. The section concluded by asking if the agreement holder would consider entering the buildings into a future maintenance scheme.
- **Section 7 Public benefits from buildings covered by the scheme**: The final section collected information about the agreement holder's perceptions of the public benefits provided by the buildings through the historic environment, landscape, wildlife, access and engagement, and the benefits for the agreement holders themselves. For CS agreements it also asked if the building wildlife assessment form (BWA) was helpful in deciding whether or not to install nesting boxes and if the BWA could be improved in any way.

Where permission was given, some of the agreement holder interviews were recorded. A synopsis of all the interview was prepared using the completed interview schedule, fieldworker summaries of the open ended questions and the recordings, where available. Direct agreement holder quotations and extracts from the interview summaries are used in the analysis and results section (Section 3) to emphasise the agreement holders' perspective on different issues. Direct quotations are denoted in the text in italics and by quotation marks, while fieldworker summaries are in italics without quotation marks. The fieldworker summaries have been edited for concision and readability. However, to maintain confidentiality, some of the detail has been omitted in places. Quantitative data were entered into a Microsoft Excel spreadsheet and analysed using the IBM SPSS statistical software suite.

2.5 Task 4: Building survey

2.5.1 Introduction

For the building survey NE specified two detailed research questions:

- Were the most appropriate buildings chosen for the option use?
- Have appropriate repairs been carried out?

Each site identified during the agreement holder interview was surveyed and recorded separately. A site was defined as a location where there were TFBs covered by a maintenance option. This is an important distinction, as locations with TFBs that were not included in the scheme were not included in the survey and also because less than 20 per cent of CS agreement folders contained a FER map showing the location of all TFBs on the holding. Therefore, the site evaluation of whether or not appropriate buildings have been left out of the scheme is confined to locations where there were both TFBs within and outside the scheme.

There were three categories of site in the building survey (Figure 2.5-1):

- **Farmstead**: A farmstead, with its farmhouse and a variety of buildings for storing and processing crops, housing farm animals and other functions.
- **Outfarm**: An outfarm, comprising one or more ranges of buildings set away from the main farmstead, usually arranged around two or more sides of a yard, and which may be sited next to housing for farm workers.
- **Isolated single building (field barn)**: A single building (field barns, barns, cattle housing and, very rarely, sheep housing) set within a field.

A TFB is defined by Defra as a building or part of a building constructed before 1940 for a use associated with agriculture and built using traditional methods using timber, brick, stone, tile or slate. This definition was used for the building survey. During the agreement holder interview a site plan was annotated to show (Figure 2.5-2):

- Weatherproof TFB ranges included in the agreement (Red).
- Weatherproof TFB ranges not included in the agreement (Green).
- Non-weatherproof TFB ranges (Blue).
- TFBs converted to domestic or commercial use (Yellow).

Within a site there may be one or more building ranges. A building range can comprise a single building or a group of buildings which are joined together (see Figure 2.5-3). This is a simpler method than the 'building types' approach that has been used for other surveys. The latter can display a great deal of variation in how buildings are quantified, and their functions defined, making it difficult to provide numbers of surviving working buildings per farmstead. It is for this reason that this project has taken a 'top down approach' based upon the identification of inter-connected ranges rather than a 'bottom-up' approach which runs the risk of separating them into many physically distinct or functional elements. Extensive and inter-connected ranges of buildings may thus comprise a whole farmstead, for example a U-plan or L-plan range, or form one range within groupings of buildings that make up different types of courtyard or (rarely) dispersed plans with no focal yard. This nests within the approach adopted by HEFMP which used the Ordnance Survey (OS) 2nd Edition 25" mapping dating from around 1900 (after which very few traditional buildings were erected) as a baseline for measuring the historic form, survival and use of whole farmsteads as quickly as possible.

Farmstead	
	
A traditional farmstead – a designed and planned farmstead of the 1870s.	A traditional farmstead – local stone and slate in the Peak District
Outfarm	
	
An early-19th century outfarm in the Cotswolds, comprising a threshing barn with an attached granary, stable and cart shed, and shelter sheds flanking a south-facing cattle yard.	An outfarm in Northumberland, set out as a U-plan of interlinked buildings – mostly to house cattle, the central taller building being a barn.
Isolated single building (Field barn)	
	
A field barn for cattle and hay in the Yorkshire Dales.	A field barn in the Sussex Downs – this is a threshing barn.

Figure 2.5-1 Categories of TFB site

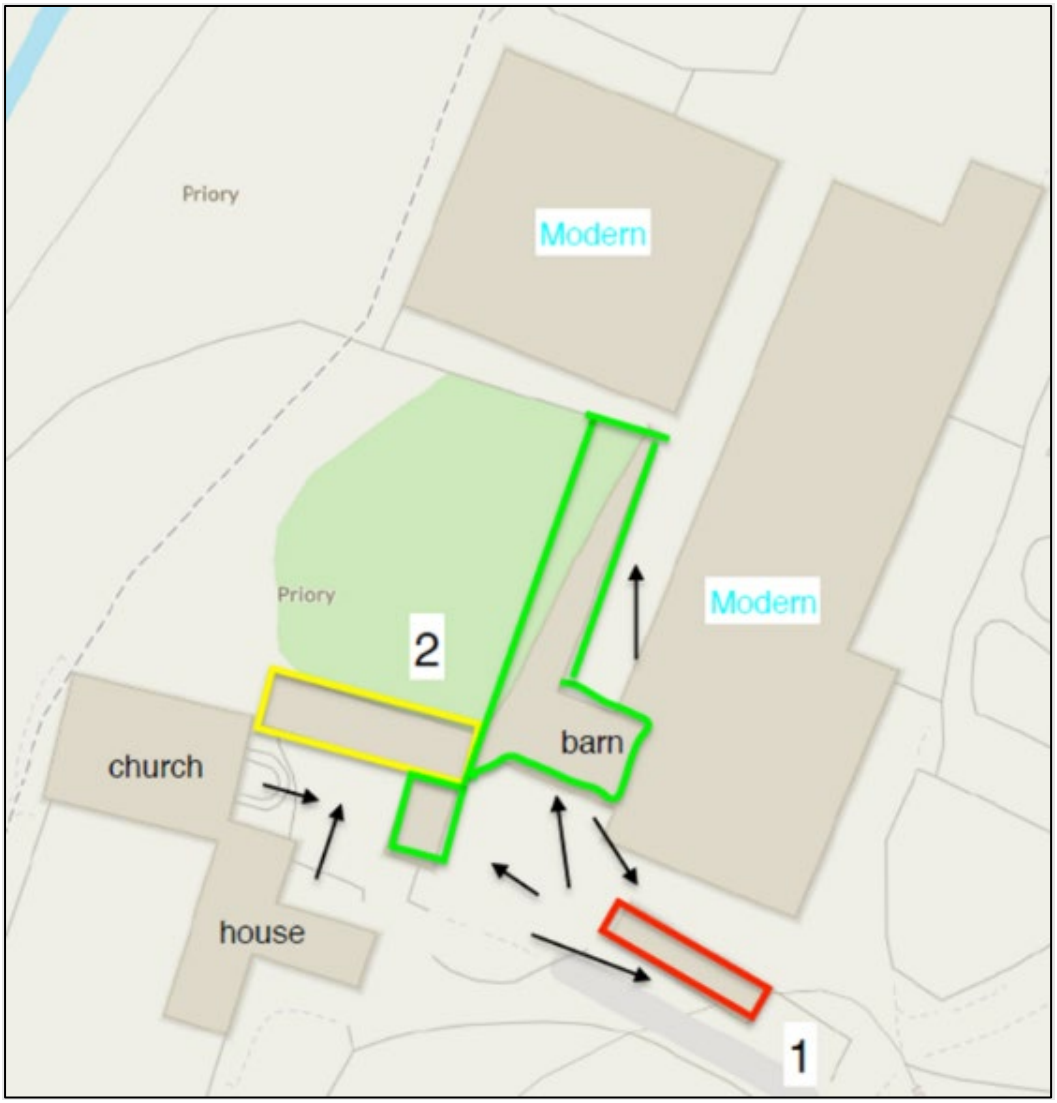


Figure 2.5-2 Example of an annotated site plan for a farmstead

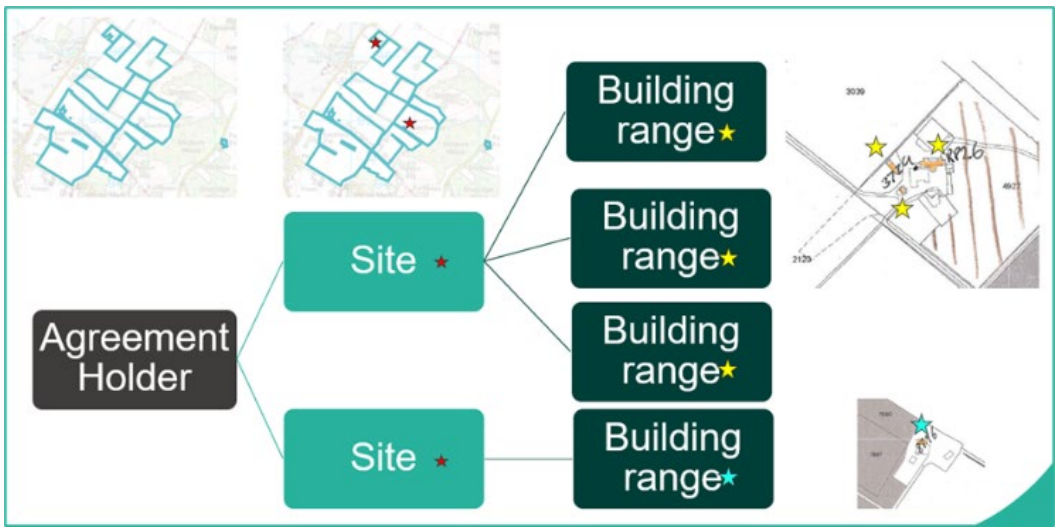


Figure 2.5-3 An example of a CS agreement that has 2 sites and 4 building ranges

2.5.2 Traditional farm building survey

Site recording form

The site recording form (SRF) comprised five sections (Appendix 4.1):

- **Section 1 Pre-coded information about the agreement:** This section contained pre-coded information about the agreement and buildings generated by document review and agreement holder interview.
- **Section 2 Site summary**: The section recorded if photographs of the site had been taken and if a detailed survey was undertaken. It also provided an overview of the site in terms of the character of the site as a whole and if it reflects any of the key characteristics of the NCA as noted in Historic England's Farmstead and Landscape Statements (FLSs). A summary was created for every range of TFBs identified on the site plan and noted:
    - The overall plan form of the range, any historic functions that could be identified.
    - Significant differences within the range with regard to materials, form and storeys.
    - Any ranges or parts of ranges were 'transitional' in that they used machine brick or concrete lintels but were pre-1940.
    - Any ranges, or parts of ranges that were converted to residential, office or other non-agricultural uses.
    - Any special external or internal features that would be useful to highlight.
    - The presence and location of Dutch barns and modern agricultural buildings.
- **Section 3 Visibility**: This section recorded the fieldworker's assessment of how visible the site was from publicly accessible areas:
    - High: Open views of the TFBs from at least one area.
    - Medium: Views partly filtered or blocked by modern buildings and/or planting.
    - Low: Site not visible due to modern buildings and/or planting.
- **Section 4 Benefits for nature conservation**: This section recorded the fieldworker's assessment of the site in terms of delivering wildlife benefits.
- **Section 5 Missed opportunities**: This section recorded the fieldworkers assessment of missed opportunities for the site in terms of:
    - Traditional buildings not included.
    - Barriers to wildlife access noted and other obvious benefits for nature conservation not realised.
    - Significant areas of maintenance not carried out.

Range recording form

A separate range recording form (RRF) was completed for each building range within a site (see Figure 2.5-4) and comprised five sections (Appendix 4.2):

- **Section 1 Range identification**: The section recorded if detailed photographs of the range had been taken (Figure 2.5-5) and if an internal inspection had been undertaken. It also identified whether the range was covered by the TFB maintenance options.

- **Section 2 Condition and character**: This section recorded the fieldworker's assessment of the building range's condition (Table 2.5-1), layout (plan form, height and type of openings), whether or not the building range had any external or internal special features (Figure 2.5-6), the historic functions performed by the building range (Table 2.5-2 & Figure 2.5-7) and the building materials used in the construction of the range (Figure 2.5-8).
- **Section 3 Maintenance**: This section recorded evidence on maintenance work being undertaken, if traditional materials were used, and if further maintenance work was required (Figure 2.5-9).
- **Section 4 Wildlife**: This section recorded the fieldworker's assessment of the range in terms of its potential for barn owl, kestrel and bat inhabitation. It also recorded any visible sign of barn owl, kestrel and bat inhabitation.

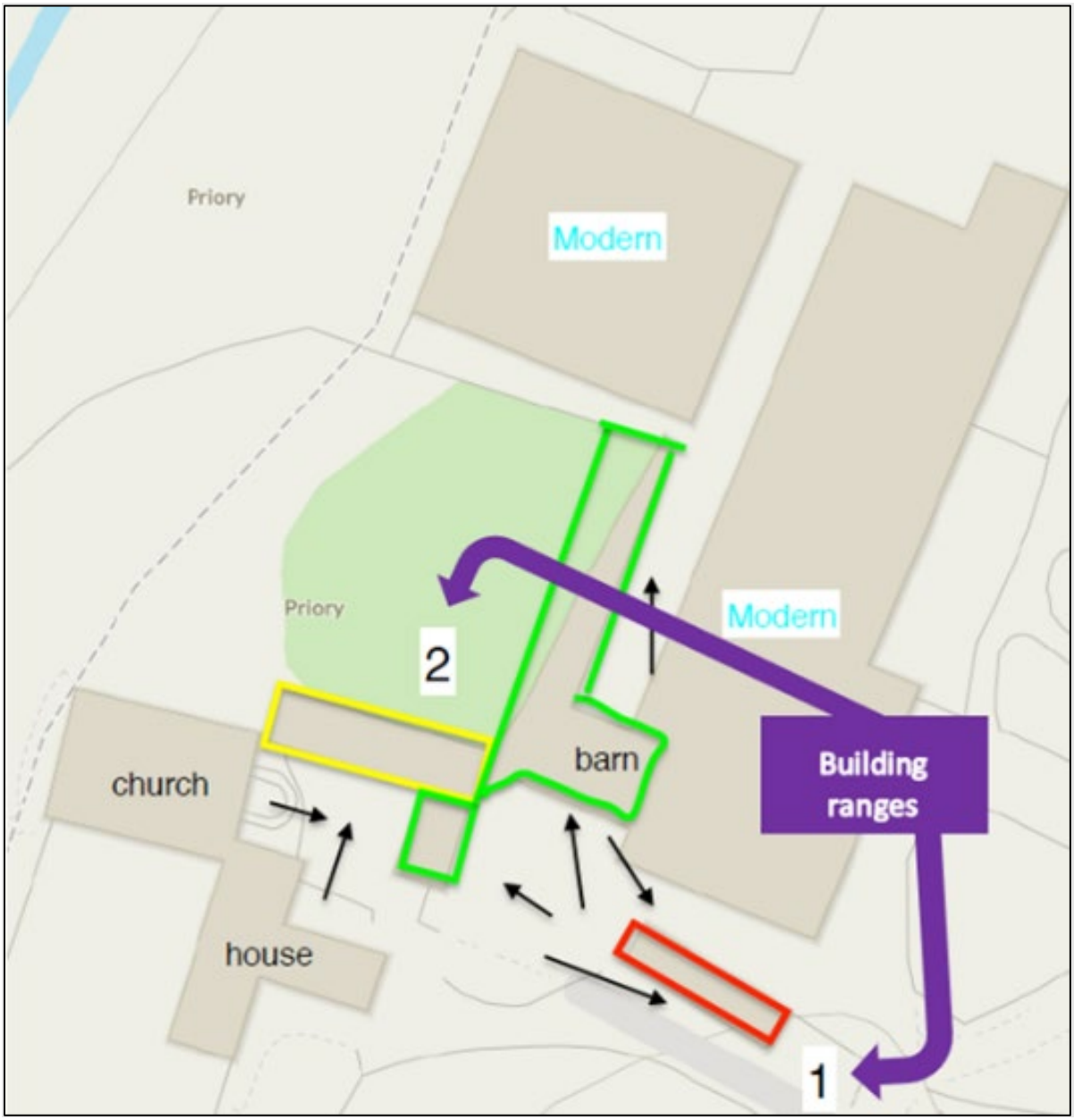


Figure 2.5-4 Site containing two building ranges

Figure 2.5-5 Example photographs taken for 2 building ranges

Table 2.5-1 Categories of building range condition

Condition category	Condition description
Very good	Well-maintained with no signs of any repair that is required.
Good	Building range is structurally sound and well-maintained with only very minor areas that may need attention.
Fair	Building range is structurally sound and generally weatherproof, but with more extensive need for repair. May include structural cracks and need for repair of doors and windows.
Poor	Building range at increasing risk of severe damage and even loss due to poor structural condition. Many elements of the fabric showing signs of decay and water ingress due to severe spalling/deterioration of walls, areas of roof admitting water, defective rainwater goods causing damage to fabric; structural cracks and evident signs of instability (leaning walls, internal propping).

Special features	
	
A protective mark to keep crops and animals safe from harm (Devon Redlands)	Animal stalls (White Peak)
	
Harness room (Suffolk Coast and Heaths)	17th century doorway (Solway Basin)
	
Belt drives for machinery (The Culm)	Threshing machine (North Northumberland Coastal Plain)

Figure 2.5-6 External and internal special features

Table 2.5-2 Building range historic function

Historic function	Description
1. Threshing barn	A barn usually containing a single, central threshing floor with opposing doorways and bays to either side for storing the threshed corn. May also include aisles to one or both sides and a horse engine house - a round or polygonal building containing a horse engine used for powering threshing and other machinery; typically found projecting from barns.
2. Combination barn	A barn for several functions (always storing and threshing corn, combined with other functions including housing farm animals, storing grain and housing carts. May also include aisles to one or both sides and a horse engine house.
3. Cow house	An enclosed building with doors, sometimes also windows, in which cattle are normally tethered in stalls.
4. Shelter shed	A single-storey open-fronted structures for cattle facing onto cattle yards.
5. Covered yard	A wide-span structure for loose housing of cattle, dating from after 1850.
6. Linhay	A two-storeyed and open-fronted structure comprising a cattle shelter or cart shed on the ground floor with a hayloft above. Most common in south-west England
7. Stable	A building, or part of a building, for housing horses or working oxen, storing and maintaining their tackle and sometimes housing farm workers. Typically has windows as well as doors
8. Granary	A building, or first-floor room in a building (usually over a stable or cart shed), for the dry and secure storage of grain after it has been threshed and winnowed in the barn.
9. Cart shed	A building for housing and protecting from the weather carts, wagons and farm implements, often open-fronted.
10. Pigsty	A structure providing secure housing for pigs, often with an attached yard.
11. Hay barn.	An open-fronted building for the dry and well-ventilated storage of hay.
12. Brewhouse/ bakehouse	A detached buildings separate but close to the farmhouse for brewing beer and baking bread, often combined into a single building.
13. Cider house	A building, or part of a building, for the milling and pressing of cider apples to produce cider (or pears for perry) and for storing the drink in barrels.
14. Dairy	A detached building, or more often a room within the farmhouse, used for the cool storage of milk and its manufacture into butter and/or cheese
15. Dovecote	A building or part of a building, usually placed at a height above the ground, used to house doves and pigeons with openings and provision inside for roosting and breeding.
16. Forge	A building housing the ironworking processes of a blacksmith.
17. Hop kiln	A building in which hops are dried and stored, known as an oast or oast house in south east England.
18. Malthouse	A low-ceilinged building for the malting of barley before brewing.
19. Mill	A building for the milling of corn to flour.
20. Poultry housing	Secure housing for poultry, often in a loft above a pigsty.
21. Sheep housing	Includes hogg houses in northern uplands and rams' pens.

Historic range functions	
	
A very large granary and cart shed range (Yorkshire Wolds)	A 17th century threshing barn (Low Weald)
	
Early-19th century stables attached to barn (Trent and Belvoir Vales)	Pigsties attached to a boiling house for preparing feed (Cheviots)
	
A root house (Cheviots)	Looseboxes for fattening cattle (Vale of Pickering)

Figure 2.5-7 Example of historic functions of building ranges

Roof and wall building materials	
	
Flint, tumbled-in brick and plain tile (Low Weald)	18th century cob barn with corrugated iron roof (Devon Redlands)
	
Stone and slate to a 15th century cruck-framed barn (Dark Peak)	A mix of stone, weatherboard to a timber frame and a brick gable end with ventilation holes (Shropshire Hills)

Figure 2.5-8 Building range roof and wall building materials

Roofs and rainwater goods

- Slipped and missing tiles or slates, holes caused by missing/ very damaged tiles or slates and missing thatch posing a particular risk to buildings through water penetration.
- Moss growth and vegetation on roofs (including thatch) can make them heavier and put a strain on internal trusses.
- Uneven roof profiles which can indicate that roof trusses have shifted.
- Broken or missing rainwater goods, including those that are filled with leaf mould etc. and are obviously blocked, pose a risk to walls.

Walls

- Bowing or leaning walls.
- Obvious damage to timber-framed walls – infill panels deteriorating, bottom rail ('sole plate') is damp/ rotten due to failing guttering or rising ground level.
- Failure of coating to earth walls or to plaster over timber frame (an East Anglian feature).
- Loss of weatherboarding to timber framing.
- Loss of facing ('spalling') to brick and stone, which can be caused by hard 'cementitious' mortar which does not allow walls to breath.
- Lost or badly degraded pointing to brickwork or stonework, leaving gaps that will be vulnerable to water penetration, frost action etc.

Openings, doors and windows

- Collapsing arches and cracked lintels.
- External doors and windows – showing signs of obvious decay.

Interiors

- Propping up of ceilings indicating a dangerous structure.
- Obvious areas of water penetration.

Figure 2.5-9 Indicators that a building range requires further maintenance work

2.5.3 Building survey response

Of the 138 farm visits, 131 (95%) resulted in a farm building survey. The detailed analysis that resulted focused on the CS scheme which accounted for 87 per cent of the surveyed agreements (114), 85 per cent of the sites (230) and 88 per cent of the ranges (435) (Figure 2.5-10). The survey of ES agreement holders (17) provided information for 40 sites and 59 ranges.

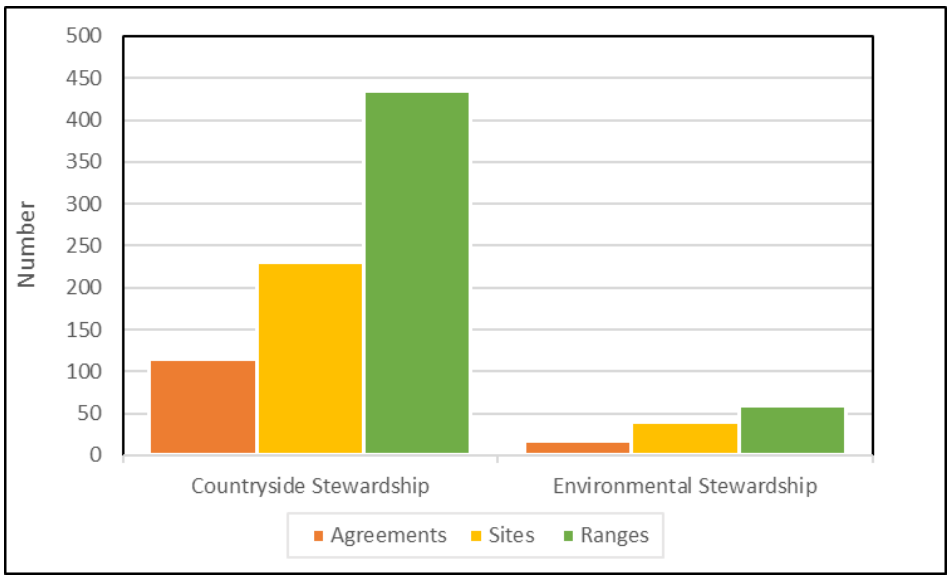


Figure 2.5-10 Distribution of CS and ES TFB building survey agreements, sites and ranges

Figure 2.5-11 shows that 60 per cent of the agreements in the building survey consisted of one site, however, there were also some complicated agreements with 12 per cent having four or more sites. These complicated agreements could take up a day to survey.

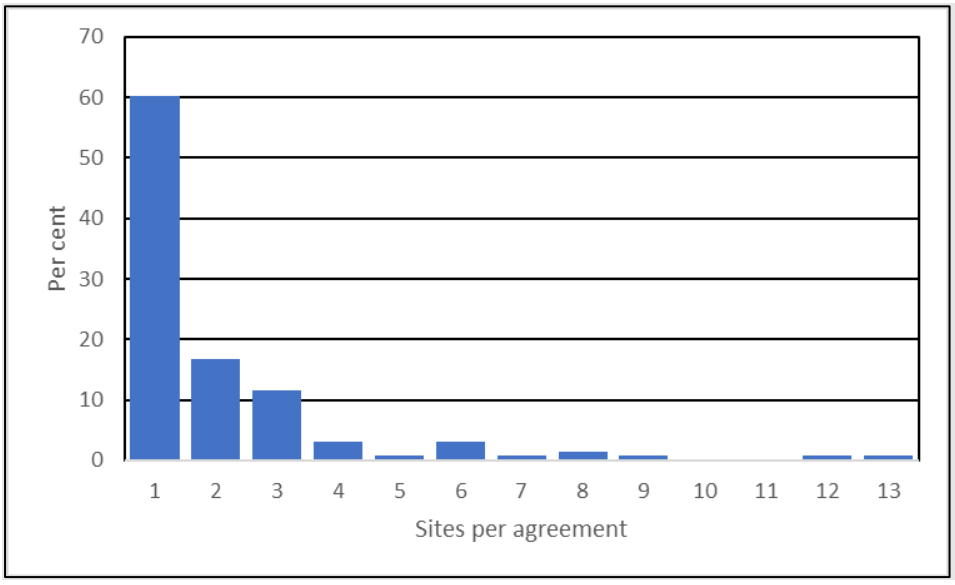


Figure 2.5-11 Number of sites per agreement with TFB maintenance options

The majority of the sites (62%) and ranges (78%) were classed as farmsteads, while just under one third of sites (32%) were field barns which also accounted for 18 per cent of the ranges (Figure 2.5-12). Only a small proportion of the sites (6%) and ranges (5%) were outfarms. Farmsteads have a mean of 2.3 ranges per site and outfarms 1.3 ranges per site, whereas field barns are simply isolated single buildings. 433 ranges have been inspected on these sites, of which 11% (46) ranges are not in the scheme. 92 per cent of ranges have been photographed, the omissions being due to a range of factors – unable to get permission, very poor weather or light, which was especially the case for

isolated buildings. 47 per cent of the ranges have been internally inspected – 56 per cent of farmstead ranges, 50 per cent of outfarms and 15 per cent of field barns in the scheme.

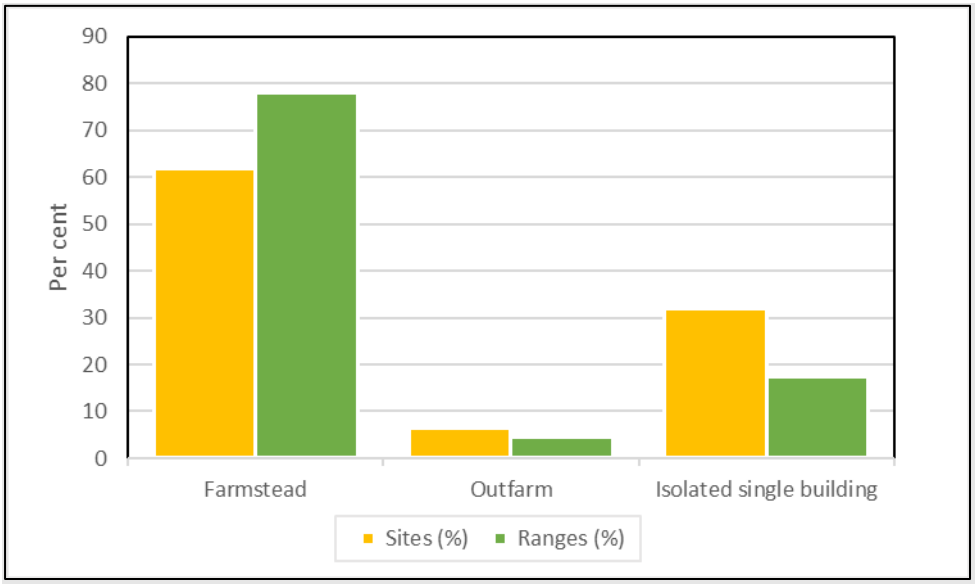


Figure 2.5-12 Distribution of building survey sites and ranges by type of site

2.6 Task 5: Case studies to showcase key processes and outcomes

Five in-depth illustrated and five lighter-touch case studies were produced to showcase the key processes and outcomes resulting from agreement holder adoption of CS and ES TFB maintenance options (see Figure 2.6-1). Each case study highlighted different features of the project and its objectives, such as improvements in agreement holder well-being through participation, greater appreciation of cultural heritage and the provision of public benefits, the role advice plays in the choice of appropriate TFBs, recognising barriers and blockages and how to overcome them. The case studies used evidence generated by Tasks 3 and 4. The case studies will be particularly useful in animating the findings of the project to inform government, the Defra family and arm's length bodies, and broader environment stakeholders of the environmental and social benefits derived from TFB maintenance options for participants and communities.

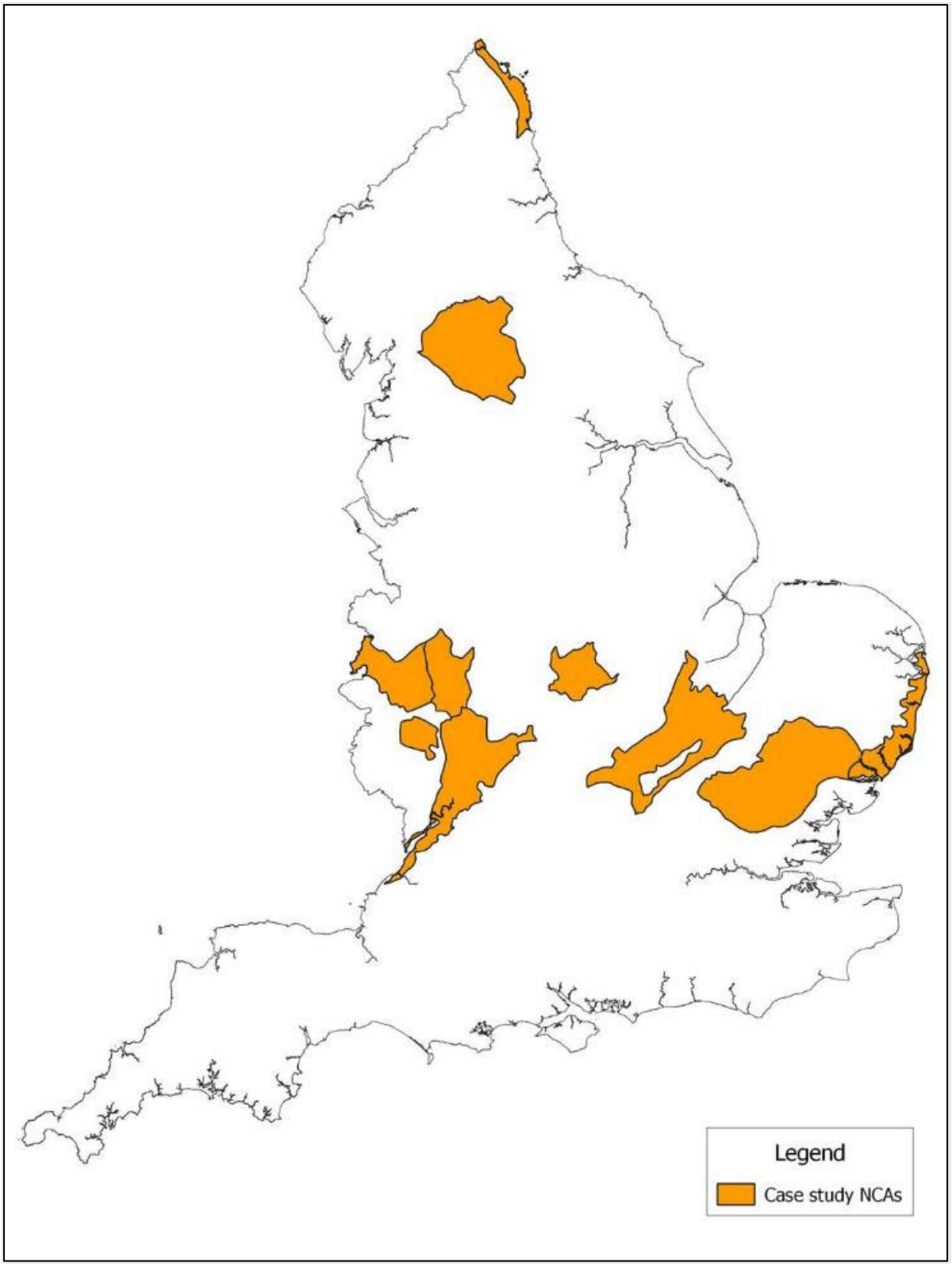


Figure 2.6-1 Case study locations

2.7 Task 6: Evaluation of effectiveness and value for money

This task drew upon the findings of Tasks 1 through 5 to consider the effectiveness of the scheme and value for money. There were four detailed research questions:

- Has the wildlife assessment and building maintenance protocols introduced for CS been successful?
- Have the cultural and natural capital values of the buildings and farmstead been correctly identified?
- Is there potential to add value to TFB maintenance options through community/recreation use and to provide new opportunities for the health and well-being of visitors or those walking and cycling nearby?
- Does option use appear to offer good value for money for the farmer and in relation to the wider natural and cultural capital benefits delivered?

Natural Capital accounting is widely used by Defra to assess the value of a wide range of ecological and cultural assets and there is a need to consider how to include TFBs into this approach. To achieve this the project adopts the framework used by Risk and Policy Analysists and Land Use Consultants (2018) and Powell et al. (2019, 2020) to consider TFBs within the context of Natural Capital accounting in terms of:

- **Stocks**: This reflects the extent of the historic assets, in this case TFBs, and their condition. Deliberate management activities are required to maintain or improve condition, which in this case are the TFB maintenance options. The condition of the TFB stock determines which benefits the natural environment might receive.
- **Flows**: This reflects the flow of ecosystem service benefits that arise as a result of the TFB stock. A lack of management activity to maintain the condition of stocks may mean that the flow of benefits decreases over time.
- **Benefits**: The flows from the stocks lead to benefits.

While the project considers the management of TFBs in the context of Natural Capital accounting, no attempt is made to provide monetary values for the benefit streams generated by the stock as this is beyond the scope of the study. As Powell et al. (2020) note:

> *There is often confusion between the definitions of natural capital, ecosystem services, public goods, and public benefits. The natural capital is the stock of assets which generates ecosystem services. When these services are analysed to identify who benefits and how, a range of benefit flows can be ascertained for each ecosystem service generated. Benefits flowing from natural capital through the generation of ecosystem services affect various sectors of society, groups and individuals in different ways. Some benefits flow to individuals who own the natural capital assets (e.g. farmers who utilise soil to produce food), other benefits are accessible to a wider range of people as 'public goods' (such as clean air and water, and access to the countryside for recreation through open access or rights of way).*

For this project two types of beneficiary are recognised, the public and the agreement holders themselves.

2.8 Task 7: Outputs

The project has culminated in this comprehensive final report, the provision of data and metadata to Natural England from the outputs of Task 1, a webinar, a two-page project summary and an infographic.

3 ANALYSIS AND RESULTS

3.1 Introduction

Section 3 presents the results from the analysis of the empirical data collected during the project. It begins with an overview of the character and value of the TFB resource in England and describes the cultural value provided (3.2). The next section (3.3) is devoted to an analysis and discussion of the national uptake of CS and ES TFB maintenance options, including the option type, floor area and adoption rates over the duration of the schemes. The pattern of option uptake is geospatially analysed to determine variations between CS and ES agreements. A case study for the county of Staffordshire is undertaken to compare the uptake of CS TFB maintenance options with the distribution of surviving historic farmsteads and TFBs. Section 3.4 focuses on the survey of agreement holders and explores the reasons behind scheme entry, the choice of buildings and their maintenance, and the agreement holder's perceptions of the public benefits provided by the buildings through the historic environment, landscape, wildlife, access and engagement, and the benefits for the agreement holders themselves. In section 3.5 attention is turned to an analysis of the character, condition and maintenance of the TFBs and the public benefits they provide. Finally, in section 3.6 the overall effectiveness and value for money of the schemes is assessed by drawing together the empirical evidence reviewed in the previous sections.

Although Section 3 is largely dependent on a quantitative analysis of the empirical data[9], the facts and figures are animated by a series of 10 case studies which illustrate how agreement holders have engaged with the TFB maintenance options, along with quotations from the agreement holders and reflections from the fieldworkers to illustrate how the schemes are operating in practice.

3.2 Character and value of traditional farm buildings in England

3.2.1 Historic character and relationship to TFB maintenance option uptake

The overwhelming majority of TFBs, as defined in 2.5.1, had been built by the late-19th century, very few being built after the 1890s due to the impact of the farming depression and the more widespread introduction of non-traditional building forms and materials. It is for this reason that the HEFMP took OS 2nd Edition 25" mapping, compiled around 1900, as the benchmark for assessment of the historic character of farmsteads, outfarms and field barns, and the degree to which they have changed or not in the last century. Based on the HEFMP survey it is tentatively suggested that around 75 per cent of farmsteads have retained all or some of their historic form and that between 30 and 40 per cent are still in agricultural use (Bibby & Brindley 2007, 2008; Bibby 2010; Lake & Smith 2010).

The uptake of CS and ES TFB maintenance options has a complex relationship to the density and pattern of TFBs in the landscape, and the extent to which they remain in agricultural use. The Government's Rural Urban Classification (RUC) shows a fundamental distinction between areas of village-based settlement and areas where the pattern is more scattered or dispersed. This is a long-recognised distinction inherited from the medieval period, which has been explored and mapped in depth in the Atlas of Settlement (Roberts & Wrathmell 2000, 2003). It is important to understanding the extent to which farmsteads have developed in villages or form part of long-established dispersed settlements. The HEFMP (see Figure 2.2-3), deepened this understanding and found that the character of traditional farmsteads was associated with the pattern and date of the fields in which

[9] Data tables for the figures presented in Section 3 are listed in Appendices 5, 6, 7, 8, and 9.

they were sited (see Lake & Edwards 2006, 2007). Pre-18th century buildings, for example, are concentrated in landscapes of dispersed settlement and ancient enclosure, or they may survive from earlier settlements within landscapes affected by late-18th and 19th century reorganisation and enclosure. There are distinct differences also in the scale and layout of farmsteads, offering insights into how they have developed to serve different farming systems from the medieval period. The early results of this work were used to inform revision by NE of the NCA profiles and the creation of the FLSs. This is significant to understanding the patterns of uptake of TFB maintenance options under CS and ES:

- It has shown that the lowest densities of farmsteads are found in areas where large arable-based farms developed, often on estates. These are most likely to have survived at the core of farm businesses, but to have also experienced some alteration to their layout and demolition of buildings.
- The highest densities of farmsteads that have survived unaltered from around 1900, and are still in agricultural use, are concentrated in upland and upland fringe areas.
- Farmsteads within villages are the most likely to have moved out of farming into commercial and especially residential use.
- There is strong variation in the rates of survival, with over 80 per cent retaining more than half of their historic form in the Upland and Upland Fringe ALT and under 30 per cent in parts of the Eastern Arable, in parts of the Chalk and Limestone Mixed ALT and in coastal areas of the South East Mixed ALT (see Edwards 2008, Edwards & Lake 2014, 2015).
- Remote outfarms and field barns with poor access have been subject to the highest degrees of loss from the landscape – with half being lost overall (55%), rising to over 80 per cent in some lowland areas.

Data gathered for the HEFMP and the preparation of FLSs for all of the NCAs suggests that the broad rates of survival of traditional farmsteads across the different ALTs can be summarised as follows:

- Very high for Upland and High for Upland Fringe.
- High-medium for Western Mixed.
- Medium for Chalk and Limestone Mixed.
- Medium-Low for South East Mixed and Eastern Arable.

In further detail:

- Upland and Upland Fringe areas retain the highest proportion of surviving traditional farmsteads, many to linear and small-scale dispersed or courtyard layouts, which have retained their historic form and remain in agricultural use.
- There are pockets of comparable density and survival in Western Mixed areas, especially in its dairying areas, but on the whole, the very wide range of survival and farmstead types reflects strong local differences in historic land use and in how dairying, stock fattening and arable farming has either retained or required the redevelopment of traditional layouts and buildings.
- South East Mixed areas have high densities of farmsteads with 17th century and earlier buildings, but the loss of minor buildings is more common and as a result the survival of complete and substantially complete farmsteads is lower.
- Large-scale courtyard farmsteads with large barns are typical of the arable Chalk and Limestone Mixed areas, where large arable farms either developed on a piecemeal

basis from the 14th and 15th centuries or result from the replanning of landscapes by estates from the late-18th century.

- Farmsteads in Eastern Arable areas have experienced the highest degree of change in the last hundred years, ranging from the large-scale mechanised farms extending from Northumberland to the East Midlands and the development of former dairying farmsteads in the claylands of East Anglia from the later 18th century.

3.2.2 The value of traditional farm buildings

Traditional farm buildings contribute to local distinctiveness and a sense of place, through their varied forms, use of materials and the way that they relate to the surrounding landscape and settlement. The absence of statutory designation does not imply lack of value, as the great majority of farmstead buildings which contribute to landscape character do not fulfil the criteria for designation (see 3.2.3).

The value of TFBs is in part set out using Historic England's *Conservation Principles*, published in 2008, and which is used in Conservation Management Plans and other strategies and plans for management of the historic environment (Historic England 2008):

- **Evidential value** derives from the evidence contained in a place, including the survival, form and fabric of buildings and groups of buildings such as farmsteads, including their potential for further evidence of interest. In this respect:
    - Traditional farmsteads and TFBs provide evidence for the development of rural communities, estates and farming from the medieval period, including the interplay of local traditions and changing ideas.
    - They complement the evidence embodied in the landscape and that has been written down and made available in archives and other sources.
- **Historical value** derives from the ways in which places illustrate or are associated with past people, historic developments and aspects of life, complementing or enriching what we may know from documentary and other sources. In this respect:
    - The layouts, phasing and character of traditional farmsteads and TFBs of different types can show how farmers and estates shaped the development of surrounding settlements and landscapes, how they formed part of local and regional farming traditions and how they followed or helped to change national developments in agriculture and land use.
    - Traditional farmsteads and TFBs will always have some level of association with local farming families and communities and may also have specific connections to or associations with particular estates, their agents, architects and engineers.
- **Aesthetic value** (architectural, artistic or aesthetic) derives from how a place has been designed and has evolved and is an essential part of how people experience places - from views in the landscape to the type, planning, style, details of craftsmanship and construction of buildings. In this respect:
    - Traditional farmsteads and TFBs make a critical contribution to the local character of landscapes and what makes them distinctive.
    - They may represent crafts and traditions that have worked with local materials, skills and architectural styles, and how these have changed over time and become influenced by national ideas and technologies.

- They may also reflect significant national developments, and embody in their choice of materials, design and detail new and cutting-edge ideas.

Conservation Principles also defines the benefits offered by the historic environment for people as Communal Value. The National Farmers Union has also drawn attention to farmland being the destination of 48 per cent of visits to the natural environment in England, with obvious benefits in terms of health and well-being, public engagement and education; it has also cited Historic England's commissioned research on mapping the historic character and use of farmsteads, and the ecosystem services offered by historic buildings (Powell at al. 2019), as a means of deepening this understanding (NFU 2020). It follows that in this respect, TFBs have value to people because:

- They tell us how farmsteads have been a part of rural communities and produced food for local and national markets.
- Through new uses they can also benefit the local community and economy and contribute to climate change mitigation.
- They can be used to maintain and develop crafts and skills.
- They are an important part of how rural landscapes are experienced and valued by people.
- They can provide important habitats for a range of species, particularly barn owls, kestrels and bats (Fluck & Holyoak 2017, Powell et al. 2019).

Traditional farm buildings are an integral part of the farmed landscape and of the historic environment that has created Natural Capital and the ecosystem services and benefits that flow from it (Powel et al. 2019). The farmed landscape constitutes over 70 per cent of England, and the realisation of how it results from how farming and other uses of land have changed in past centuries offers a dynamic framework that can inform future change for the benefits of people and habitats (Bridgewater & Rotherham 2019).

Research undertaken by Historic England[10] has demonstrated how TFBs and their environs make a significant contribution to rural landscapes and also, through a diversity of uses from farm-based diversification to residential and business use, to local communities and economies. Studies in the Lake District and the Yorkshire Dales have demonstrated the socio-economic benefits of AES for conservation repair (Edwards et al. 2005, Courtney et al. 2007).

3.2.3 Traditional farm buildings and statutory designation

Traditional farm buildings are heritage assets and as part of the historic environment they are an irreplaceable resource. The Government has approached their conservation, so that they can be enjoyed for their contribution to the quality of life of existing and future generations, in part by designation (MHCLG[11] 2021). It has long been recognised that designation as significant heritage assets through statutory listing only covers a small fraction of the TFBs that have survived (Gaskell & Owen 2005, Cherry & Chitty 2010, Edwards 2012). The main reason for this is that most TFBs are of 19th century date, and most of these were considered to post-date the 1840 'cut off' date after which the criteria are far more selective. Most of the TFBs on the statutory lists were added during the Accelerated Resurvey of rural parishes in the 1980s, a period when understanding of this hitherto little-known aspect of our national heritage developed. Analysis of the statutory lists has shown that the farmhouses and barns, typically the oldest and most imposing buildings on

[10] https://historicengland.org.uk/advice/caring-for-heritage/rural-heritage/farm-buildings/

[11] Ministry of Housing, Communities and Local Government.

farmsteads, dominate the lists. Farmhouses and barns account for 8 out of 10 list entries (Gaskell & Owen 2005, pp. 40-51). Surveys of rural areas assumed that 'curtilage listing' would cover other pre-1948 buildings ancillary to, fixed to or within the curtilage of listed farmhouses (Lake 2000, 2005), and a recent clarification of curtilage law has stated that if farm buildings have uses independent of the farmhouse they should not be treated as listed, even if they have been in the same ownership prior to the date of listing (Historic England 2018).

The HEFMP has deepened this understanding, showing that areas with high TFB survival are not always associated with high levels of listing, for example, over 60 per cent of sites in the High Weald, an area with a high survival of 17th century and earlier houses and barns, have listed TFBs, while only 10 per cent of sites in upland areas, with high levels of survival, possess listed TFBs. The HEFMP recorded fewer than one per cent of outfarms and field barns having any listed buildings, although they have been subject to very high levels of loss and make a very important contribution to the historic environment. There are few Conservation Areas outside villages and other nucleated rural settlements, with the rare exception of some 'barn and wall' landscapes in upland areas (e.g. Swaledale and Arkengarthdale in the Yorkshire Dales and Edale in the Peak District).

3.3 Nature and extent of CS and ES farm building maintenance option uptake

3.3.1 Option uptake over the duration of the schemes

Introduction

Environmental Stewardship began in 2005 and closed to new entrants in 2015. Over the 10 year period a total of 12,872 ES agreements included TFB maintenance options, with a total of 13,457 individual option records. Countryside Stewardship replaced ES in 2016 and will be eventually replaced by the LNR component of ELM from 2024 onward. In contrast to ES, CS has been a smaller scheme in terms of the number of agreements that have included TFB maintenance options (Figure 3.3-1). Since its inception a total of 3,274 CS agreements have included TFB maintenance options, with a total of 4,447 individual option records.

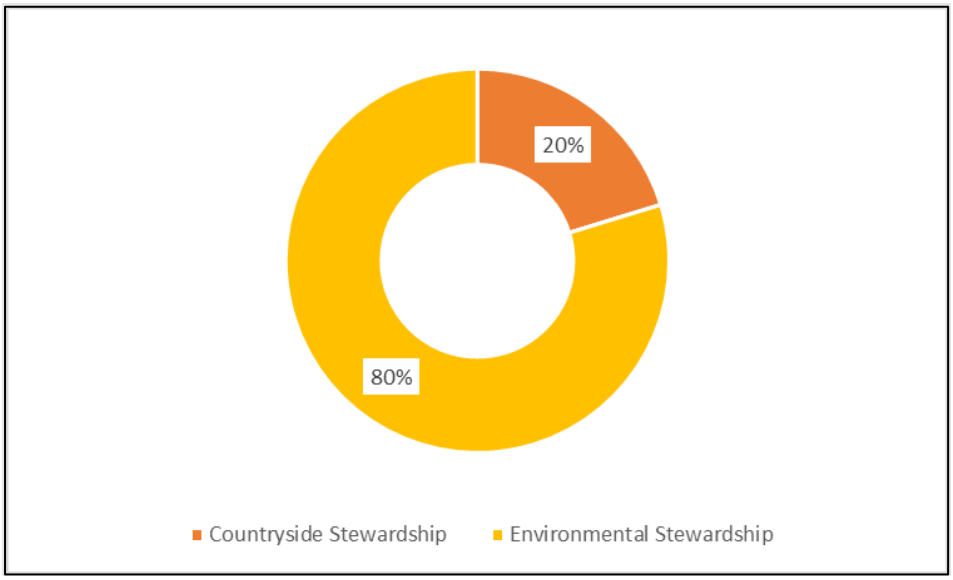


Figure 3.3-1 Uptake of CS and ES agreements with TFB maintenance options

Uptake through time

National uptake of the ES TFB maintenance options followed a steady pattern until 2010 when a dramatic increase took place followed by a gradual decline (Figure 3.3-2). Research by Gaskell et al. (2014) for NE reported that this increase was partially influenced by the Environmental Stewardship Training and Information Programme (ETIP) which re-emphasised the environmental benefits of maintaining TFBs. It was also reported that some agreement holders had chosen the building maintenance option as a replacement for management plan[12] options that had been dropped from the scheme around this time (see ADAS 2009). The transition from ES to CS and a more targeted approach has resulted in an overall reduction in the uptake of TFB maintenance options. However, the national uptake of maintenance options under CS showed a steady increase between 2016 and 2021.

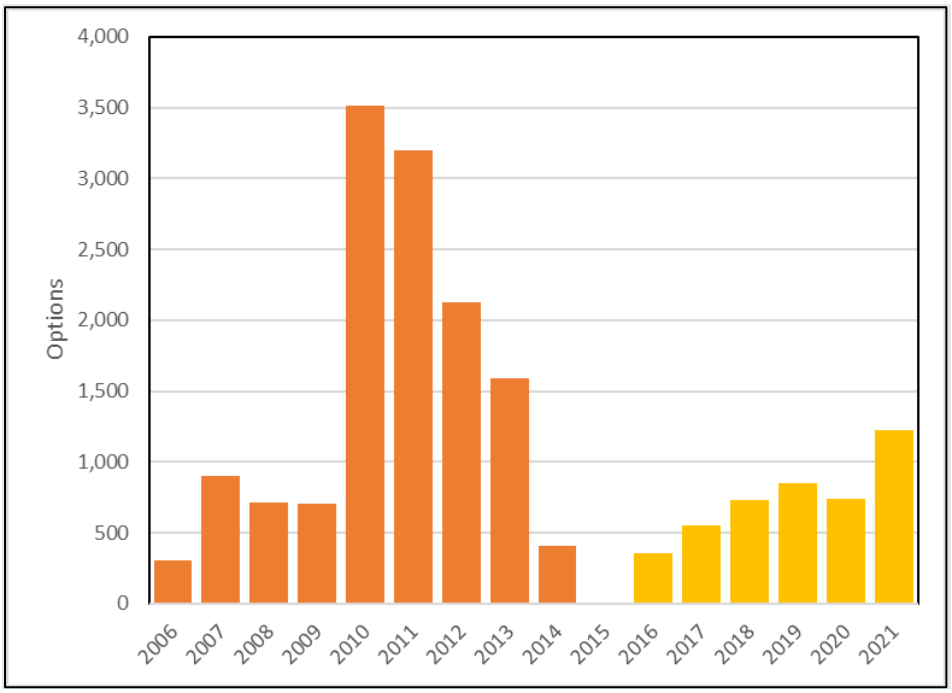


Figure 3.3-2 Uptake of ES and CS TFB maintenance options

Option type

For both schemes the vast majority of the options selected (over 95%) were for accessible buildings (D1 for ES and HS1 for CS) (Figure 3.3-3). For ES the ED1 option, which was incorporated as part of ELS agreements, dominated the uptake with only 3 per cent (330 records) involving the maintenance of TFBs in remote areas (D12) (Figure 3.3-4).

[12] Within ES ELS a mechanism for addressing natural resource protection was through four Management Plan Options: namely the soil management plan, nutrient management plan, manure management plan and crop protection management plan. The main reason for preparing the plans was for ELS, either to comply, enter or gain points. (ADAS 2009, p iv).

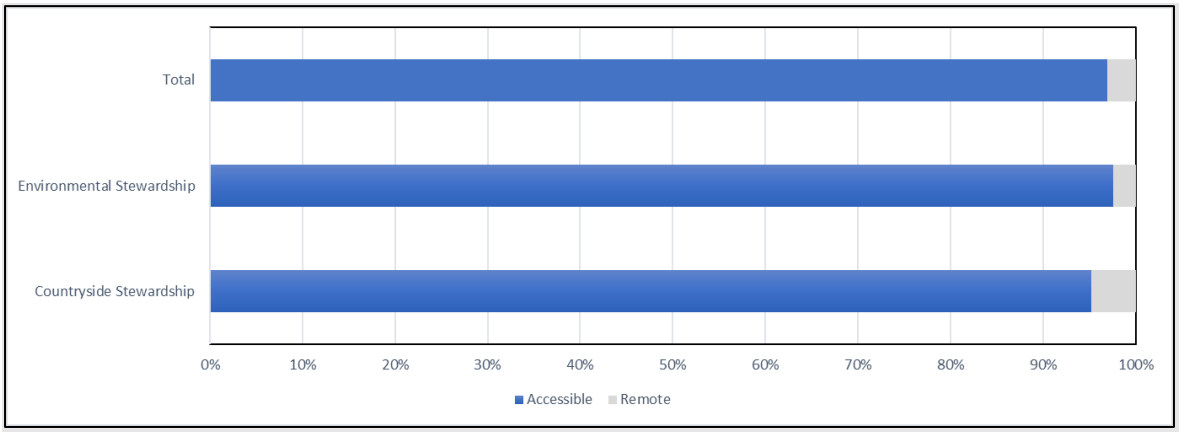


Figure 3.3-3 Uptake of ES and CS TFB maintenance option types

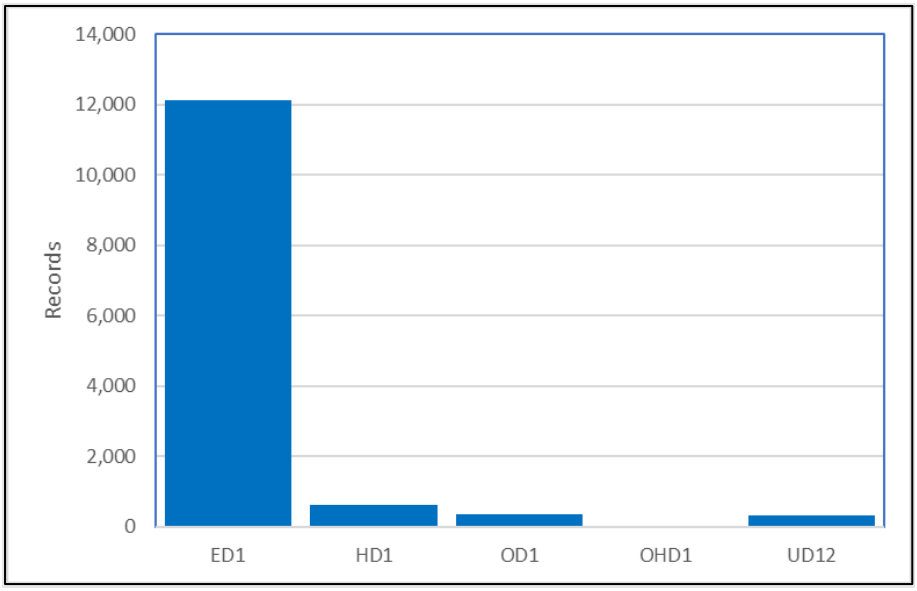


Figure 3.3-4 Uptake of ES TFB maintenance option types by scheme element

Floor area

Although data on the floor area covered by the TFB maintenance options is recorded in different ways for the two schemes, it is possible to provide a general overview of the size of the TFB maintenance options and how the two schemes compare. Figure 3.3-5 shows that the size distribution between small and large option uptake is closely mirrored between both schemes. This can be partially explained by the findings from the agreement holder survey (see 3.4.2) that found around a third of the buildings covered by the CS options have likely transitioned from ES to CS. The uptake is dominated by a large number of small agreements with 60 per cent of ES options and 61 percent of CS options being under 400m^2. Similarly, there are relatively few large-scale agreements with only seven per cent of ES options and five per cent of CS options being larger than 1,000m^2. This may indicate a tendency for the option uptake to focus on smaller-scale buildings or farmsteads.

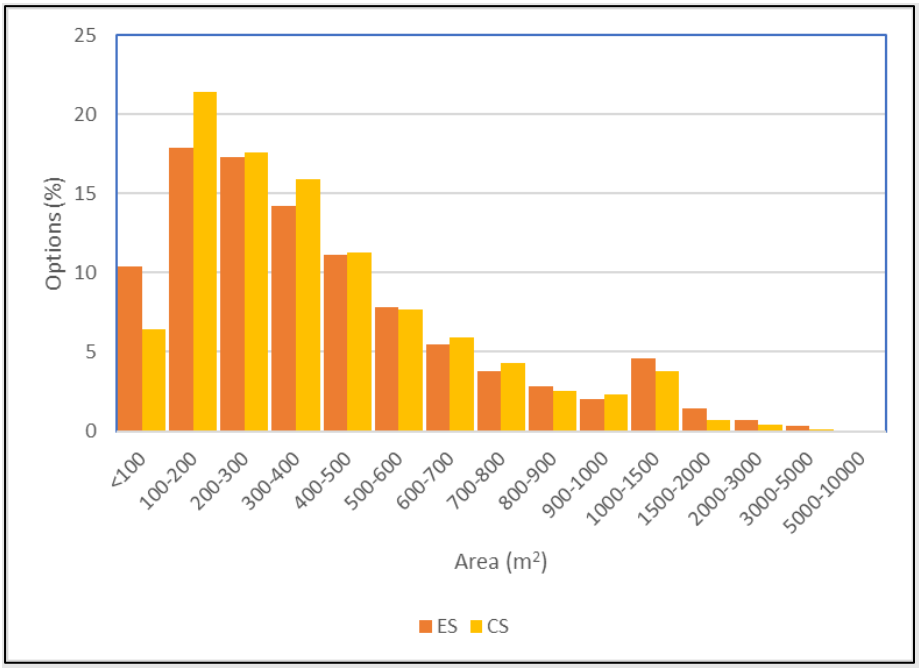


Figure 3.3-5 Comparison of CS and ES TFB maintenance option size by floor area

3.3.2 Spatial comparison of ES and CS uptake

Spatial patterns of uptake

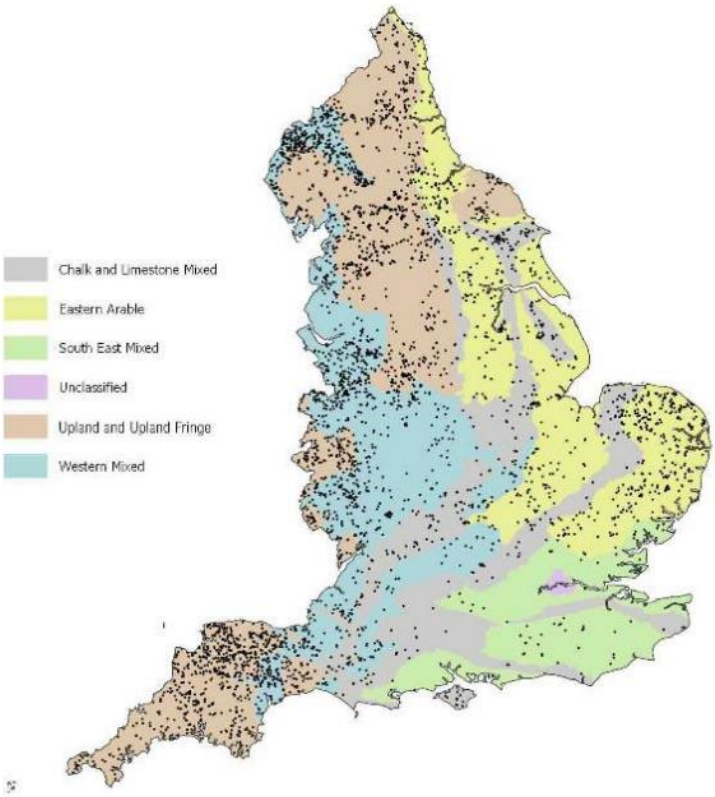
Although the ES scheme accounted for 80 per cent of the TFB maintenance options and displays a denser pattern of uptake compared to the CS scheme (Figure 3.3-6), the heat maps in Figure 3.3-7 show a remarkable degree of similarity in the pattern of uptake within the respective schemes. The lighter colours represent an increasingly dense pattern of option uptake. The pattern of uptake can be broadly summarised as follows:

- The high density in the Solway Basin and Eden Valley relate to high densities of farmsteads built in stone, earth and brick in mixed farming landscapes which had access to upland and lowland unenclosed land, and where survival of farmsteads and pre-18th century buildings appears to be high. This then extends across the stone-built northern uplands, where HEFMP has recorded an exceptionally high rate of survival in the North Pennines and Yorkshire Dales National Park (including the Howgill and Orton Fells), towards the Lune estuary and across to the Howardian Hills and Yorkshire Wolds where many estate-built courtyard farmsteads have been included in the scheme.
- The Peak District, where survival and agricultural use is high, and westwards to the northern part of the Shropshire, Cheshire and Staffordshire Plain where there are some large courtyard farmsteads. The historic stock is dominated by farmsteads rebuilt for the dairy industry in the mid-late 19th century.
- The western part of the West Midlands, including the western part of the Shropshire Hills where survival is highest but with a high density of hop kilns, cider houses and barns including 17th century and earlier timber-frame buildings.
- An area of south-west England centred on the Culm, Exmoor and Devon Redlands, where there is a high density of farmsteads with a rich diversity of building types including 17th century and earlier buildings.

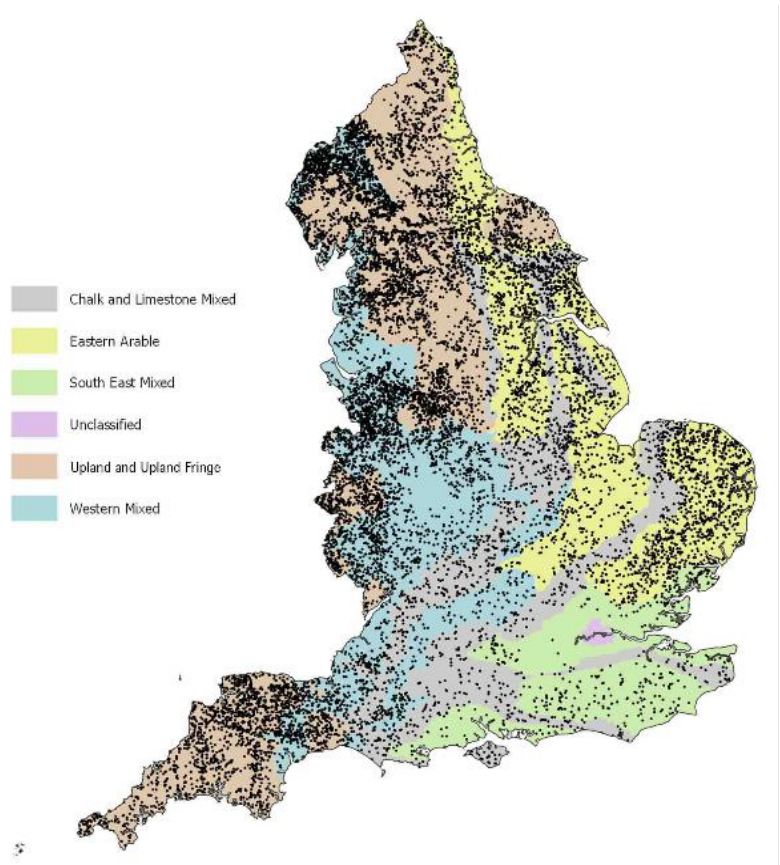
- The East Anglian part of the Eastern Arable ALT, the claylands having a particularly high density of 17th century and earlier barns and other building types.

Another potential reason for variations in the pattern of uptake is related to the characteristics of the schemes themselves and the range of options open to the farmers as they created their agreements (discussed in more detail in 3.4.2). There was some evidence from the interview survey of ES and CS agreement holders to suggest that the TFB maintenance options were more attractive in the uplands as compared with other farming systems. It was reported by some of the agreement holders that there were not many options that were attractive to upland farmers and that the TFB maintenance options provided a 'good fit' with the way in which these farming systems operated. This was particularly the case for the ELS element of ES where the TFB maintenance options were important in gaining enough points to enter the scheme. It was also reported that the Mid Tier element of CS had less to offer upland farmers and that the TFB maintenance options again provided a 'good fit'. It was also mentioned by some of the agreement holders that previous AES schemes (ESA, CCS and ES) had offered TFB restoration capital grants that experienced a high uptake in the uplands and the restored buildings were well suited for the TFB maintenance options as they were in good condition and structurally sound (see also Gaskell & Edwards 2014). Conversely, in lowland farming systems it was suggested that there was a larger range of attractive options with which to reach the points threshold for entry into ELS and also to create a successful application for a Mid Tier agreement in CS. This may be a contributing factor to the large variation in uptake of the schemes between the Upland and Upland Fringe ALT and the South East Mixed ALT (see Figure 3.3-6). Another possible reason for the variation between the Upland Fringe ALT and the South East Mixed ALT is the likelihood that a greater proportion of surviving TFBs may have been converted to non-agricultural uses in the lowlands.

As mentioned previously in 2.2.1, because of the way the data on uptake is recorded for both schemes, it was not possible to determine what proportion of agreement holders had transitioned their buildings from ES to CS as one scheme ended and the next began. However, as part of the CS agreement interview survey (see 3.4.2) it was found that a third of agreement holders (32%) had previously had an ES agreement and used the TFB maintenance option, and 80 per cent of these had transitioned the same buildings into CS. Therefore, it should be expected that the pattern of uptake between the two schemes may be somewhat similar.

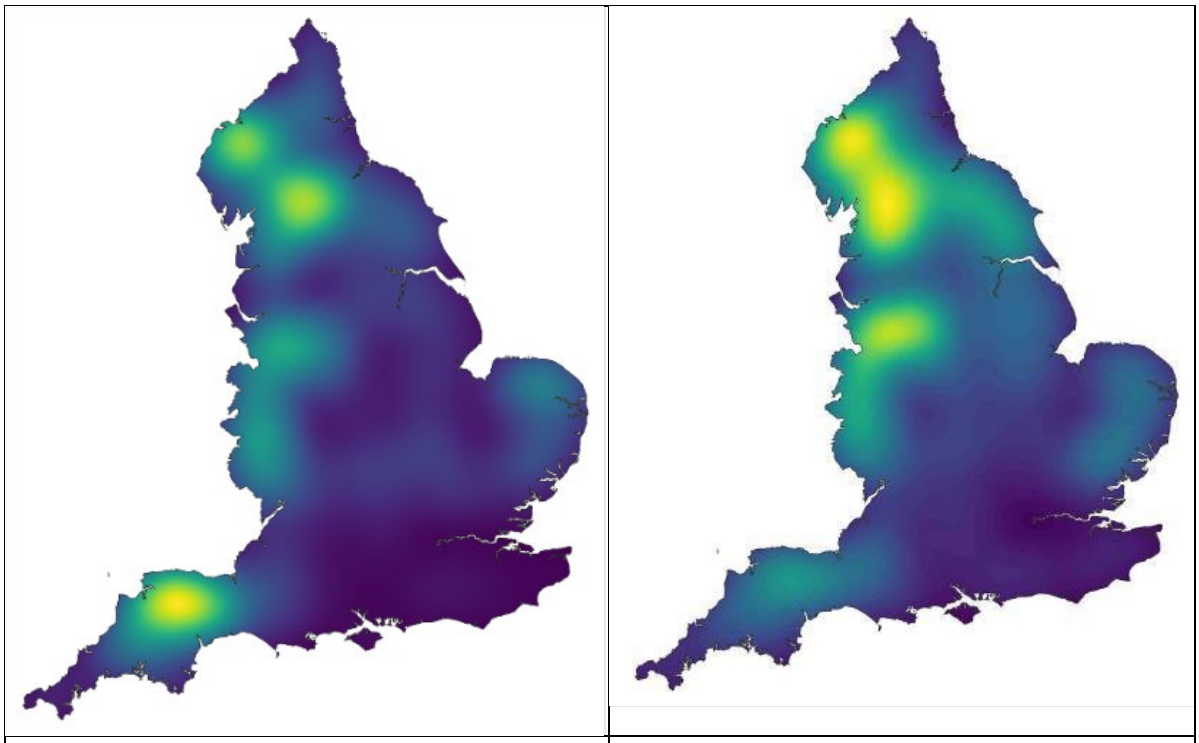


Countryside Stewardship



Environmental Stewardship

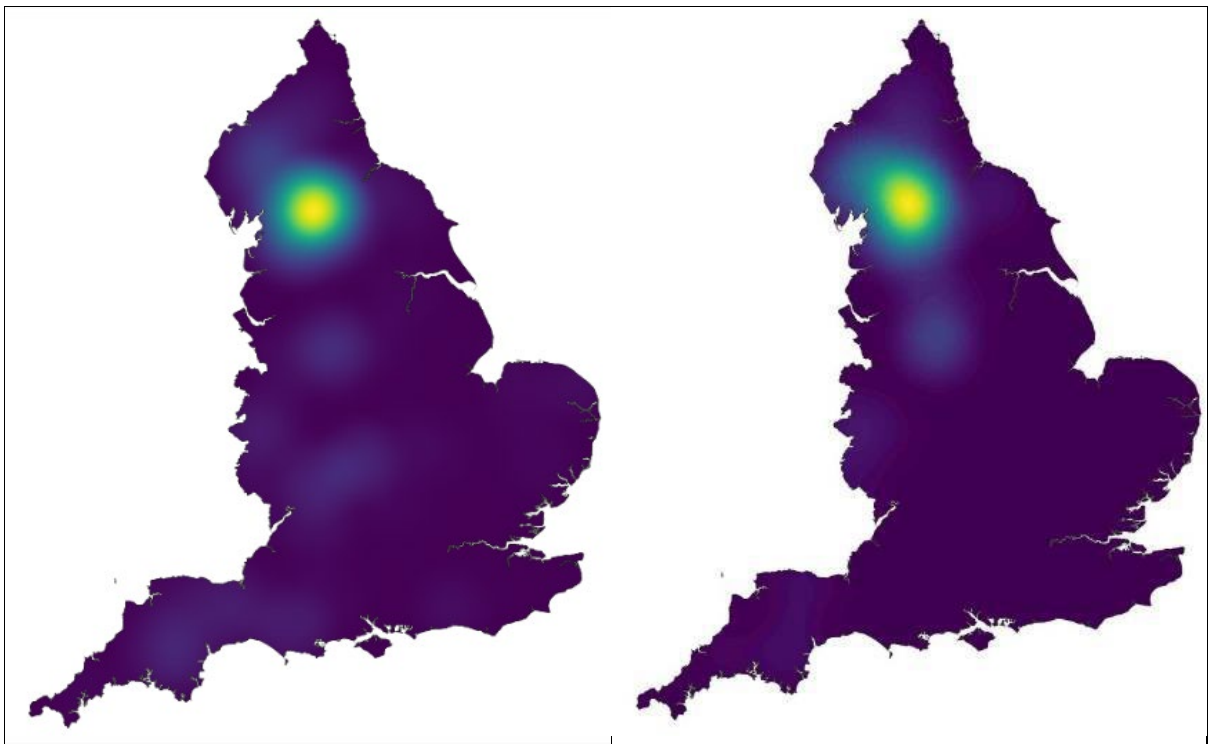
Figure 3.3-6 Comparison of CS and ES TFB maintenance option uptake



Countryside Stewardship	Environmental Stewardship

Figure 3.3-7 Heat maps comparing the density of CS and ES TFB maintenance option uptake

The uptake of maintenance options for TFBs in remote areas for both schemes is concentrated in the northern uplands of England, particularly in the Yorkshire Dales and to a lesser extent the Lake District, where remotely located field barns are prevalent (Figure 3.3-8).



Countryside Stewardship (HS8)	Environmental Stewardship (D12)

Figure 3.3-8 Heat maps comparing the density of CS and ES TFB maintenance option uptake in remote areas

CS and ES TFB maintenance option up take by Agricultural Landscape Type

Analysis of the pattern of uptake by ALTs shows an uneven regional distribution. Figure 3.3-9 clearly shows the dominance of the Upland and Upland Fringe and Western Mixed ALTs and a very low level of uptake in the South East Mixed area. This pattern of uptake is somewhat reversed when the size of the options, determined by floor area, is considered. Figure 3.3-10 shows that the average size of the CS TFB maintenance options in the Upland and Upland Fringe, and Western Mixed areas is smaller than the other ALTs. This indicates that the upland areas are characterised by a large number of quite small TFB maintenance options which likely reflects the smaller scale of many of the farmsteads and the preponderance of small outfarms and field barns. In contrast, although the lowland areas have a smaller proportion of the TFB maintenance options overall, they are larger in size which would reflect, on a broad scale, the larger farmsteads associated with mixed and arable farming systems.

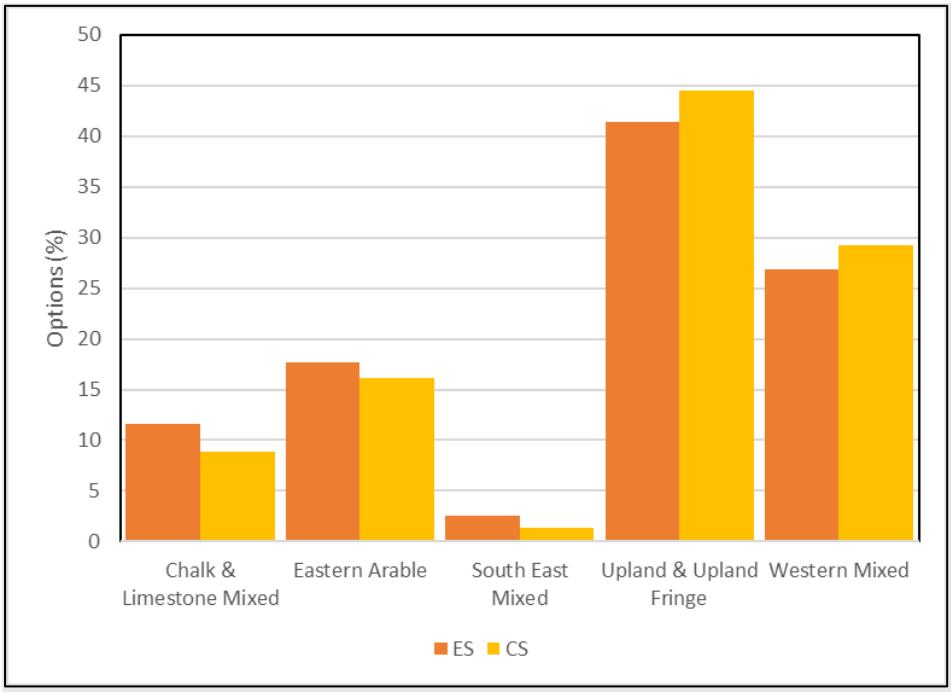


Figure 3.3-9 Comparison of CS and ES TFB maintenance option uptake by ALT

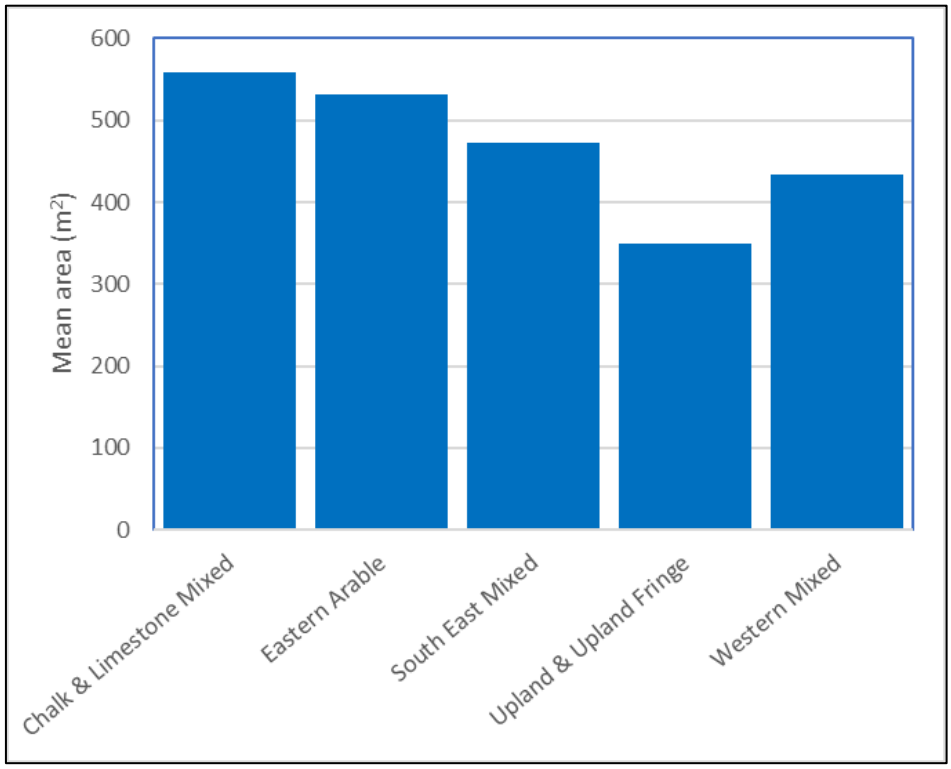


Figure 3.3-10 Mean area of ES TFB maintenance options by ALT

CS and ES TFB maintenance option up take by Protected Landscape

The 71 per cent of ES and 74 per cent of CS TFB maintenance options that have been taken up outside Protected Landscapes demonstrates the popularity of the option in all areas and the contribution of TFB maintenance to landscape character across the nation (Figure 3.3-11). The option uptake within Protected Landscapes is fairly evenly split between National Parks and AONBs for both schemes. These are predominantly within upland landscapes (Figure 3.3-12). Thus 87 per cent of field barns within the schemes are within National Parks, 20 per cent of outfarms and 18 per cent of farmsteads. The fact that 7 per cent of field barns and 27 per cent of outfarms fall into AONBs is again a reflection of the character of these landscapes, AONBs including some upland and upland fringe landscapes (such as the North Pennines) but also wold and downland landscapes where outfarms are more commonly encountered than field barns.

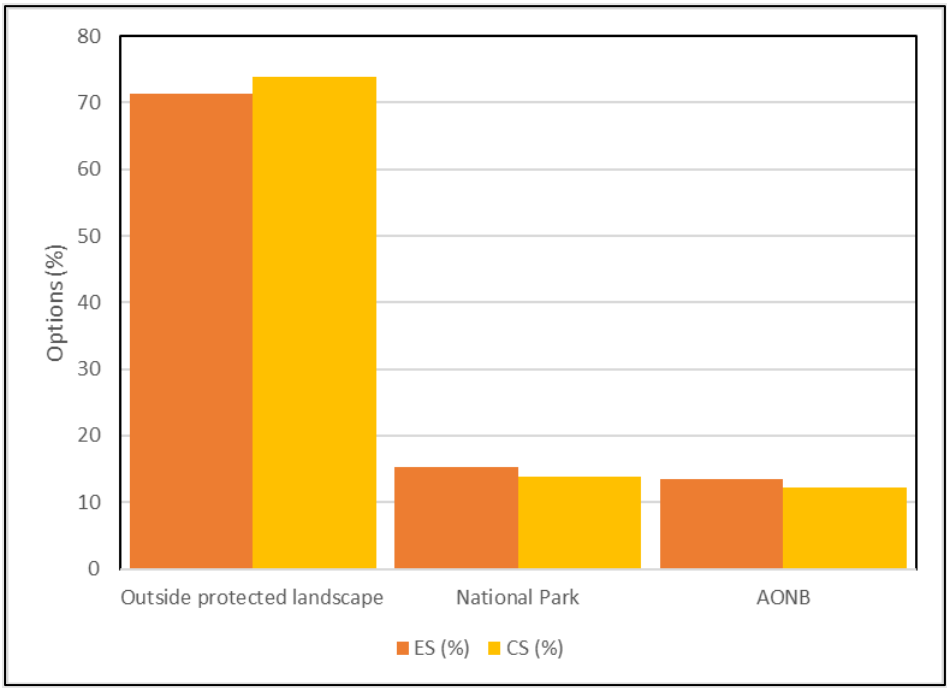


Figure 3.3-11 Comparison of CS and ES TFB maintenance option uptake by Protected Landscape

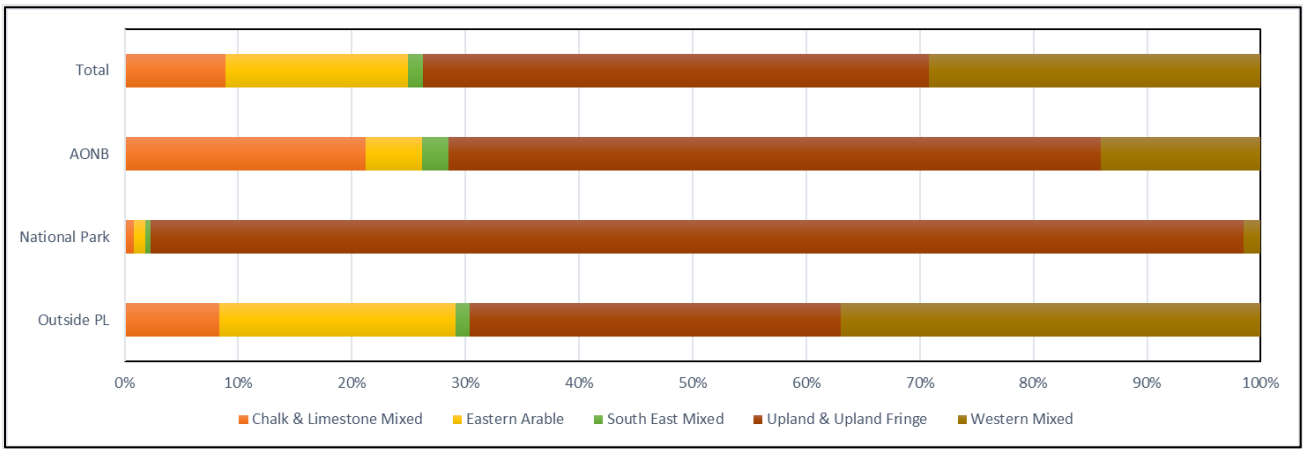


Figure 3.3-12 Uptake of CS maintenance in Protected Landscapes by ALT

Although the area of England's farmed landscape that is covered by WHS designations is small and the vast majority of the TFB maintenance option uptake (96%) has occurred outside WHSs (Figure 3.3-13), there are two WHSs (Lake District and Hadrian's Wall) where TFB maintenance is making a significant contribution to conserving their special value (Figure 3.3-14). Those within the Hadrian's Wall WHS include some with reused elements of Roman masonry and examples rebuilt to courtyard plans with engine houses in the early-mid 19th century, whilst the farmsteads and field barns in the Lake District, mostly dating from the late-17th century and developing from upland linear farmsteads, make a significant contribution to the 'agro-pastoral landscape' which is cited as a key reason for its inscription as a WHS.

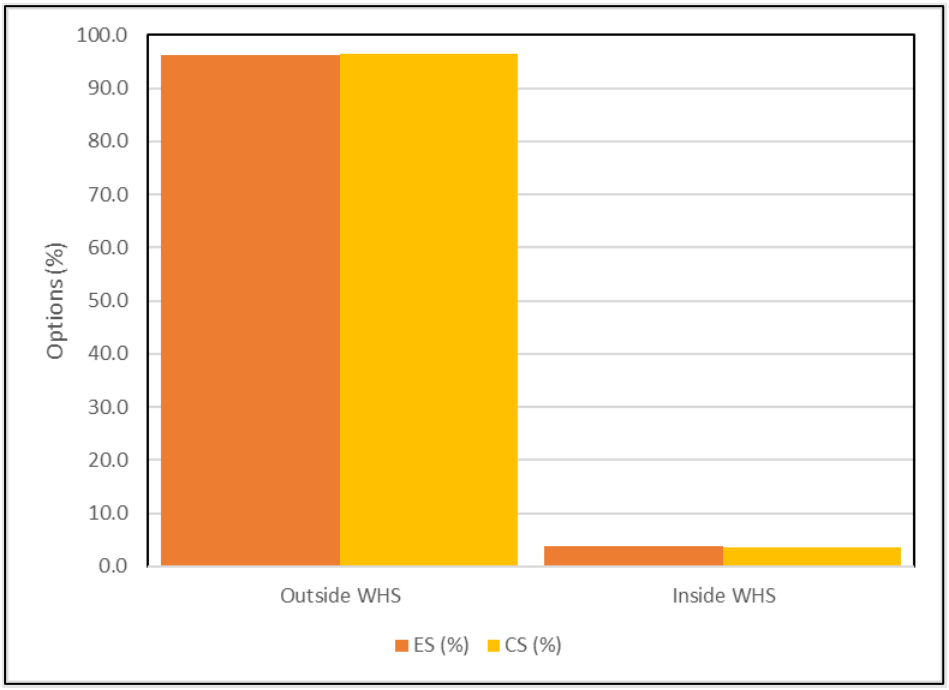


Figure 3.3-13 Comparison of CS and ES TFB maintenance option uptake by WHS

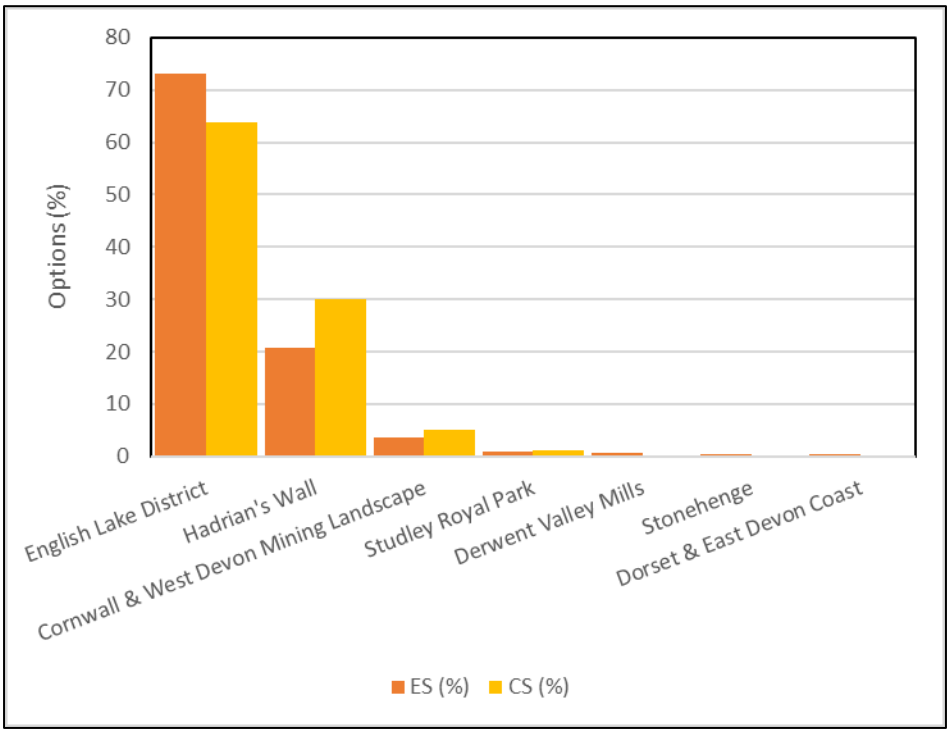


Figure 3.3-14 Comparison of CS and ES TFB maintenance option uptake by WHS location

Farmsteads within some of the smaller WHSs also include a small number of large estate and industrial farms (in Studley Royal and the Derwent Valley Mills), a mix of industrial farmsteads and dispersed-plan farmsteads with small-scale farmsteads in the Cornwall and West Devon Mining Landscape.

CS and ES TFB maintenance option up take by location, proximity to urban areas, visibility and accessibility

Section 3.2 discussed the communal values of TFBs for people and an important part of being able to realise this communal value is being able to have access to and engagement with the buildings. Therefore, it is important to understand the extent to which the TFBs covered by the maintenance options can be experienced by the public. To this end the TFB maintenance option uptake data are analysed in terms of:

- **Location**: The location of the TFB maintenance options as defined by the Rural-Urban classification.
- **Proximity to urban areas**: The proximity of the TFB maintenance options to urban centres with a population of over 10,000.
- **Green Belt**: The location of the TFB maintenance options within Green-Belt land.
- **Visibility**: TFB maintenance options situated within 500m or a PROW, public road, or open access land.
- **Accessibility**: TFB maintenance options situated within 100m or a PROW, public road, or open access land.

Rural-Urban location

The vast majority of TFB maintenance option uptake for both schemes took place in rural settings, 97 per cent for CS and 96 per cent for ES. Within the rural areas option uptake was less likely to be located in villages than in areas characterised by rural hamlets and isolated dwellings (Figure 3.3-15), The main reasons for this pattern are likely to include:

- The location of the key concentrations of scheme uptake in parts of England that are characterised by dispersed settlement dating from the medieval period.
- The location of most Upland and Upland Fringe landscapes in areas of dispersed settlement, with the prominent exception of parts of the North York Moors and the White Peak; upland village settings are categorised as ‘sparse setting’.
- The historic and continuing movement of traditional farmsteads out of villages, and the far higher proportion of converted buildings within villages that are ineligible for the scheme as they have been converted to non-agricultural uses.

In terms of affording access and opportunities for engagement with the buildings included by the schemes, over a third of ES options (38%) and 36 per cent of CS options were located within population centres.

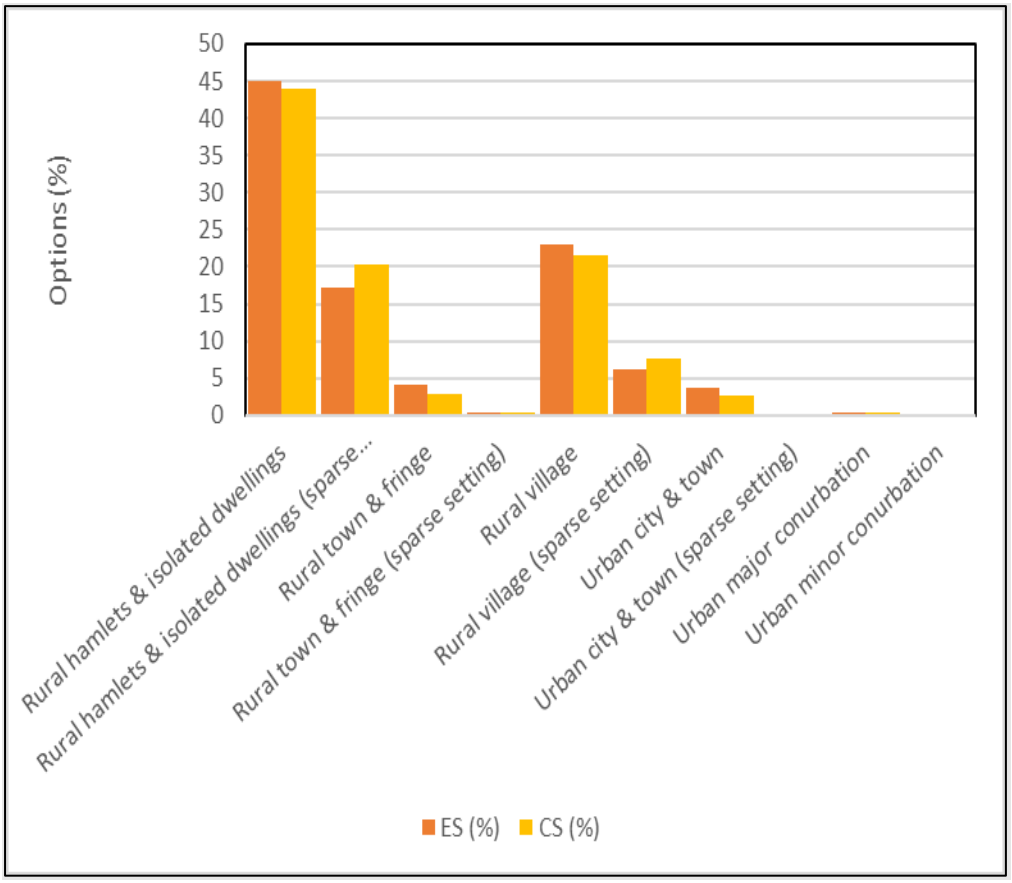


Figure 3.3-15 Comparison of CS and ES TFB maintenance option uptake by Rural-Urban location

Proximity to urban areas

Another way of accessing the likely opportunities for the public to access and engage with the TFBs that are covered by the two schemes is to calculate how close they are to major centres of population. For this analysis being close to an urban centre was defined as being within 10km of a town with a population of over 10,000. By this metric, as Figure 3.3-16 shows, almost two-thirds of the options (CS 64%, ES 62%) were considered close to an urban centre. There was some degree of regional variation with the Upland and Upland Fringe areas having less than 50 per cent of sites (CS 45%, ES 43%) within 10km of an urban centre. In contrast, the figure for South East Mixed ALT was over 90 per cent (see Figure 3.3-17 & Figure 3.3-18).

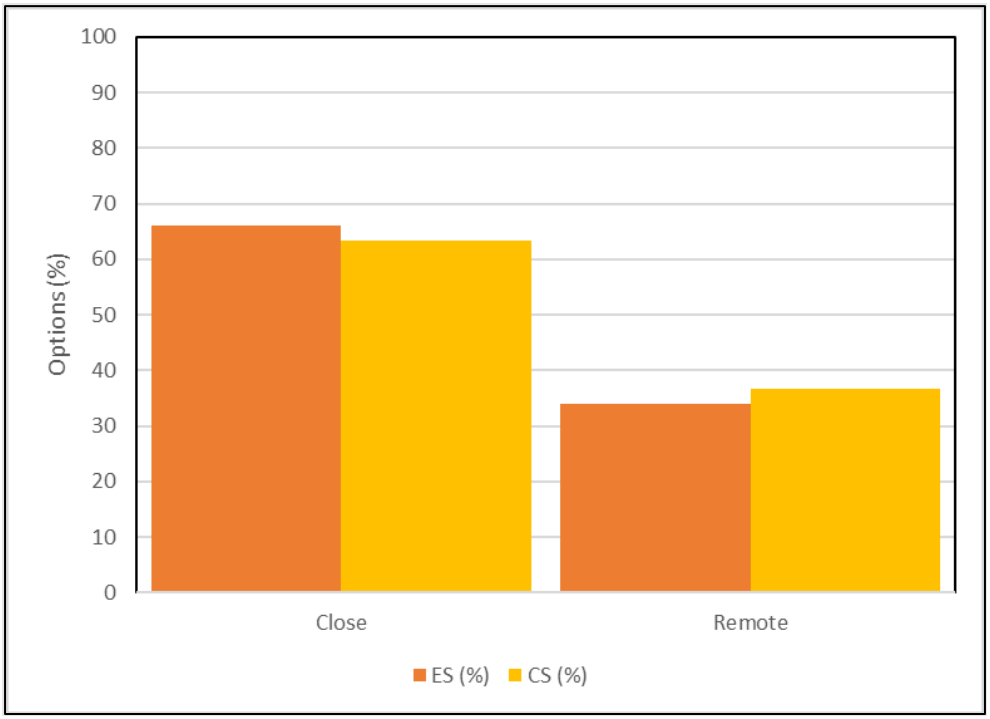


Figure 3.3-16 Comparison of CS and ES TFB maintenance option uptake by proximity to urban centres

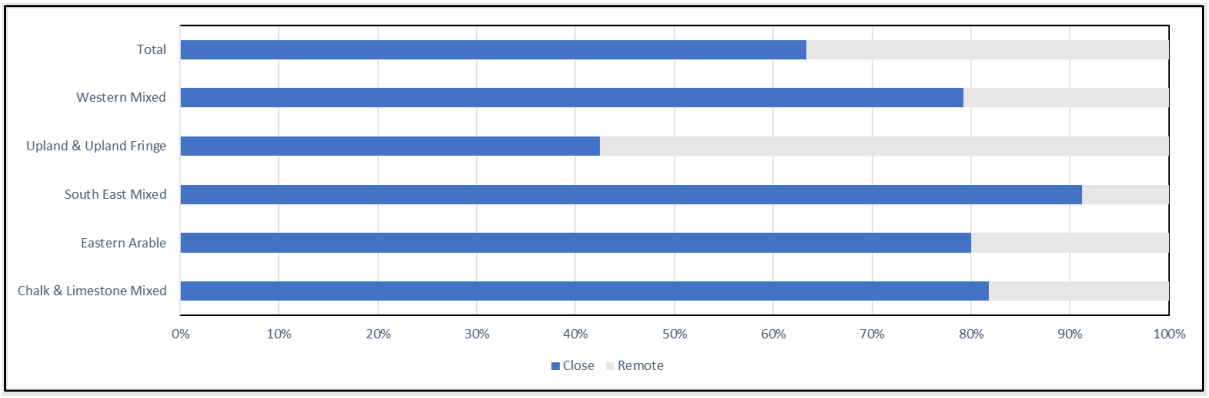


Figure 3.3-17 Proximity of CS TFB maintenance option uptake to urban centres by ALT

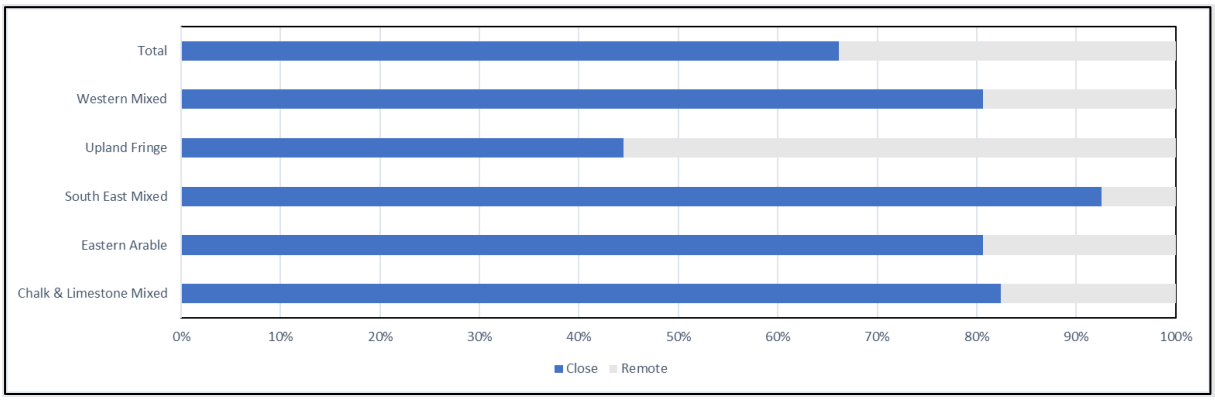


Figure 3.3-18 Proximity of ES TFB maintenance option uptake to urban centres by ALT

Green Belt

A relatively small proportion of TFB maintenance option uptake (<10%) took place within the Green Belt surrounding England's major conurbations (Figure 3.3-19). However, a report by the Campaign to Protect Rural England (CPRE) showed that while the countryside around towns has a dense network of public footpaths providing access to large numbers of urban dwellers, the uptake of AES is lower in Green Belt areas compared with the rest of the country and there may be untapped opportunities to deliver a range of public goods (CPRE 2022). The uptake in each Green Belt is shown in Figure 3.3-20. The highest proportion of buildings are situated in the Merseyside and Greater Manchester and South and West Yorkshire Green Belts.

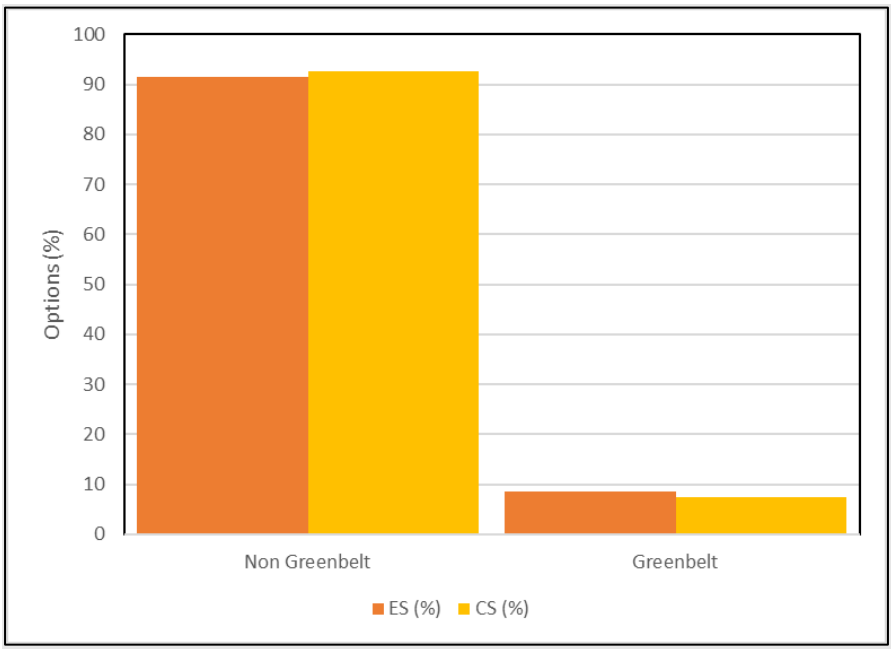


Figure 3.3-19 Comparison of CS and ES TFB maintenance option uptake by Green Belt

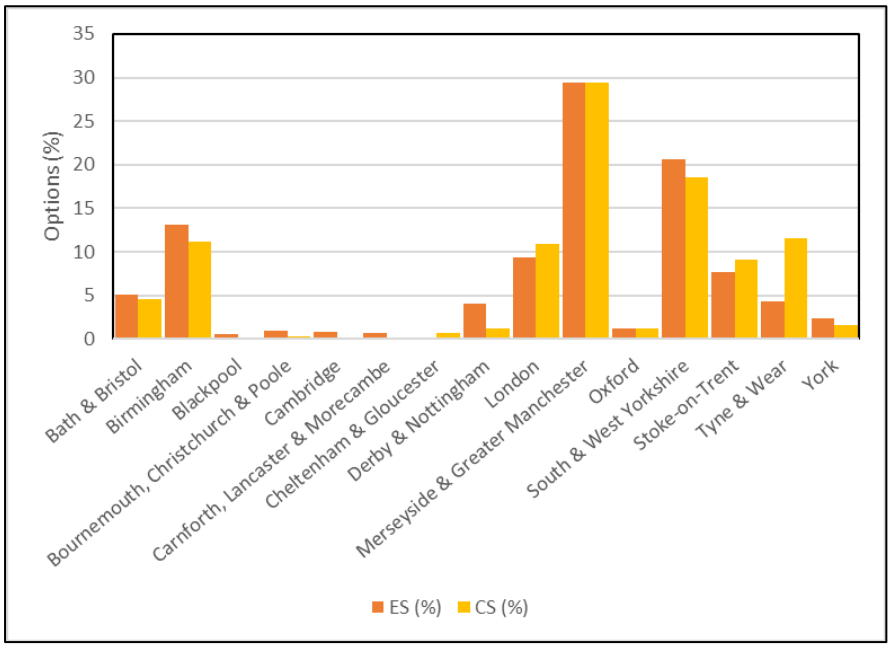


Figure 3.3-20 Comparison of CS and ES TFB maintenance option uptake by Green Belt location

Visibility and accessibility of CS TFB maintenance options

So far, the analysis has shown that less than 10 per cent of the TFB maintenance option uptake is within the Green Belt surrounding England's major conurbations, while around a third of the uptake is within 10km of an urban centre. The analysis has also shown that around 30 to 40 per cent are located within or near to population centres as defined by the Rural-Urban classification. The question remains as to what opportunities there are for the public to access and engage with the roughly 60 per cent of TFBs maintained by the schemes that are more remotely located among hamlets and isolated dwellings. One way of answering this question is to determine how close the public can get to these buildings by using PROWs, public roads and public access land. The overwhelming majority of TFBs in CS[13] (99%) which are covered by the maintenance options are highly visible in the landscape and can be approached within 500m and there is very little variation between ALT regions (Figure 3.3-21). The Farmstead location (HS1) of the vast majority of the TFB maintenance option uptake makes them highly visible in the landscape as most farmhouses are accessed by public roads and/or PROW.

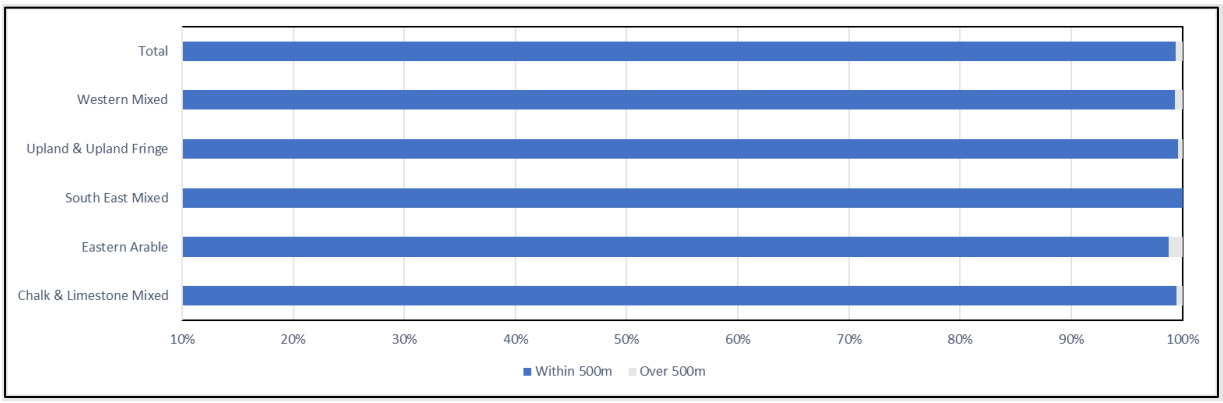


Figure 3.3-21 Visibility of CS maintenance options by ALT

Figure 3.3-22 Shows that three-quarters of the CS TFB locations (75%) can be approached within 100m, thereby offering the public a close encounter and opportunity to engage more intimately with the character of the buildings in terms of their architecture, form, types of construction material and details of openings, doors and window. Only in the Chalk and Limestone Mixed ALT, where large-scale courtyard farmsteads display a tendency to be located at the end of long access drives, does the level of accessibility fall below 70 per cent.

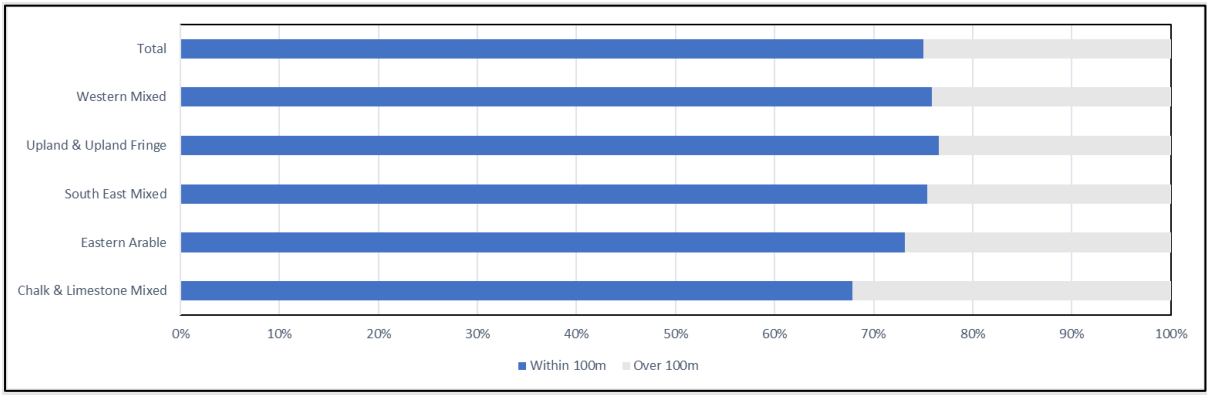


Figure 3.3-22 Accessibility of CS maintenance options by ALT

[13] Data for ES is not available.

3.3.3 Comparison of CS scheme uptake with the distribution of historic farmsteads in Staffordshire

Introduction

To gain a deeper understanding of the uptake of CS TFB maintenance options compared to background population of surviving historic farmsteads, outfarms and isolated farm buildings a case study for the county of Staffordshire was undertaken. Through this analysis it was possible to determine if the CS uptake reflected the characteristics of the broader population of sites or was the uptake concentrated on particular types of site.

Historic farm building sites in Staffordshire

The HEFMP recorded 7,594 sites with TFBs (see Edwards & Lake 2012 for a full description). These sites were identified from the OS 2nd Edition 25" mapping dating from around 1900 and comprised two main types[14] (Figure 3.3-23):

- **Farmsteads**: The homestead of a farm where the farmhouse and some or all of the working farm buildings are located (73%).
- **Outfarms and isolated buildings**: Some farms have field barns or outfarms sited away from the main steading (27%).

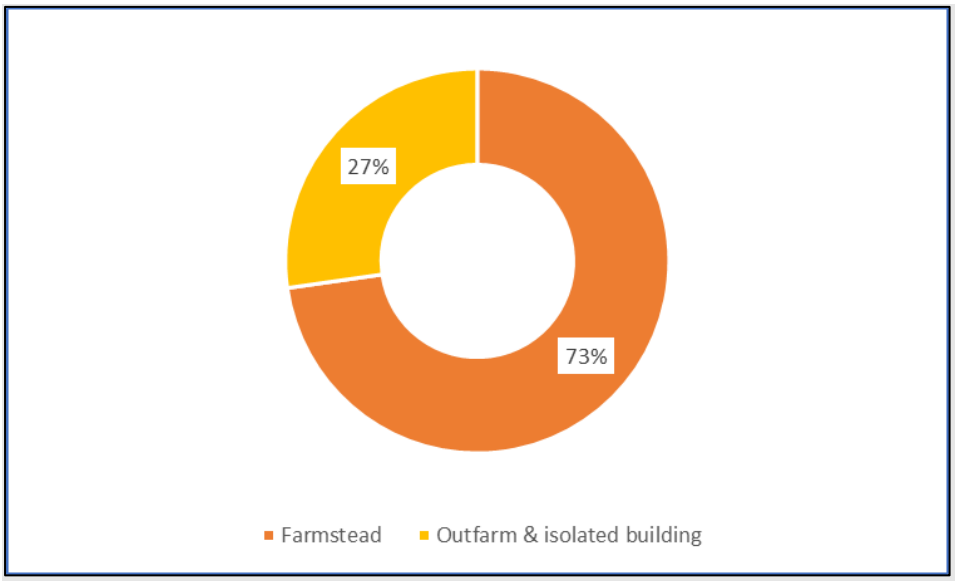


Figure 3.3-23 HEFMP site distribution in Staffordshire by site type

Comparison with recent OS maps (c.2007) showed that 5,041 sites (66%) survive to the present day (*Figure* 3.3-24), with a high degree of loss (73%) from the outfarm and isolated building (field barn) category compared to farmsteads (19%) (Figure 3.3-25). Lost farmsteads are concentrated in areas of urban expansion.

[14] The Staffordshire HEFMP grouped outfarms and isolated buildings together.

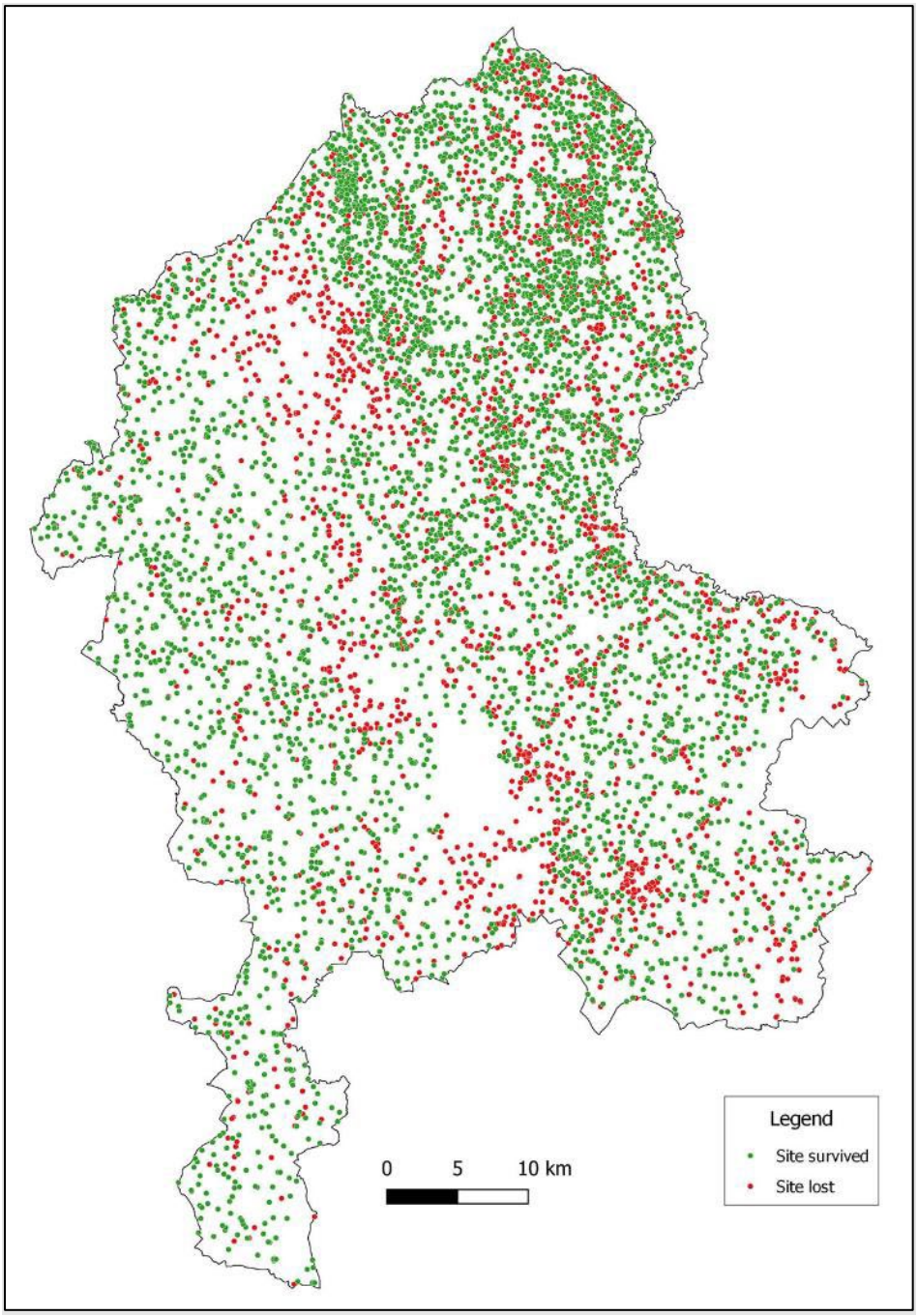


Figure 3.3-24 HEFMP site survival in Staffordshire

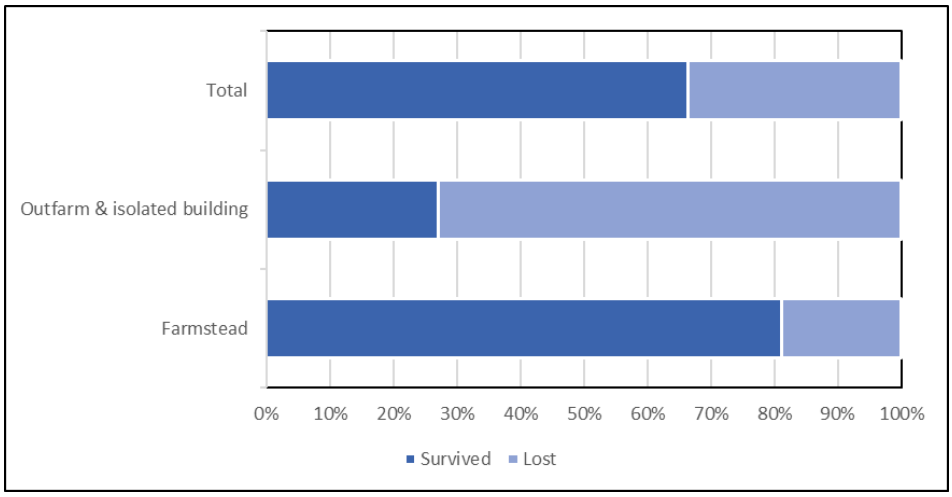


Figure 3.3-25 HEFMP site survival in Staffordshire by type of site

Figure 3.3-26 shows that two thirds of the surviving sites (67%) have courtyard plans. Linear farmsteads, which have the house and working buildings attached in-line and sometimes extended as an L-plan, are typical of upland areas and concentrated in the higher land of the Potteries and Churnet Valley NCA, the South West Peak and the White Peak NCAs, as are dispersed plans (often astride routeways leading to upland commons) and the smallest of the courtyard plans with buildings to one or two sides of a yard. Small to medium-scale courtyard plans are found across the county, and are strongly associated with either mixed farms or with the dairy farms typical of the northern half of the Shropshire, Staffordshire and Cheshire Plain NCA. Large-scale courtyard plans matching those found in other estate landscapes of England are concentrated in the Mid Severn Sandstone Plateau, the eastern part of Cannock and Needwood Forest and the Mease and Sense Lowlands NCAs; these are landscapes of 18th and 19th century enclosures, farm amalgamation and improvement. All of those classified as 'Single building' are field barns and outfarms, and there is a very small number of 'Other' plan types.

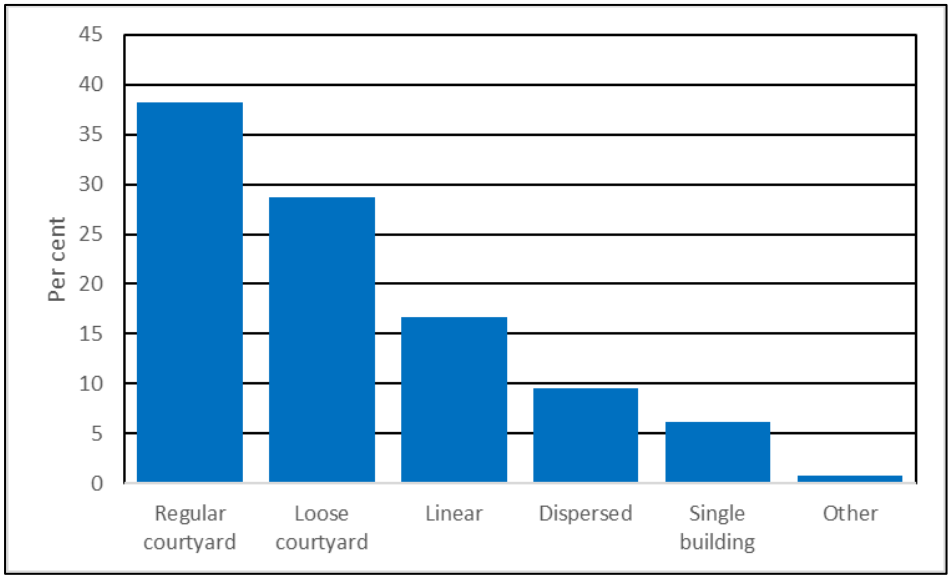


Figure 3.3-26 Distribution of HEFMP sites by plan type

The degree of change occurring to a surviving site, as defined by the loss of buildings and plan form experienced by farmsteads between the date of the 2nd Edition mapping and the present, was assessed by comparing the c.1900 OS maps and the modern OS Master Map c.2007. The HEFMP recognises three main categories of survival for sites that have retained at least some of their historic form:

- **Complete survival**: Site is largely unaltered from late-19th century form.
- **More than 50% survives**: Some noticeable change to the site but more than half of the buildings surviving.
- **Less than 50% survives**: Considerable change to the site, with less than half of the buildings surviving.

The degree of survival provides a broad proxy for a site's potential value as a heritage asset as TFB sites subject to the least change are likely to make the greatest contribution to local distinctiveness. As noted in section 2.2.2, this is because they are most likely to have retained their varied styles, building materials and the way that they relate to the surrounding form and patterning of the landscapes within which they developed.

Figure 3.3-27 shows surviving sites, having noted the far greater degree of loss of outfarms and isolated single buildings (field barns). If an outfarm and especially an isolated single building has survived, it is far more likely to survive extant or with partial loss (e.g. a wing to an L-plan outfarm) than if it was a farmstead. It follows that, while just under half of all surviving sites (47%) remain largely unaltered, most of the change that has taken place has occurred within farmstead sites.

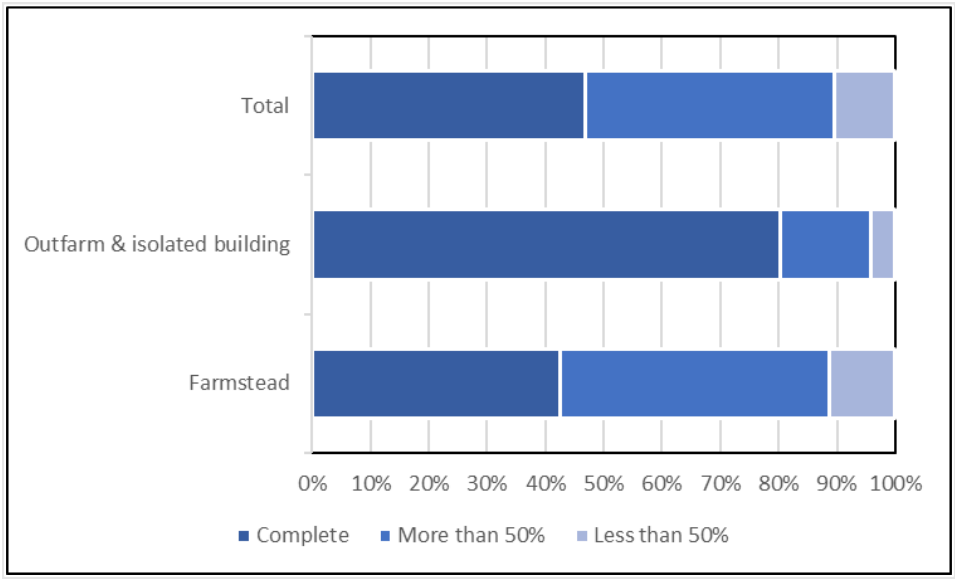


Figure 3.3-27 Degree of HEFMP survival by site type

Comparing the uptake of CS TFB maintence options with the distribution of surviving historic farm building sites

As of October 2021 there were 97 live agreements in Staffordshire with CS HS1 and/or HS8 TFB maintenance options with a total of 115 records (sites). The majority of agreement holders (87%) entered a single site into their CS agreements (Figure 3.3-28Figure 3.3-28) and only four per cent of the sites were covered by the HS8 option for the maintenance of remote buildings.

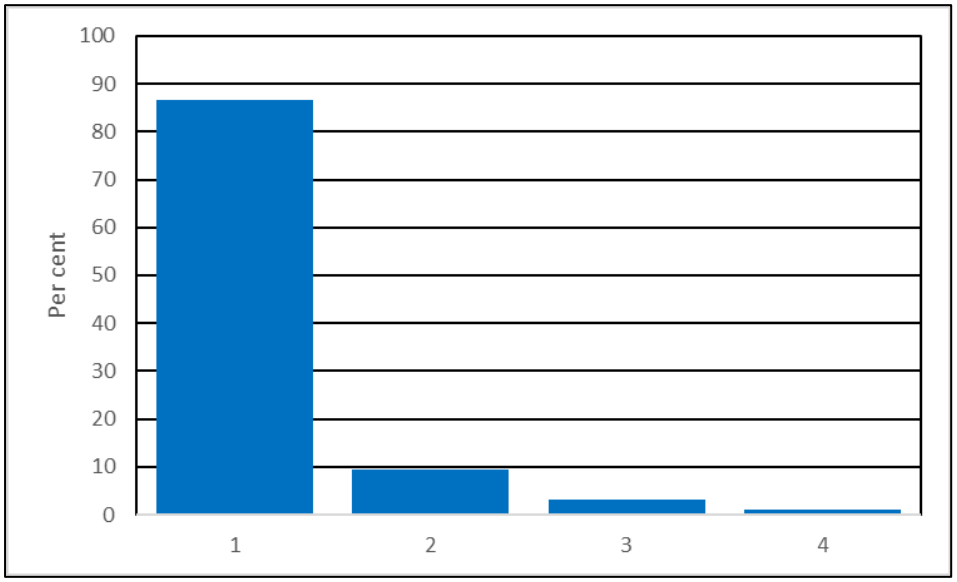


Figure 3.3-28 Number of sites with CS TFB maintenance options per agreement

GIS analysis was used to match site data from the HEFMP survey with the sites covered by the CS TFB maintenance option. This allows a general comparison of the sites within the CS scheme with the population of surviving sites that contain traditional farm buildings. However, there is one important caveat to bear in mind, which is that only HEFMP sites in agricultural use with weatherproof TFBs will be eligible for participation in the CS scheme. Of particular relevance is that some sites may no longer be in agriculture or may have been converted to non-agricultural uses. Matching data on historic character and survival of farmsteads to data on business and residential use in 2010, for the HEFMP in the West Midlands, found that 31 per cent of all surviving traditional farmsteads remain in agricultural use with minimal diversification. The proportion of farmsteads remaining in farming use was higher in upland areas (Lake & Smith 2010, pp. 13-18).

Using the proportion of surviving sites that remain in agricultural use identified by Lake and Smith (2010) in their analysis of HEFMP data for the West Midlands, it is estimated that around 1,500 sites across Staffordshire could potentially be in agricultural use. Of these sites between 80 and 90 per cent are estimated to be weatherproof, based on figures provided by Gaskell et al. (2009. p.11), and are eligible for CS. Therefore, it is estimated that the 115 sites covered by the CS TFB maintenance options represent approximately 8 to 10 per cent of the total number of eligible sites.

Spatially, the CS uptake reflected the general population of surviving sites (Figure 3.3-29, Figure 3.3-30, Figure 3.3-31). However, there was a higher level of uptake in the Protected Landscapes with 23 per cent of CS sites located in the Peak District NP compared to 16 per cent for the general population.

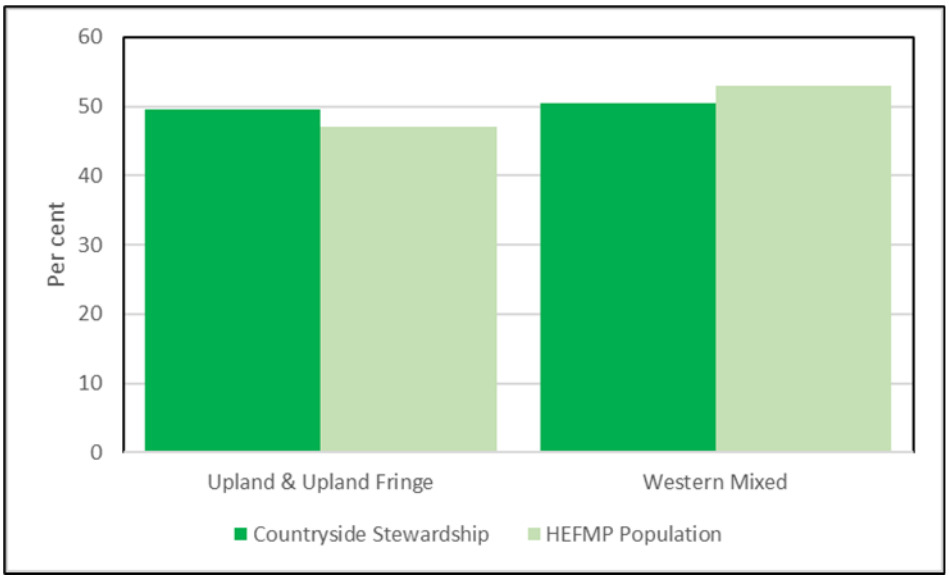


Figure 3.3-29 Comparison of CS and HEFMP sites according to ALT location

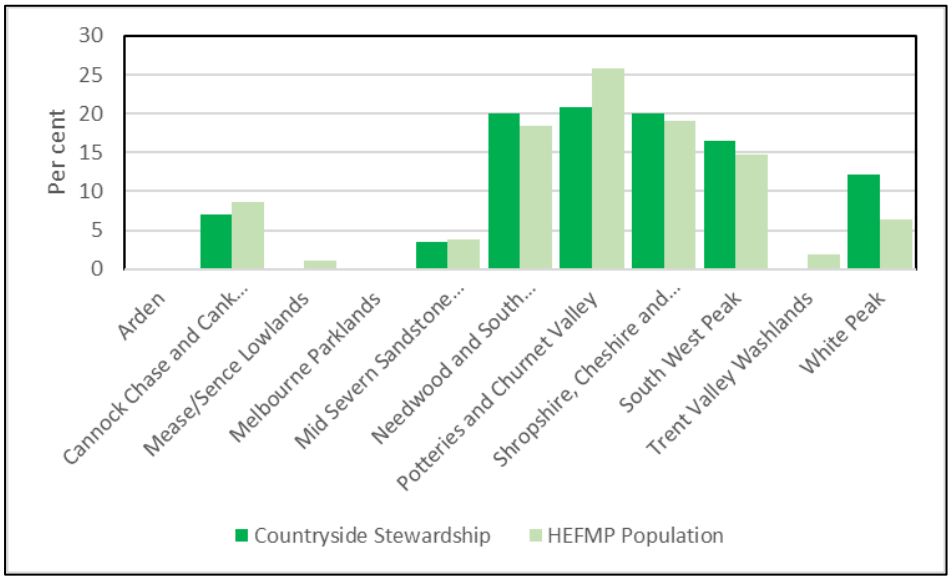


Figure 3.3-30 Comparison of CS and HEFMP sites according to NCA location

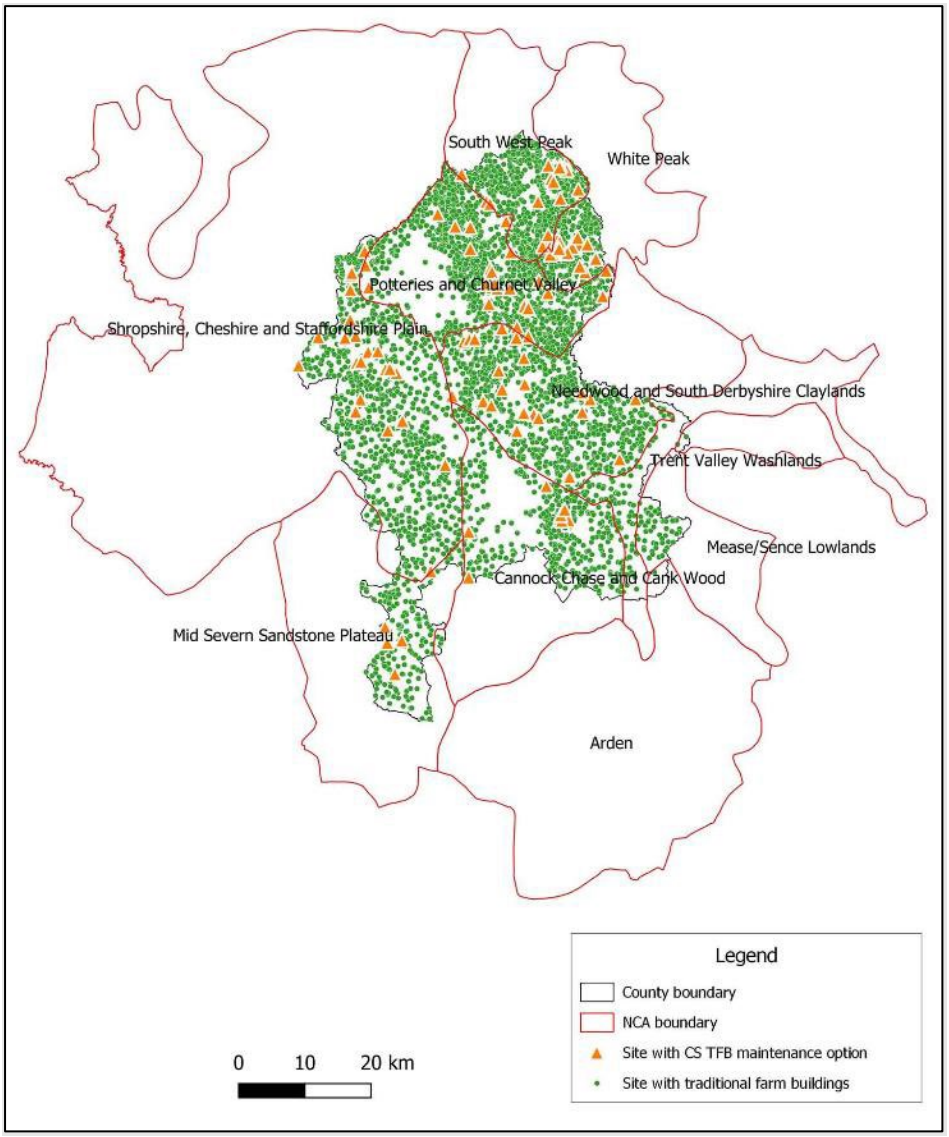


Figure 3.3-31 CS TFB maintenance uptake and HEFMP site survival by NCA

The uptake of CS TFB maintenance options is greater on farmstead sites, especially on sites with courtyard plans, when compared to the general HEFMP population (Figure 3.3-32 and Figure 3.3-33). The matching of HEFMP data in the West Midlands to business and residential data has shown that smaller-scale farmstead plans, which would include all of the linear plans and most of the dispersed plan types, are less likely to have modern working buildings and to have continued in farming use (Lake & Smith 2010, p. 15).

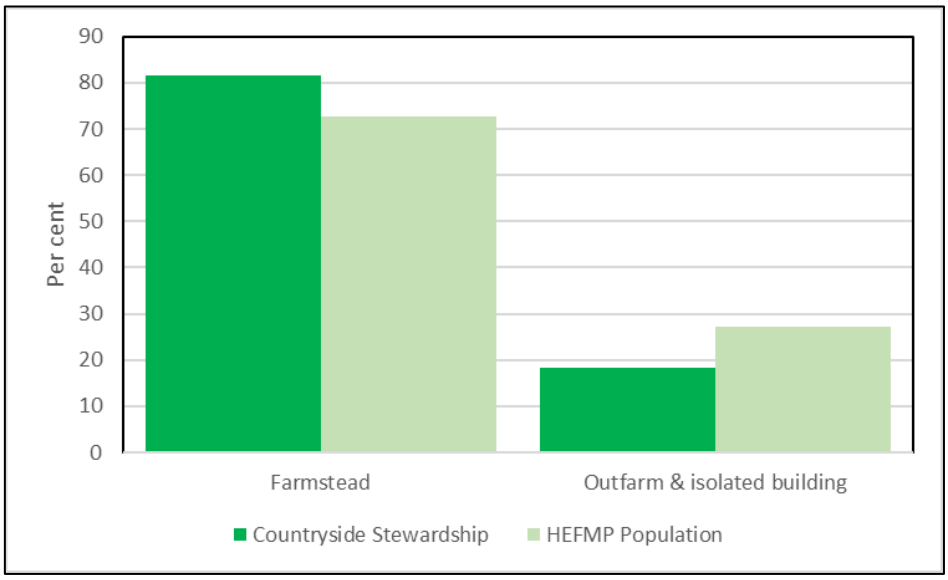


Figure 3.3-32 Comparison of CS and HEFMP sites by site type

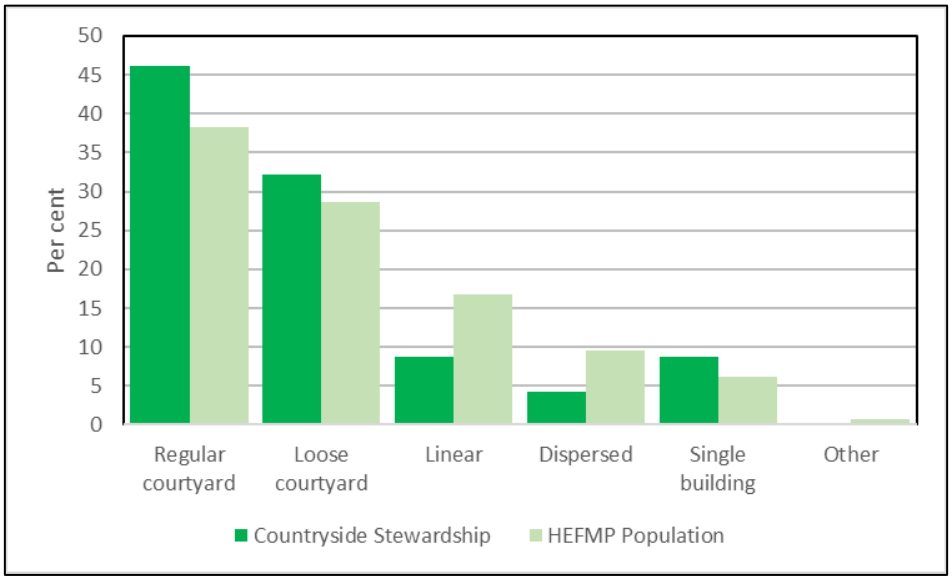


Figure 3.3-33 Comparison of CS and HEFMP sites by plan type

Figure 3.3-34 shows that the uptake of CS TFB maintenance options is higher than the HEFMP general population for sites that have survived as extant with no discernible change to their historic form. This demonstrates that this investment is thus likely to maintain the character of these sites with the highest heritage potential.

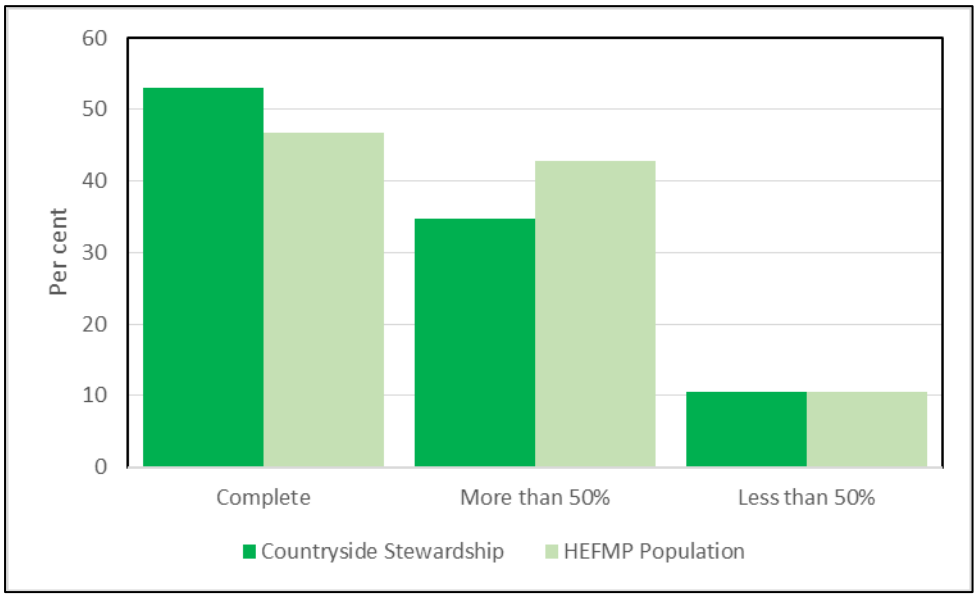


Figure 3.3-34 Comparison of CS and HEFMP sites by degree of survival

Summary

In summary:

- Uptake of the TFB maintenance options accounts for about 10 per cent of surviving sites that remain in agricultural use and focuses on those with the highest heritage potential.
- Uptake reflects spatial differences in the historic character and survival of these sites, with a marked emphasis on complete sites that have retained all of their historic form.
- Uptake also reflects the types of farmstead that have remained in farming use, with an emphasis on the different types of courtyard plan and a smaller proportion of the linear plans that are most heavily concentrated in the Upland and Upland Fringe areas.

3.4 Agreement holder survey

3.4.1 Introduction

For the agreement holder interview survey NE specified 10 detailed research questions:

- Which building was chosen and what were the agreement holder's reasons for selecting the building?
- Has there been any change in use of the building over agreement time that was the result of the repair work?
- Review of the building wildlife assessment form completed on application – did the agreement holder find it helpful?
- Has placement of wildlife boxes been successful?
- What does the agreement holder feel about wildlife in the building - has this changed?
- Review of the building log – did the agreement holder find it helpful?
- What have the agreement holders learned from implementing the options?
- What are the blockers to repair?
- Does option use appear to the agreement holder to offer good value for money?
- Has participation in the maintenance options influenced agreement holder feelings about their TFBs?

To answer these questions the interview schedules for the CS and ES surveys (Appendix 3) were divided into seven sections and explored the reasons behind scheme entry, the choice of buildings and their maintenance, and the agreement holder's perceptions of the public benefits provided by the buildings through the historic environment, landscape, wildlife, access and engagement, and the benefits for the agreement holders themselves.

The analysis that follows focuses on the 98 CS agreement holders who were interviewed and is supplemented, where appropriate, with evidence from the 14 ES agreement holder interviews[15]. Three quarters of the CS agreement holders were owner occupiers (75%) the majority of the remainder being tenants (19%) (Figure 3.4-1). Ten of the 14 ES agreement holders (71%) were also owner occupiers.

[15] Data tables for ES responses are included in Appendix 8.

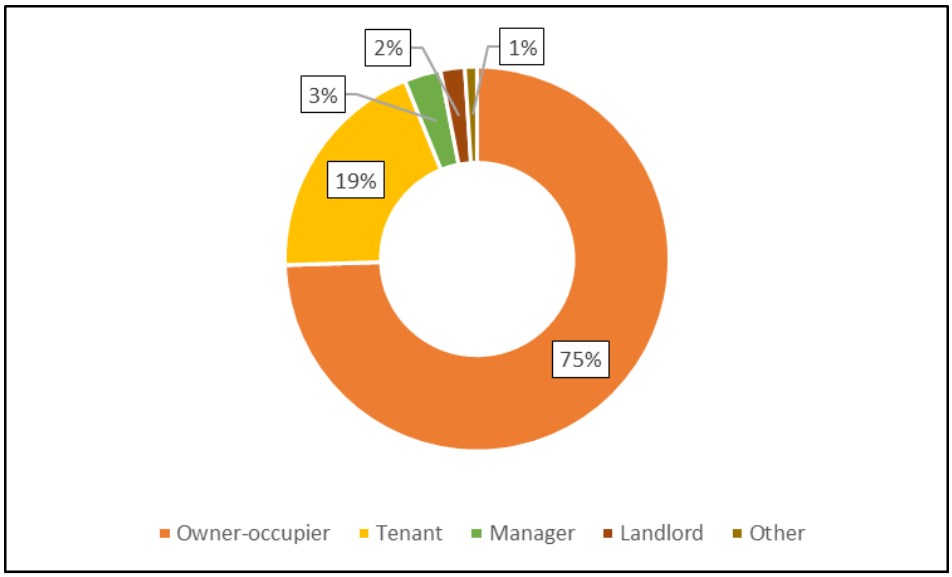


Figure 3.4-1 CS agreement holder status

3.4.2 Which building was chosen and what were the agreement holder's reasons for selecting the building?

Introduction

The 98 CS agreement holders identified 212 sites where they had entered buildings under TFB maintenance options. Just over half the agreement holders (53%) entered a single site, while 26 per cent had used the TFB maintenance options on 3 or more sites (see Figure 3.4-2).

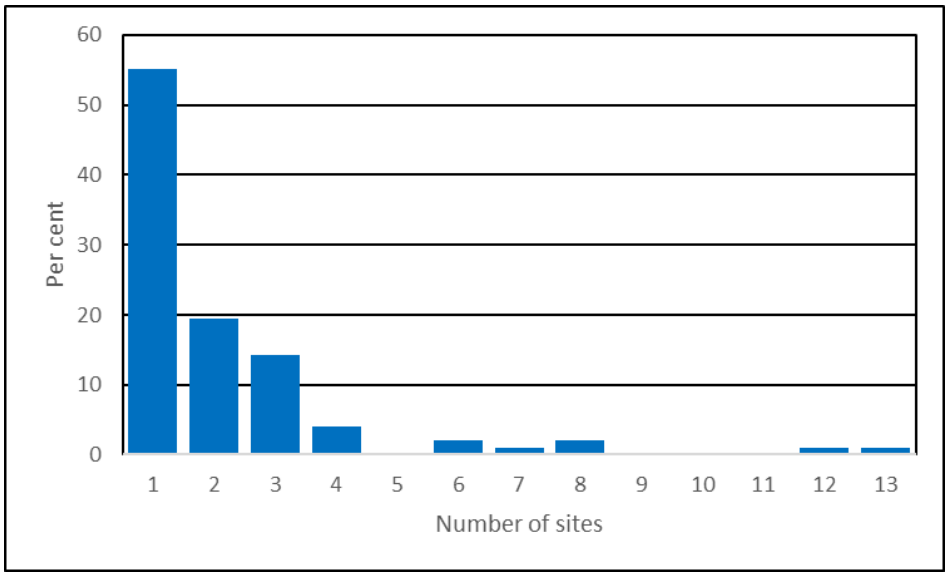


Figure 3.4-2 Number of TFB maintenance option sites per CS agreement

Over three quarters of the CS agreement holders (79%) had selected the HS1 option for buildings that were within a farm yard setting or easily accessible for maintenance. 15 agreement holders (15%) used both the HS1 and HS8 options and six had used only the HS8 option for remote buildings

(Figure 3.4-3). Ten of the 14 ES agreement holders (71%) selected the D1 option for buildings that were within a farm yard setting or easily accessible for maintenance.

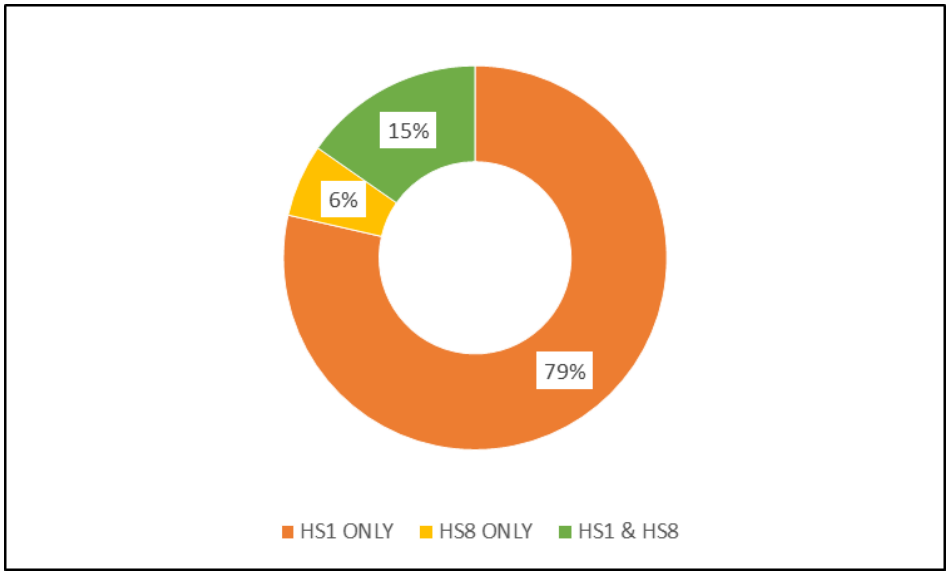


Figure 3.4-3 CS TFB maintenance option types

Reasons for including TFB maintenance options in CS agreements

Agreement holders relate to and value their buildings in a multitude of ways and this can have an important influence on the reasons behind their decision to use the TFB maintenance options. For some, the main reasons are instrumental, that is as a means to a particular end. For example, to generate income or as an option that is easy to put into practice. For others, intrinsic values receive prominence with the buildings being important in their own right. For example, for their contribution to the landscape, historic environment and wildlife. Agreement holders can also value their buildings in a personal context. For example, how their maintenance reflects upon them as farmers, how the farm is presented to the world at large and how they are connected to the buildings through memories and experiences.

When asked why they had decided to include TFB maintenance options in their CS agreements, the agreement holders provided 253 responses with an average 2.6 responses per agreement. Nearly three quarters of the CS agreement holders (74%) provided multiple reasons for choosing the options. This pattern was echoed in the ES survey. The responses were grouped into six categories - four instrumental, one intrinsic and a catchall 'other' category (Figure 3.4-4). A distinction was made between instrumental reasons (suggested by an advisor, finance, management prescription and ES option) and intrinsic reasons. Public benefit was the most common reason cited by agreement holders (67%) and is described in more detail later in this section.

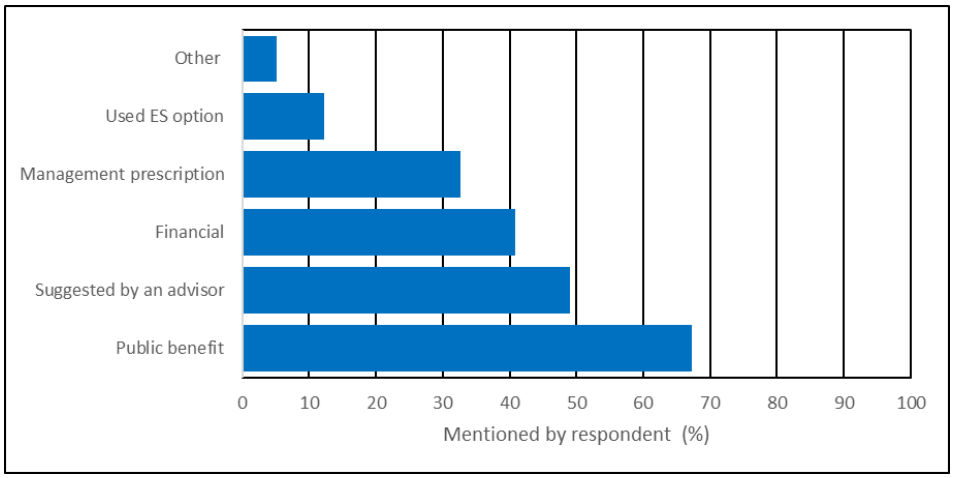


Figure 3.4-4 Reasons for including TFB maintenance options in CS agreements

The most common instrumental response, provided by almost half the CS agreement holders (49%), was that the TFB maintenance option had been suggested by their advisor (including NE officers and land agents). This highlights the importance of receiving pre-application advice about options that may not be well known in the farming community. It was apparent from the fieldworker summaries that some agreement holders were not heavily involved in the details of option selection:

> *The application was put together by a land agent. The agreement holder said he did not get involved in the detail too much.* (CS Type: Higher Tier. NCA: North Northumberland Coastal Plain)
>
> *The agreement holder said the option was suggested by an adviser. The payment was available and he had the building but did not know what to do with it. Wanted to show Defra that he was interested in the environment, just in case when they abolished the Basic Payment Scheme they barred people who did not have agri-environment schemes from accessing environmental money.* (CS Type: Mid Tier. NCA: North East Norfolk and Flegg)
>
> *"It was [land agent] who suggested it actually, he said we could get this money for doing nothing. He is very well up with everything and very switched on. When I say money for nothing, it's kind of like what we were doing with the buildings anyway, but now it's more organised and official like. He just said put it in until something else comes with the new schemes."* (CS Type: Mid Tier. NCA: Yorkshire Dales)

The importance of advisors in decisions to include TFB maintenance options in scheme applications was also identified in some of the ES interviews:

The agreement holder said he did not know the buildings were in the scheme. Must have been chosen by the land agent who prepared the ELS application. The buildings chosen were the ones that they use and maintain. Has a strong opinion that buildings had to have an agricultural function to justify their maintenance. Most of the buildings had been altered to provide larger entrances (double doors) for ease of access. All the TFBs were used on the farm. (ES Type: ELS & HLS. NCA: Yorkshire Dales)

The agreement holder remembered that the scheme was originally promoted by the National Park Authority. But when they decided to enter the scheme it was so complicated that they had to employ an agent. It was the agent who prepared the scheme, and the buildings were entered because they need the points to get into ELS. (ES Type: ELS & HLS. NCA: Tyne Gap and Hadrian's Wall)

Financial reasons were mentioned by 41 per cent of CS agreement holders. As the following agreement holder quotations and fieldworker summaries suggest, some CS agreement holders were concerned about the overall financial balance of their scheme applications as well as receiving payment to help maintain their TFBs. For some, the TFB maintenance options provided a means of assembling a financially viable CS agreement where option choice was considered to be limited for their farming systems:

"*With the Mid Tier scheme there was not much money, not a lot of options, the only place we could get money was for the barns, and we have some terraces, Iron Age, that was the only way that we could get into Mid Tier."* (CS Type: Mid Tier. NCA: Yorkshire Dales)

"We had to get a certain percentage of land down into the scheme to qualify, so that was guiding it." (CS Type: Mid Tier. NCA: The Brecks)

For ES ELS agreement holders, the TFB maintenance option was useful for achieving the points threshold required for entry into the scheme[16]:

The agreement holder said for ELS they needed points to reach the threshold for acceptance and the buildings provided good points and they were using them, so it made sense to include them. He also stated that the area is renowned for its barn and wall landscape and the importance of maintaining this character. "Because [redacted] is known for its barns and walls. Not for its ruined barns and ruined walls, sorry if I'm laying it on a bit thick but you see what I mean." (ES Type: ELS & HLS. NCA: Yorkshire Dales)

To get the points. (ES Type: ELS & HLS. NCA: Dartmoor)

For some agreement holders, the payments were seen as a means of keeping the buildings sound and weathertight and retained in agricultural use:

[16] In some of the text boxes a word or words have been redacted to retain the anonymity of the respondent.

The agreement holder is keen on historic buildings. Option contributes towards the cost of maintaining the buildings, particularly the rhubarb sheds which he considers to be the three oldest rhubarb sheds left in production. Roof repairs are constant and expensive and increasingly difficult to achieve. (CS Type: Mid Tier. NCA: Nottinghamshire, Derbyshire and Yorkshire Coalfield)

The agreement holder thought the financial side of it was pitiful but at least the option focuses the mind and encouraged them to maintain the building. This has also prevented them from converting it away from agricultural use. (CS Type: Mid Tier. NCA: Shropshire, Cheshire and Staffordshire Plain)

The agreement holder stated all the buildings were used but are expensive to maintain so this option was helpful providing a little bit of money. (CS Type: Mid Tier. NCA: Mid Northumberland)

The agreement holder said he'd like to see the buildings maintained but couldn't really justify the investment without some help. Having the maintenance payment tipped the balance. (CS Type: Mid Tier. NCA: Yorkshire Dales)

The availability of TFB maintenance payments could also trigger further investment in repairing buildings:

Had to spend a lot of money just to make the buildings weathertight. Currently working their way around each farmstead undertaking major restoration work to repair the buildings with structural damage, such as rotten roof beams and unstable walls. Spent in excess of £60k in the last 3 years. The availability of the maintenance payments was the trigger for them to address the farm buildings which had been neglected for many years. So stimulated their investment. (CS Type: Mid Tier. NCA: Mid Norfolk)

A third of CS agreement holders (32%) said they had continued the TFB maintenance options when they transitioned to CS from their previous ES scheme. Over three quarters (79%) said that they had included the same buildings in both schemes. Where agreement holders did not include the same buildings, the two most common reasons given were that the buildings had structural issues which meant that continuing to keep them weatherproof was becoming more difficult and that they wanted to be flexible over concerning the potential reuse of the buildings.

A third of CS agreement holders (33%) mentioned that the TFB maintenance options were appealing because the prescriptions were straightforward. For some the options were attractive because maintaining buildings was something that they were familiar with, especially when compared to some of the other more technical management options which required a lot of additional time and knowledge to implement:

"Because I farm this with my wife, we don't have any labour, we didn't want to spend a lot of time doing things, because we don't have the time. So we thought we would just take the options where we can manage it ourselves and the building option looked like one of those. You know, we could do it reasonably easy." (CS Type: Mid Tier. NCA: Eden Valley)

Another reason why we did it is that it doesn't cause a lot of bother and take up a lot of time. We just have to keep account of the barn owls. There's another one [CS option] for a meadow we have, and we have to keep a record of what stock and all sorts of… Birds and things … It's a lot more work." (CS Type: Mid Tier. NCA: Yorkshire Dales)

Having gained experience in participating in agri-environment schemes through ELS they were less suspicious of the agri-environment schemes, and they were now quite comfortable with entering the buildings into the maintenance option. (CS Type: Mid Tier. NCA: Bedfordshire and Cambridgeshire Claylands)

"The honest truth, it looked like easy money." (CS Type: Mid Tier. NCA: Eden Valley)

Reasons for selecting particular buildings to be included in the scheme

The general questioning about why the TFB maintenance options were included in the agreement was followed up by a more searching question on why the agreement holder had selected those particular buildings to be included in the scheme. Here the intention was to examine the extent to which the agreement holders intrinsic reasoning matched the benefits for the TFB maintenance options: for the historic environment, landscape, wildlife, and for community and agreement holder well-being. Without being prompted, CS agreement holders mentioned one or more type of benefit for 81 per cent of the sites they had included in the CS scheme and multiple benefits for 60 per cent of the sites (Figure 3.4-5). For ES the figures were 77 and 71 per cent respectively.

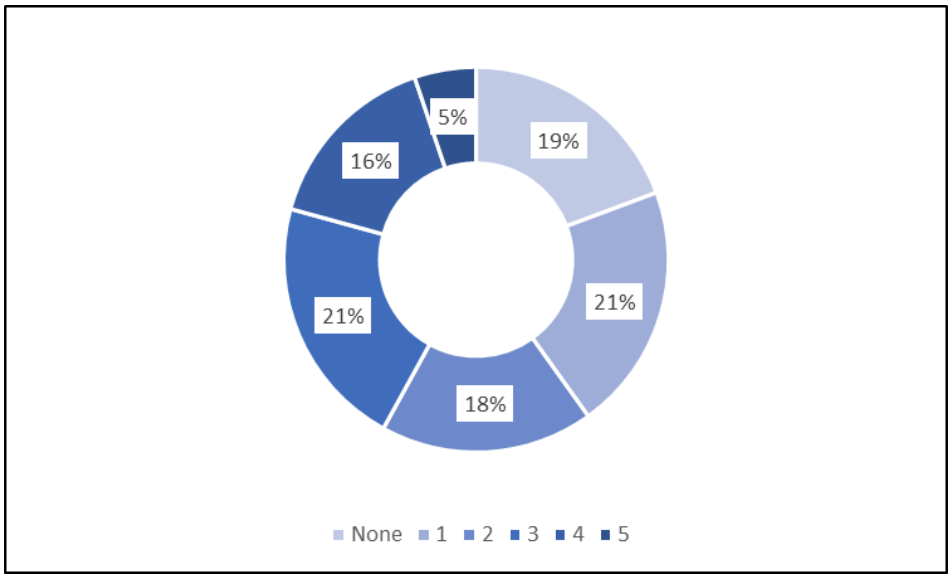


Figure 3.4-5 Number of benefits identified by CS agreement holders per site

Figure 3.4-6 shows that the historic environment (65%) was the most common public benefit cited by CS agreement holders for including their buildings in the scheme. Making a contribution to the landscape was given as a reason for inclusion in the scheme for 58 per cent of the sites, while

personal or family associations with the buildings were associated with a third of the sites (34%). The importance of the buildings for wildlife was important for one quarter of the sites (26%). Also, agreement holders made specific reference to the community benefits, for locals and visitors, for a quarter of the sites (26%).

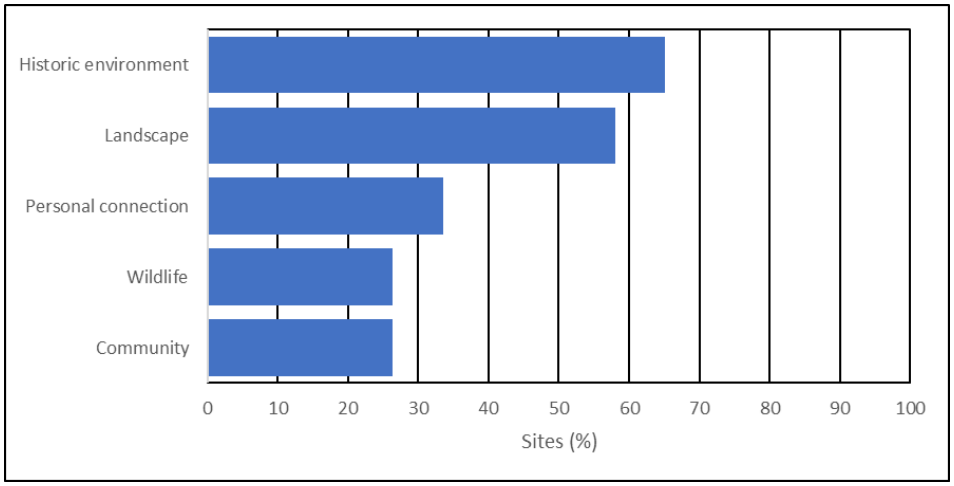


Figure 3.4-6 Benefits identified by agreement holders for the sites entered into the CS scheme

The reasons for selecting particular buildings, or building ranges, for entry into the schemes were often expressed by CS and ES agreement holders in terms of conserving and enhancing the historic environment and local landscape together as one. In conversation with the agreement holders the distinction between the historic environment and landscape was often blurred and overlapping.

Historic environment

Many of the agreement holders were aware of the age and time depth of their buildings and how they contributed to the history of their farms and the local area. This is clearly illustrated by the following agreement holder quotations and fieldworker summaries:

"The majority of farmsteads around here have been converted into housing, there are not very many farmsteads left intact, I think it's quite unique this one. We have a granary here that is 320 foot long. It's a wonderful granary but what do you do with that. A lot of farm buildings are just sold off, we don't want that. The farmstead next door, which you will have come past to get here, there were some great buildings in there which have all been developed, I think there are now 12 houses." (CS Type: Higher Tier. NCA: North Northumberland Coastal Plain)

"A lot of them [field barns] on the end you can see a thatching line where it's been altered at some stage to take the stone slates. You can see a line in the gable end where they have been ling thatched. They'll be older than the ones in [redacted], I think… So that's my interest, looking at things, looking at buildings." (CS Type: Mid Tier. NCA: Yorkshire Dales)

The agreement holder said he was interested in the history of the farm and that he had learnt a lot about the buildings from the farmer that was on the farm before him. The agreement holder is also a land agent and is particularly interested in the history of the farms that he works with. "I work part time as a land agent, so knowing about the buildings as part of my job. Also [previous farmer] who was here before me was very interested in history and he told me quite a lot about the buildings and what they were used for. When you think about all the thought that went into those farm buildings, and now we just stick a shed up and put some plasticised steel on the outside we are not thinking about the landscape gain and being aware… like they did 100 years ago." (CS Type: Mid Tier. NCA: Cheviot Fringe)

"We've been here over a hundred years, I see myself, I always say this to my wife, I see myself as a guardian to the next generation, if that makes sense. So, there is a lot of heritage, we've been here a long time and I'd like to think we are going to be here for a long time." (CS Type: Mid Tier. NCA: Bedfordshire and Cambridgeshire Claylands)

The agreement holder stated there was a lot of subtle differences between the farm buildings across a small area. The quality of the stonework often reflected the status of the farmer. Peasant farmers had poor buildings with rough stonework and fixtures and fittings, while richer farmers could afford to dress the stone and have embellishments inside. (ES Type: ELS. NCA: Yorkshire Dales)

It was common for agreement holders to have an intimate knowledge of the history of their TFBs. For some, this knowledge was architectural with agreement holders pointing out datestones and other details that identified when the buildings were constructed. There was also a substantial degree of social knowledge of how the buildings were used in the past and a number of agreement holders talked about graffiti and markings on the walls and internal fixtures and fittings of their buildings that had been made by previous generations of farmers and farmworkers (see Figure 3.4-7):

The agreement holder said that there was graffiti in the buildings from the 1880s detailing planting dates for the crops and when the last snow left. (CS Type: Mid Tier. NCA: South Norfolk and High Suffolk Claylands)

"You know it is very remote, you literally cannot see anything around you. There is a gravestone there, you can see that somebody lived there. There is prisoner of war graffiti in there because POWs were there was the end of the war. There are whole layers of history, and it is a really old lovely building." (CS Type: Higher Tier. NCA: North Pennines)

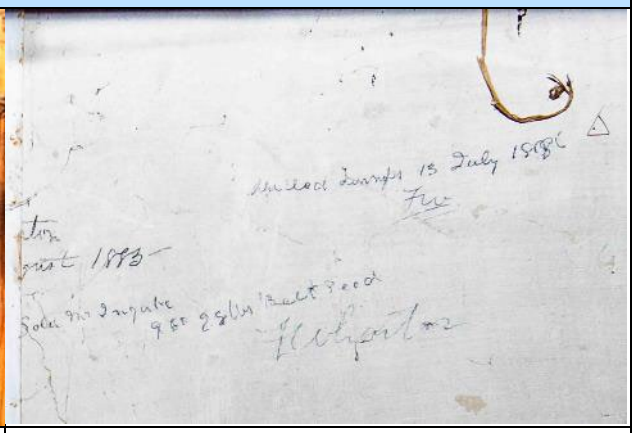
Intimate details	
	
Graffiti on a stable door dated 1872	Graffiti on granary wall, crop dates 1883 & 1886
	
Graffiti etched into the chalk wall of a threshing barn	Horse names “Rose” & “Bute” in a stable block, late-19th century

Figure 3.4-7 Social history contained within TFBs covered by the maintenance options

Landscape

The contribution made by TFBs to the local landscape was frequently cited by the agreement holders as a reason for inclusion in the schemes (CS 58%, ES 55%). During the interviews agreement holders sometimes went into considerable depth about the importance of the buildings in their own right, but also to the landscapes within which they were situated. It was reported that the payments received through the maintenance options helped some agreement holders steer their buildings away from certain types of adaptive reuse, which they considered to be detrimental to the landscape:

"I suppose aesthetically they are quite pleasing aren't they? (...). If I had the money to buy the farm I would be very happy to take the big grain shed down and move it to a separate area and keep it as a traditional little farm… To have a separate farmyard with all the big machinery and grain stores, to take the wear and tear out of the place." (CS Type: Mid Tier. NCA: Bedfordshire and Cambridgeshire Claylands)

"The buildings are stunning (…) we did a video of the dawn breaking over [redacted], we have it as a screen saver. We did a time lapse, which was the dawn breaking over it. It's literally surrounded by heather." (CS Type: Higher Tier. NCA: North Pennines)

"The age of the building was important for me (…). They have not changed that much and protection is important for me. Majority of my neighbours have converted barns into houses, there is a huge pressure from developers around here. I want to protect the buildings." (CS Type: Higher Tier. NCA: Severn and Avon Vales)

These are very prominent sites in the landscape with many historic buildings. (CS Type: Mid Tier. NCA: South Suffolk and North Essex Clayland)

Personal connection

The interviews found evidence to suggest that using the options to maintain their TFBs also contributed to the well-being of the agreement holders, their self-esteem and their farming identity (CS 34%, ES 58%). This was expressed in many ways during interviews. Some of the agreement holders expressed pride and pleasure in maintaining their farm buildings:

"The buildings are an important part of the farm, and having them in good condition puts a smile on my face." (CS Type: Mid Tier. NCA: Clun and North West Herefordshire Hills)

"Without a shadow of doubt, it's just personal pride of the farmyard. You know, they will soon deteriorate if you don't look after them… Can I bang the drum for the family farm, its families that look after the buildings, its families who live and work there, some of these big companies don't really care very much." (CS Type: Mid Tier. NCA: Mid Norfolk)

"(…) we had these farm buildings, the finances don't stack up having them. They are useless for farming. My family said we have got to keep them, they are very attractive, they have always been here, and they are part of the estate." (CS Type: Mid Tier. NCA: The Brecks)

Agreement holders also mentioned that family history and the family ties to the land were important reasons for selecting buildings to enter into the schemes. From the interviews it was apparent that in some cases the farm buildings represented a measure of stability and consistency in a period where farming and farming techniques have experienced a considerable degree of change. It was clear that some farmers kept their traditional buildings as a symbol of continuity rather than sweeping them away to be replaced by modern multipurpose structures:

Farm has been in the family since 1868, and [the agreement holder] stressed how the buildings are integral to their family history as well as the farming history of the area. (CS Type: Mid Tier. NCA: Potteries and Churnet Valley)

The agreement holder said they had been on the farm nearly 70 years. Farm has a lot of history and is mentioned in the Doomsday Book. They like the buildings because it is where they live. "for us this is a lovely view out here, this is where we live." (CS Type: Mid Tier. NCA: Shropshire Hills)

"The family has been here a long time, I am the third-generation, almost a hundred years. The buildings haven't changed very much at all in that time. I think the only thing that has gone is the old toilet that was at the bottom of the garden, I can just remember that but only just. Years ago all the cows were actually tied up in the traditional byres, we had about 30 cows tied up at one time. This was when it was a dairy farm." (ES Type: ELS & HLS. NCA: Tyne Gap and Hadrian's Wall)

"I used to shovel out the grain here myself, harvest time you'd have to watch the auger, 'mind your fingers don't get chopped off' dad would say. In my grandfather's day all the stables were used for the working horses and all that." (CS Type: Higher Tier. NCA: The Broads)

"I'm just passionate about the old buildings. In the old days you would have just knocked them all down or you would have sold them off and, to be honest, if things got rough I would have to sell them off (…) Nothing has been changed, because the family never wanted to change it, patch and make mend, keep it as it is. That's very unusual I think you'll find (…) I know about the buildings because of [redacted], she lived here, and she was a great storyteller. I've got so many tales. The family has a long connection with the farm and the village. In those days in the village everybody knew everybody, and a lot of knowledge passed on (…) So the buildings I know we used for [redacted] and agriculture. I can remember the sacks in the granaries, was packed with sacks, 16 stone sacks, and the big tractors in the yard powering all the equipment." (CS Type: Mid Tier. NCA: Mid Norfolk)

It was also stated by several agreement holders that the way in which their buildings were maintained reflected upon them as farmers and they cared very much what their peers and visitors to the farm thought about them. Having a well maintained farm was part of their farming identity and how they presented who they were and what they stood for to the outside world:

The buildings are part of the family's history and heritage, and the agreement holder wants to get the farm looking neat and tidy, as it was in the 1960s. Wishes to improve the condition of buildings so that they are admired and not seen as an eyesore and the work done to date and intended to be done provides a sense of pride in the holding and in the achievements so far. (CS Type: Mid Tier. NCA: South West Peak)

The agreement holder said the maintenance option keeps the farm looking tidy and they use some of them. But also said they don't really have an agricultural use and they "stand there doing nowt." (CS Type: Mid Tier. NCA: Yorkshire Dales)

Like to see farm buildings looking tidy and maintained. (CS Type: Mid Tier. NCA: Southern Magnesian Limestone)

Want to keep the buildings in good condition and neat and tidy; it is a tenanted farm, so responsibilities come with that although the landlord has some responsibilities also. (CS Type: Mid Tier. NCA: Herefordshire Plateau)

"(…) it's nice that the buildings are there and it's nice that they look tidy as well isn't it? You wouldn't want to see, like, half the roof falling off." (CS Type: Mid Tier. NCA: Rockingham Forest)

"we live here so we would rather not live in a derelict place. We like them, and who knows, one day they might add some more value to the business." (CS Type: Higher Tier. NCA: North Northumberland Coastal Plain)

"it's just a family tradition, it's the way we were brought up, we try and keep things tidy. Like with the walls, I can count on one hand how many gaps we have down on the farm." (ES Type: ELS. NCA: Yorkshire Dales)

For some agreement holders the motivation for entering buildings into the scheme came from the negative emotions generated by the loss of TFBs on their farms:

"I think it was because, especially now having the experience of one falling down, you just wanted to make sure that wasn't going to happen again. And they are used for a certain amount of farming activity, storage et cetera. And then they are just lovely historic buildings." (CS Type: Higher Tier. NCA: North Pennines)

"Well, we had lost a barn. You know, like when farmers talk about losing a species of bird, we lost a barn exactly like this. The roof goes and before you knew it, it's come down. Which is a great shame. It's a loss of heritage, they are also good assets." (CS Type: Higher Tier. NCA: The Broads)

The deep family connection between some of the agreement holders and their buildings is illustrated by the following passage which describes how knowledge about the farm buildings spanned three generations. Here an agreement holder in the Eden Valley explains that the farm had been in the family since the 19th century and his father and grandfather understood the TFBs and how they were used on the farm:

Site 1: Farmstead

"That rectangular bit there [points to map] these were originally byes, the bit at the end were calf pens. The L-shaped bit at the far side was a stable block, according to grandfather. The little bit on the L was the old bullpen and the loft above was used as a hen house, they used to climb up and down on a ladder and scramble about inside to get the eggs. On the back of the barn, it's gone now, was an old gin case. I can never remember the gin case here, it was taken down in around 67 or 68 when I was only three or four. People have described it to me, and I've got a picture in my head, but whether I can remember the picture or whether it's just been planted there, because there was one at the next farm and my dad always used to say that it was exactly the same as that one, and I can remember that one because it was there up to 20 years ago."

Site 2: Isolated single building

"It's a little stone bothy I would call it, stone built with a flagstone roof (…) I can remember going back 40, 50 years where we would winter some livestock in them. It's a very low building, I've seen ones that look more like a barn, but ours is just a small building. Part of it was for crop storage, you would put a bit of hay in it, it's not very big, it's maybe twice as big as this kitchen. And the other part was for stock. Maybe cows, and there was a yard with it, and they would shelter in the building and then come out into the yard because the stream runs past it and it would be where they would get the water. The estate now uses it as part of their pheasant shoot, they have their lunch there on a shoot day."

Similarly, a CS agreement holder in the Yorkshire Dales recounted how the field barns in the scheme were traditionally used, he remembered his father visiting all the field barns once a day to let the cows out to get water. Each field had a stream or a water source. While the cows were drinking the shippon would have been mucked out and hay put in the stalls. The cows would be back just as he was finishing:

"I remember my dad doing it, he would let them out [cattle] once a day, not twice a day. Every field had a water source at some point, with ours it was the river and the beck that runs down the side here. He would go on the morning, open the door, and let them out and they would go straight to the water because they were thirsty. He mucked them out and fothered them and by the time he had done that the cows would be waiting to come back in. Yes, I remember that when I was a little lad with my dad."

Another CS agreement holder emphasised the importance of passing on farming heritage from one generation to the next:

The agreement holder said his father started to preserve the redundant farm machinery that was once used on the farm. Horse harnesses, horse-drawn machinery, early tractors and implements. Much of the machinery is stored in the cart shed ranges and shelter sheds. This equipment will be passed on to the next generation. Even though the agreement holder is more interested in the buildings than the machinery. His father told him how the buildings are made and where the materials came from. Pointing to a map to show the clay pits and where the bricks were made. "That's where the quarry was [points to map] that's where the clay came from [points to map], I've known about it since I was probably 10 or 12 years old. That sort of thing interests me. About the actual farm buildings, what they were used for, I suppose I've known since a young age." (CS Type: Mid Tier. NCA: Bedfordshire and Cambridgeshire Claylands)

Wildlife

Conserving and enhancing wildlife was mentioned by agreement holders as a reason for entering 26 per cent of CS and 32 per cent of ES sites into the schemes.

"We've got a heap of bats, house martins and swallows. We've got barn owls, the list just keeps going… As part of the scheme we have done a lot of work restoring habitats, creating hunting grounds. So once the owls have got a food source the barns are ideal to be honest." (CS Type: Higher Tier. NCA: Orton Fells)

"There are several bats in them, sparrows and swallows nest in them, we got a barn owl. You know, the buildings are there, we don't have that many, but what we've got we thought would like to put them in to the scheme and it helps with the upkeep" (CS Type: Mid Tier. NCA: Mid Norfolk)

The agreement holder said he liked to see the swallows around the farmyard on an evening. (CS Type: Mid Tier. NCA: South Norfolk and High Suffolk Claylands)

Always been used by wildlife and are still useful for farm business. (CS Type: Higher Tier. NCA: Mid Norfolk)

Flight path for bats and owls. (CS Type: Mid Tier. NCA: Yeovil Scarplands)

Community (locals and visitors)

The agreement holders made specific reference to the community benefits, for locals and visitors, of selecting buildings for the CS scheme on a quarter of the sites (26%) and 52 per cent for ES sites. There was often an awareness of the benefits that the TFBs provided for the public and that it was, therefore, important to maintain the buildings. Some of the agreement holders had engaged with the public first hand and these interactions were often based around their TFB management, for others it was about providing benefits more generally as the following extracts from the interviews illustrate:

"one reason is that we get a bit of money for the maintenance. But when you go out there, the buildings are quite nice and nice to look at. And I think it's nice for the village as well because people drive through (…). Because normally everything is just houses, houses, houses, whereas if you see some old barns which are as they were hundreds of years ago it's a nice thing to see." (CS Type: Mid Tier. NCA: Rockingham Forest)

"When we reroofed the building we were there all summer, to be honest we had quite a bit of comment about it from visitors, how nice it was to see a barn being restored." (CS Type: Higher Tier. NCA: Orton Fells)

Unique building, admired by many people including members of public. (CS Type: Higher Tier. NCA: Yorkshire Wolds)

The agreement holder thought it was just "proper" to keep the buildings up. Also said it was important for tourists and that the landscape look more appealing when the buildings are looked after. Said that the "area sells itself better when the buildings are looked after." (CS Type: Mid Tier. NCA: Yorkshire Dales)

The agreement holder has made a farm trail to the site so people can look at the building up close. Also get very good views of the surrounding landscape. (CS Type: Higher Tier. NCA: North Pennines)

Agreement holder also gets a "buzz" out of seeing people appreciate buildings. Recognises that the buildings are visually very impressive, part of an extensive estate which invested a lot of money in developing the farmsteads in the 19th century. (CS Type: Mid Tier. NCA: Bedfordshire and Cambridgeshire Claylands)

The agreement holder said they had lots of walkers and visitors passing through the farm and they often commented on the field barns and took photographs. "Loads of folks photograph them [the field barns] and all sorts of things, they are unique to this area (…). They look better if they are up, I think, that if they are all dropping in bits (…) Once they are gone no one is ever going to put them back." (CS Type: Mid Tier. NCA: Yorkshire Dales)

The buildings are an integral part of the educational provision on the farm. Part of the restored range has been converted into an educational space, with a kitchen, toilets and washing facilities. (CS Type: Higher Tier. NCA: Mid Severn Sandstone Plateau)

Agreement holders also mentioned some of the wider public benefits of scheme participation and that the maintenance of TFBs helped to keep the countryside looking attractive and providing opportunities for locals and visitors alike:

Agreement holder said that that maintaining the landscape through the countryside stewardship options helped support the local economy by attracting visitors who spent money in the area. He said that many farmers and their families in the area were involved in tourism related activities. "A lot of farmers around here have an interest in tourism in some way, like a campsite or bed and breakfast. And they realise it keeps the local economy going. Which, without the local pub, the local shop then you have got nothing have you? You've got to see the bigger picture, like you know." (CS Type: Mid Tier. NCA: Yorkshire Dales)

"I think the future of farming is going to be to a considerable degree linked with educating the public. I can see that this is something we ought to be doing." (CS Type: Mid Tier. NCA: Shropshire Hills)

The agreement holder said he was very proud when the NPA used his barn to hold an event to show tell people all about the traditional farm buildings. "I must say that the farm buildings have been used by the National Park for an event about traditional stone buildings (…). You will find when you go out it's all dressed stone around the doors." (ES Type: ELS & HLS. NCA: Tyne Gap and Hadrian's Wall)

The agreement holder says the buildings and walls that surrounded them were an essential part of the landscaped which attracted many thousands of visitors to the area and gave a lot of enjoyment but also brought a lot of money into this area. (CS Type: Mid Tier. NCA: Yorkshire Dales)

Instrumental reasons

Instrumental reasons were also commonly cited by agreement holders for entering some or all of their TFBs into the schemes (CS 46%, ES 36%). It was reported that the payments helped some of the agreement holders keep their TFBs in agricultural use:

Building is used for several purposes (cookery school, workshop, agricultural storage), making it important to the business to maintain it. (CS Type: Mid Tier. NCA: Lancashire Coal Measures)

Buildings are all in agricultural use and need to be maintained; the option provides a contribution toward the costs of that maintenance. (CS Type: Mid Tier. NCA: Vale of Pickering)

The agreement holder feels that traditional farm buildings should have a use and be able to contribute to the farm business. If they can't be used for farming they should be converted to other uses. The agreement holder was very knowledgeable about the history of the buildings and how they were managed and how they were maintained in his grandfather's day. However, the agreement holder did not see it as a reason to maintain the buildings if they were no longer used as part of the farm business. (CS Type: Mid Tier. NCA: Yorkshire Dales)

Some of the agreement holders also mentioned that the maintenance payments helped them to prolong the working life of the buildings where the alternative would be demolition and the construction of modern structures. This was explained in purely financial terms and no mention was made of the benefits of maintaining TFBs as a means of sequestering carbon as a contribution to climate change mitigation.

The importance of having a contemporary agricultural use for the TFBs was very important to several of the agreement holders and that maintenance payments should been seen through this lens as demonstrated by the following passage from an interview with an ES ELS agreement holder:

> *"we've never taken a grant to maintain a field barn, we've always done it ourselves. Because to us a field barn is no good, you can put this down, unless it has double doors in for modern farming. So you can put machinery in. We have one down there [points to map] where we have put double doors into it and we can put machinery in. And we have another one that we use in lambing time that already has double doors in. They are just handy to put a few lambs in. We have just reroofed one on some rented land that we have [points to map]. We put a tin roof on it. They are handy. To run in and out of in the winter or whatever. But apart from that they are not much use for anything."*
>
> *The agreement holder went on to say that some farmers didn't care for the landscape or appreciate the history of their buildings. He gave an example of a neighbouring farmer who had let most of his traditional buildings become derelict through lack of maintenance and now the roofs have fallen in because the timbers have rotted. He said many TFBs are on the brink of collapse because they haven't been maintained over the last half-century. Therefore, help and grants were definitely needed because farmers haven't got the resources to maintain a non-productive asset. (ES Type: ELS. NCA: Yorkshire Dales)*

Advice and the application process

The majority of agreement holders (CS 71%, ES 64%) received advice and information before choosing the building maintenance options and from the comments received it was clear that information was obtained from a variety of sources. Written material was mainly accessed through the Defra website and scheme handbooks, while personal interaction involved NE scheme officers, National Park and AONB staff, environmental NGOs, and commercial advisors. This resulted in nine out of 10 agreement holders being able to get all the buildings they wanted into the schemes (CS 87%, ES 93%). However, 10 CS agreement holders said they were unable to get all the buildings they wanted to into the scheme with the main reported reasons being confusion over eligibility, fear of penalties if they made a mistake and miscommunication with agents who were preparing the application (see below).

Over three quarters of the CS agreement holders (79%) could not think of any improvements to the application process for the HS1 or HS8 options. Inspection of the comments suggesting improvements found that only eight of the 21 comments were specifically about the TFB maintenance options. The main suggested areas for improvement of the application process were:

- Difficulties in uploading photographs of TFBs to the system.
- The instructions on information entry for the TFB options could be confusing.

The remainder of the comments referred to the complexity of the application process in general, low payment rates, and the absence of a capital option for the restoration of TFBs that needed major work which was beyond the scope of the maintenance options.

Weatherproof TFBs not included in the scheme

Almost two thirds of CS agreement holders (63%) reported that when a site was entered into the scheme, all eligible TFBs were included. There were however, 36 farmstead sites that contained weatherproof TFBs that were not covered by the maintenance options. Two of the 14 ES agreement holders had two farmstead sites that included weatherproof TFBs that were not in the scheme.

Agreement holders reported the following reasons for not including all their weatherproof TFBs in the schemes:

- **Confusion over eligibility**: This included uncertainty over tin roofs, early 20th century buildings, minor buildings such as cider houses and pigsties, and TFBs attached to farmhouses.
- **Fear of penalties**: The main concern here was the fear of incurring scheme penalties by including an ineligible building. There were examples of parts of TFB ranges being excluded "to be on the safe side" because they housed farm workshops, or activities that might be considered borderline agricultural. There was some confusion over the boundaries between agricultural and domestic activity.
- **Miscommunication with agents**: This included examples where the agreement holder said the buildings had simply been missed out by the agent, or where the agent was unsure of eligibility, especially relating to the age of the building and non-traditional roof coverings.
- **Difficult to follow the management prescriptions**: This included examples where the building was borderline weatherproof and required a lot of work to make them sound.
- **Flexibility**: There were instances where agreement holders said they wanted to keep their "options open" in terms of future uses and did not want to be tied down by a maintenance agreement.
- **Public benefits**: In one case an agreement holder said that he thought of the building as being "ugly" and not worthy of inclusion in the scheme although it met the criteria.

Presence of non-weatherproof TFBs on farmstead sites

The interview surveys found it was rare for agreement holders to have non-weatherproof TFBs on their farmstead sites. Nine out of 10 agreement holders (CS 93%, ES 85%) maintained all the TFBs on farmstead sites in a weatherproof condition. At the site level less than 5 per cent contained buildings that were not weatherproof.

3.4.3 Has there been any change in use of the building over the agreement time that was the result of the repair work?

Building use prior to scheme entry

The vast majority of the TFB sites were in use prior to entry into the schemes (CS 97%, ES 100%). Figure 3.4-8 shows that the agricultural building use dominated the CS agreements (84%), while 17 per cent of the sites contained buildings that were not used at all. The other category contained buildings with a variety of functions. Some of the buildings were used for borderline domestic/agricultural purposes such as storing firewood, passenger vehicles, dog kennels, while other were used as educational facilities (see case study 2), or in one instance as part of a care farm (see case study 9).

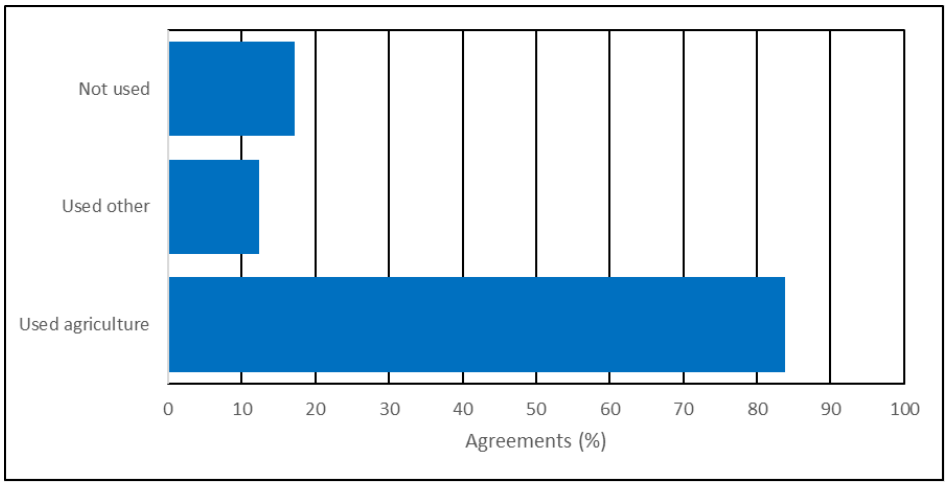


Figure 3.4-8 TFB use prior to entry into CS scheme*

*Columns do not add up to 100% as a building site may have more than one use.

Relatively few of the buildings were being used for their original purposes (see, for example, Figure 3.4-9). During the interviews, agreement holders often reported that they could find a modern use for their TFBs, however, they frequently stressed the limitations of using TFBs as part of modern farming systems. Many of the buildings were being used for general agricultural storage and in some cases not at all as the following interview responses demonstrate:

The agreement holder said the cart shed was still used for machinery, Land Rover, small tractors. The stables and shelter shed are now a workshop and also used by a footpath charity for making signposts. The old turnip store is used as workshop to repair machinery. The old dairy is now used for general storage. The dog kennels are used as a secure chemical store. "Yes, they are used, mainly for store sheds. They can't be used for any large machinery or anything, you tend to put what you can in them."

"As far as day-to-day running of the farm goes, less than 10 per cent I'd say are used on a daily basis, because they are just not big enough. Some of the stables are used for ponies for the wife and kids. It has kind of been revived, my mum was into horses, but there hasn't been horses there for 20 years probably until just recently again the last three or four years. It's quite nice because it's brought a bit of life back."

The buildings in the scheme are still used for low intensity agricultural use: Sheep housing, machinery storage. General storage. Uses the threshing barn for mixing and storing animal feed. The agreement holder says the buildings are not suitable for contemporary farming activities. The agreement holder described the use of the single-storey cart shed: "There are things under there, but they are not any good for anything like modern agriculture, you couldn't drive a tractor underneath them because they are not high enough are they?"

"I would say that the main use is nothing, the biggest floor area would be nothing, 40 per cent or so is used for animals in the winter, mainly cattle."

"With the old brick buildings, as we'll see later, because the accesses aren't suitable for modern machinery, you do tend to fill them up with crap. You know, the stuff that you don't want to throw away, stuff that, well we can wheel that in there because that will probably come in sometime or it will be a spare part for that, so it's the stuff that you don't want to clutter up a modern shed that you can get big machinery into. Hence it gets tucked away in there."

"We use them for storage and things that perhaps use once in a blue moon, you know, and you don't want to put outside."

"That one [points to map] we run the sheep in and out and use it as a collecting yard. The other one stores, all sorts of stuff, you know things like pipe fittings, stuff you don't need every day. One of them still houses hay, we make some little bales of hay if we can in that one [points to map] (...). We use that one for running sheep in and out. This one here is where we have the beef herd."

TFB use	
	
Loose housing for cattle	Cattle in a threshing barn
	
Hay storage in a field barn	Machinery storage in a threshing barn
	
Machinery storage in a cart shed	Workshop in a turnip store
	
General storage in a stable	Educational provision in a threshing barn

Figure 3.4-9 Contemporary uses of TFBs covered by the maintenance options

Changes in building use since scheme entry

Six CS agreement holders changed the use of some of their TFBs as a result of joining the scheme (Figure 3.4-10). In all but one of the cases an unused building, or range of buildings, had been brought back into agricultural use. In the other case a building that had been used for general agricultural storage was converted into an educational facility. For the vast majority of TFBs in the schemes maintenance payments help to retain the buildings in their current agricultural use.

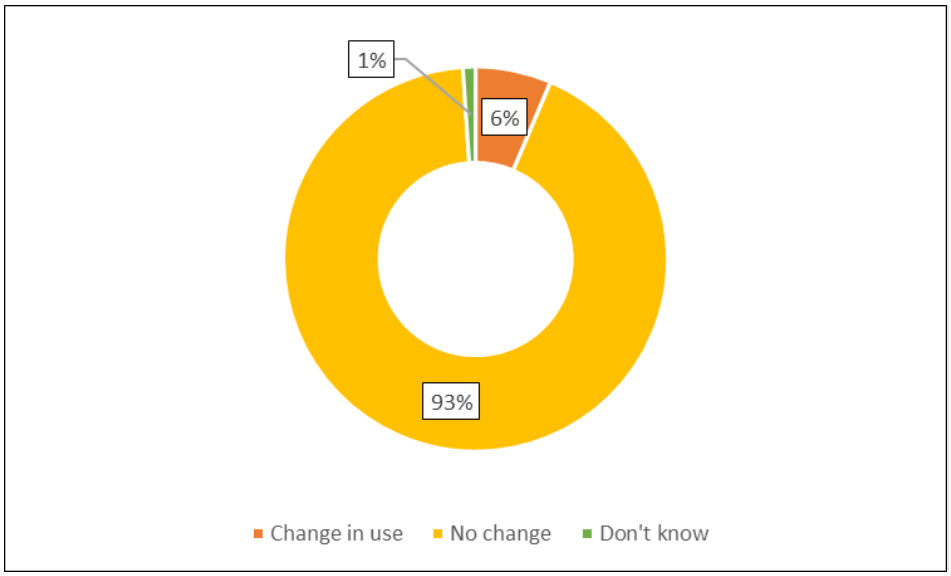


Figure 3.4-10 Change of building use after entry into CS scheme

Building maintenance in the absence of the schemes

Agreement holders reported that in the absence of the schemes the maintenance policy for TFBs on one third of the sites would have remained unchanged (Figure 3.4-11). However, buildings would be maintained to a lower standard on 61 per cent of sites and not maintained at all on four per cent of sites.

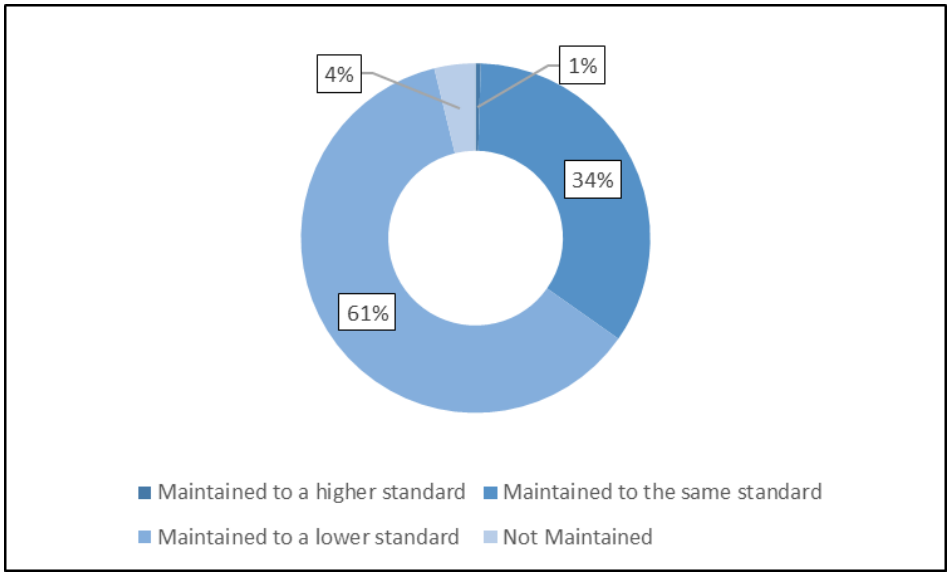


Figure 3.4-11 Building maintenance policy for sites in the absence of the CS scheme

Plans for the buildings at the end of the current agreement period

Agreement holders reported that there was considerable uncertainty about the future direction of agricultural policy which made planning for the future quite difficult. However, over half of the agreement holders (CS 55%, ES 79%) said that they had plans for the buildings at the end of the current agreement period. For those who had plans, over three-quarters of the sites (CS 76%, ES 82%) would be entered into a future TFB maintenance option, if one was available.

3.4.4 Review of the building wildlife assessment form completed on application – did the agreement holder find it helpful?

Introduction

As part of the CS scheme application process a four-page BWAF had to be completed for each TFB to assess the suitability of the buildings for barn owls, kestrels and bats. BWAFs were available for analysis for just under half of agreement holders who were interviewed (46%).

Review of the BWAFs

There are some limitations which have to be taken into account when interpreting the results of the BWAF analysis presented below. First, the BWAF does not identify the location of the site or building ranges, so it was not possible to match the BWAFs to sites for multiple site agreements. Second, it was not possible to match BWAFs to individual building ranges within sites. Third, on closer inspection of the BWAFs and comparing them with information from the interviews, it appears that a common practice was to complete a single BWAF for each site entered, irrespective of the number of building ranges present. For example, a single BWAF was found to cover 5 building ranges of different morphologies which limits the value of the building specific questions on the form concerning building height, openings, flight paths, lighting and use.

Bearing in mind these caveats, the analysis of the BWAFs produced following results:

- A third of the agreement the holders (37%) appear to have followed the instructions to complete a BWAF for each building.
- Some of the agreement holders appear to have taken considerable care in completing the BWAFs, often annotating the forms with additional information, for example:

> *"Occupied by Owl in box already (…) bats and kestrel will not occupy if owls are present as owls could kill bats or kestrels."*
>
> *"Barn currently has two owl boxes"*
>
> *"Our neighbour has had breeding barn owls for the past 3 years"*
>
> *"Because of our large number of traditional farm buildings and 8 acres of traditional orchard next to the buildings we have very good habitat for bats"*

- Because of the variations in how the BWAFs were completed, the results of the analysis can only be taken as a general indication of the suitability for wildlife and the likely benefits of providing nesting boxes.
- For barn owls it was found that:
    - 64% of agreement holders had seen barn owls on the farm in the past year.

- 84% think there is sufficient owl habitat in the area.
- 36% think barn owls currently breed on the farm.
- 36% have found evidence of barn owls using the buildings.
- 17% have historical records of breeding barn owls.
- 13 agreement holders were advised to erect barn owl boxes on 13 sites (17%).
- 21 agreement holders were advised there was potential to erect barn owl boxes on 38 sites (49%).
- 21 agreement holders were advised not to erect barn owl boxes on 27 sites (35%).

- For kestrels it was found that:
  - 44% of agreement holders had seen kestrels on the farm in the past year.
  - 16% think kestrels currently breed on the farm.
  - 0% have found evidence of kestrels using the buildings.
  - 7% have historical records of breeding kestrels.
  - 3 agreement holders were advised it would be beneficial to erect a kestrel box on 3 sites (4%).
  - 15 agreement holders were advised there was potential to erect a kestrel box on 24 sites (31%).
  - 36 agreement holders were advised not to erect a kestrel box on 51 sites (65%).
- For bats it was found that:
  - 69% of agreement holders had seen bats on the farm in the past year.
  - 89% percent think there is good foraging habitat for bats close by.
  - 31% think bats currently roost in buildings on the farm.
  - 22% have historical records of bat roost on the farm.
  - 16 agreement holders were advised to erect a bat box on 22 sites (29%).
  - 11 agreement holders were advised there was potential to erect a bat box on 15 sites (20%).
  - 24 agreement holders were advised not to erect a bat box on 39 sites (51%).

From the BWAF analysis it is clear that agreement holders believe there is suitable habitat surrounding most TFB sites to support barn owls and bats (72% and 71%) (see Figure 3.4-12). Agreement holders recorded less suitable habitat for kestrels (49%). The potential to erect wildlife boxes was considered highest for barn owls (65%). Just under half the building sites had potential for bat boxes (49%) and one third of building sites (34%) had potential for kestrel boxes (see Figure 3.4-12).

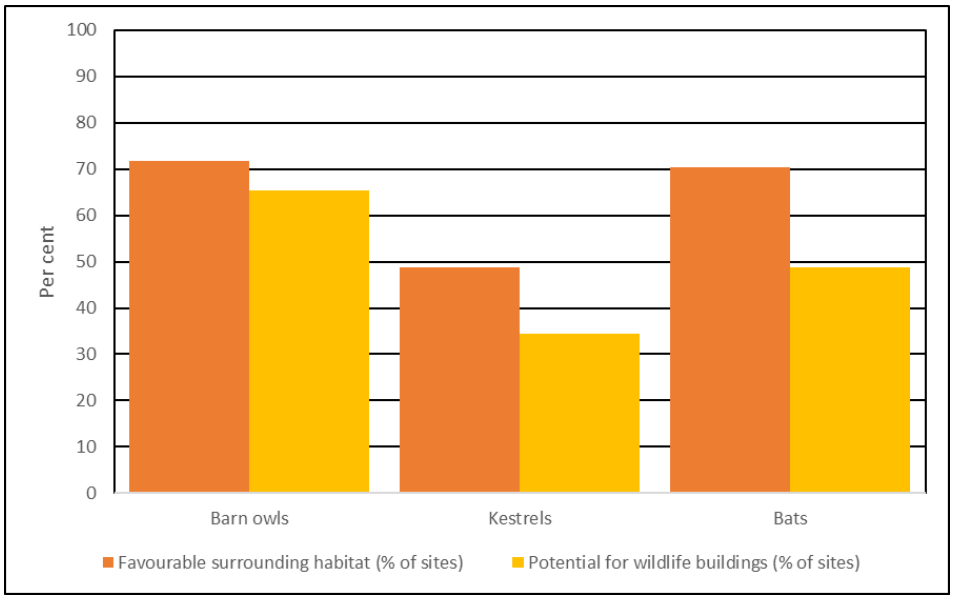


Figure 3.4-12 BWAF: Suitability for barn owls, kestrels and bats

Agreement holder views on the BWAF

Agreement holders were fairly evenly split in their views about the usefulness of the BWAF in deciding whether to install boxes or not (Figure 3.4-13). Of the 30 per cent who found the BWAF valuable it was reported that the form provided a structure and check list to assist their thinking about wildlife use of the buildings and on their farms more generally. For some of the agreement holders the advice on whether or not to erect wildlife boxes at the end of each section was particularly useful. For the 28 per cent who did not find the BWAF helpful if was often felt that the form was a tick box exercise to get the payment.

A significant proportion of the agreement holders (42%) said they did not know much about, or could not remember, the BWAF. This was often the case for those who had delegated much of the application process to their agents. This figure, coupled with the finding that 63 per cent of agreement holders appear not to have followed the scheme applicants' guidance to complete a BWAF for each TFB, suggests the BWAF is having most impact as a means of raising general awareness of the benefits of TFBs for wildlife rather than at the level of the individual building range.

When asked if the BWAF could be improved in any way, 11 agreement holders provided a response. It was suggested that it would be helpful to have more information on how to recognise if the buildings and surrounding area were being used by wildlife, particularly kestrels which might not be as familiar to many farmers. It was also suggested that the buildings were frequently occupied by other bird species, such as martins and swallows and this should be recognised as a public benefit as well. It was thought that some people filling in the forms may be apprehensive about filling in the bat section because of the potential legal ramifications of bat occupancy on the use of the buildings. There also appeared to be some confusion over the questions about historical records of wildlife and what exactly counted as an historical record.

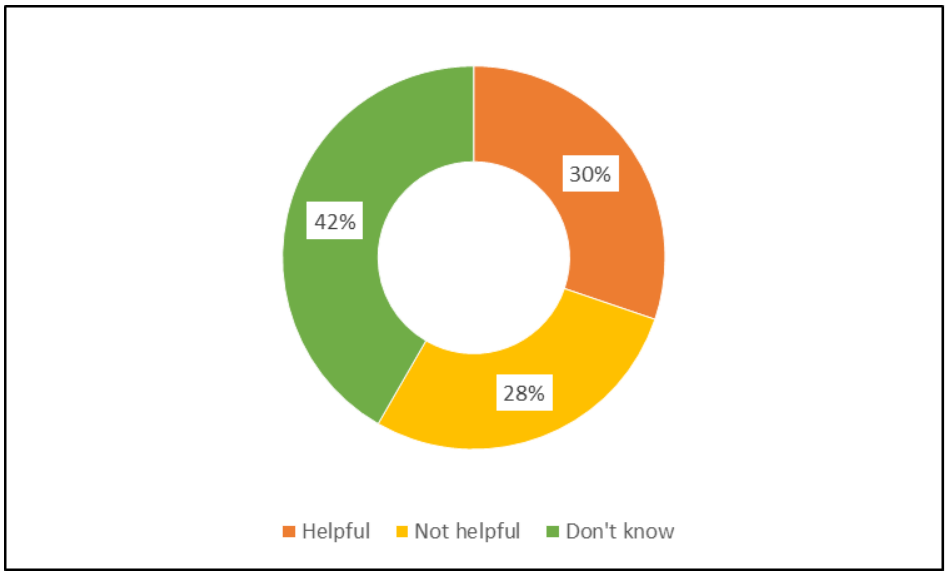


Figure 3.4-13 Was the building wildlife assessment helpful in deciding whether to install boxes or not?

3.4.5 Has the placement of wildlife boxes been successful?

The interview survey found that 34 agreement holders (35%) had erected barn owl boxes at 58 sites and of the 13 agreement holders who were advised by the BWAF process to erect a barn owl box, nine had already completed this task at the time of the survey (see, for example, Figure 3.4-14). These results would suggest a broad compliance with the prescription even though some of the boxes have yet to be installed:

> *The agreement holder says that putting up some owl and bat boxes in the barn is on his to-do list. He has done some research on the Internet to find out where the best location is to put the boxes. Reports seeing barn owls in some of the buildings and the same with bats. These tended to be the buildings that he visited most often. He wasn't sure about wildlife occupancy in the buildings that were not visited very often. Does not think that there are any birds of prey like kestrels nesting on the farm. There are swifts nesting in some of the buildings as well. He has an interest in ornithology and always keeps a lookout for birds when he is working around the farm.*

The interview survey recorded a much smaller degree of activity in erecting kestrel boxes when compared to barn owls. Two agreement holders (2%) had erected kestrel boxes at 2 sites. Of the three agreement holders who were advised to erect a kestrel box, none had completed the task at the time of the survey. The interview survey found that 11 agreement holders (11%) had erected bat boxes at 14 sites. Sixteen agreement holders were advised to erect a bat box on 22 sites of which three had completed the task at the time of the survey.

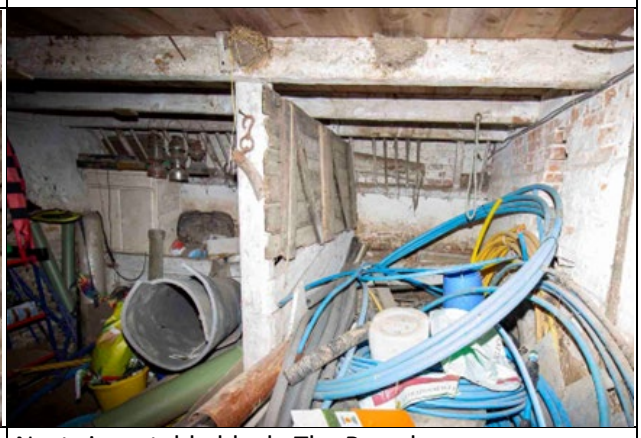
Wildlife boxes and nests	
	
Occupied barn owl box, North Northumberland Coastal Plain	Occupied barn owl box, The Brecks
	
Recently installed barn owl box, Severn and Avon Vales	Bat box, Yorkshire Dales
	
Nests, Mid Somerset Hills	Nests in a stable block, The Broads

Figure 3.4-14 Provision for wildlife in TFBs covered by the maintenance options

3.4.6 What does the agreement holder feel about wildlife in the building - has this changed?

The CS agreement holders reported an increase in the use of the sites covered by the maintenance options by wildlife since entering the scheme (Figure 3.4-15).

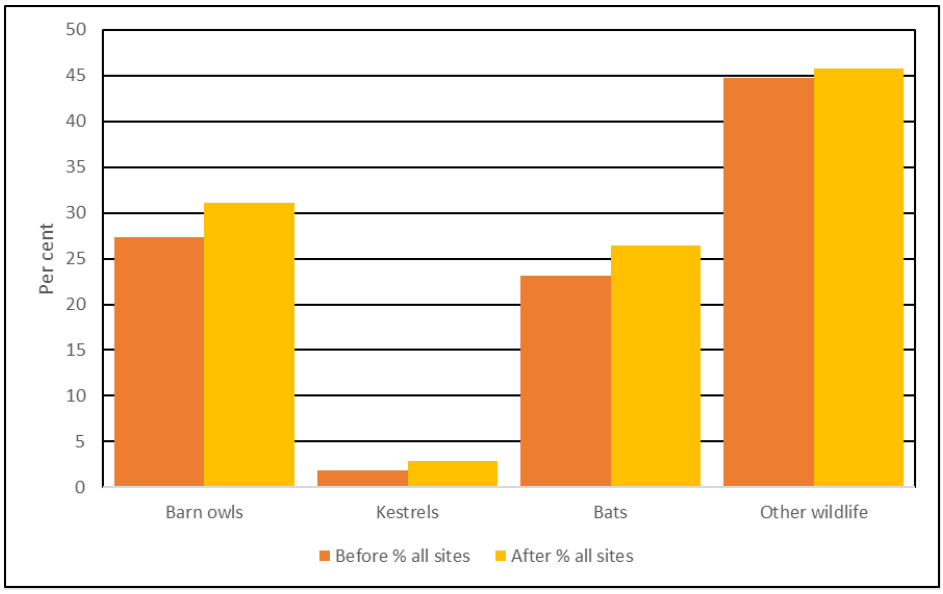


Figure 3.4-15 Change in wildlife use of TFB since entering the CS scheme

Overall, there was a general awareness among the agreement holders of which sites and building ranges were being used by different types of wildlife. Some of the agreement holders possessed an intimate knowledge of the wildlife occupying their TFBs, for example:

> *"We've got owls and bats, thousands of bats so many bats you have to cover the tractors up, bats everywhere. The wildlife side is precious to us, my dad used to be a shooter, but we decided to stop (…). That's change the whole outlook, wildlife seems to know that we are a sanctuary, a safe haven."*
>
> *The agreement holder says he keeps notes when does building inspection. "January 2019, no bat seen, barn owl seen occasionally coming out of the barn. I thought I won't put an owl box up because there is an owl already in the and I could frighten it off (…) I do love seeing the barn owl."*
>
> *"We do have one or two barn owls coming and going out of that one up there [site 5]. Even the low side one, the [redacted], I've seen barn owls down there like. We put up a bat box in the [redacted] one as well, there are plenty of crevices for the bats. Bats are going to go into them barns, there are plenty of places for them to find a hole or a crevice (…). We didn't see barn owls like 10, 20, years ago I never really saw one, but now I quite often see one flying around here."*

A number of the agreement holders also shared their experiences of the circumstances and conditions that were required to promote occupation of the TFBs by wildlife. Lack of disturbance and shelter were cited as important factors for attracting wildlife to use the buildings:

The agreement holder has seen little owls roosting in the barn. The site is quite quiet and the agreement holder thinks this is why it attracts the owls. Also the site is used for straw and feed storage so there will be a lot of vermin around. There are lots of insects and moths which are good food for the bats that use the buildings.

The agreement holder says barn owls are in the quieter remote buildings that aren't visited very much. "To be honest, we just about have a barn owl in every barn we have. You know, the out barns. I don't think it's anything we have done. It's changed, barn owls are now a very common species around here."

Thinks that some of the barns are quite exposed and wouldn't be suitable for barn owls, but the more sheltered ones near the woodland might provide opportunities.

Frequent use of the buildings was seen as a deterrent for wildlife as was road traffic:

The agreement holder said the buildings that are in the scheme are used every day. People are constantly in and out of them. They don't seem to have any wildlife using them. However, the stable block attached to the house is only used for storage and is a lot quieter. This is where the bats have been seen.

Buildings are situated close to the main road. Boxes are installed, but kestrels and other wildlife (e.g. bats) prefer the fields not so close to the road. A bat survey was conducted but did not find any evidence. Overall, the agreement holder says there is a lack of evidence for all 3 listed species.

In addition to the barn owls, kestrels and bats which were the focus of the BWAF, agreement holders reported that their TFBs were used by a variety of other species:

Pigeons, crows and jackdaws use the buildings. They bring a lot of sticks into the buildings for their nests. Hasn't seen signs of owls bats or kestrels. Owls were in one of the buildings many years ago but not recently.

Sparrows and swallows nest in the building. They see bats around the yard but they come from elsewhere.

Swallows have nested here. Have now installed swallow, swift and house martin boxes to the farmstead buildings.

Sometimes there could be a conflict between wildlife use on the provision of other public benefits. For example, it was reported that for health and safety reasons wildlife had to be sealed out of TFBs where they were used as educational facilities.

3.4.7 Review of the building log – did the agreement holder find it helpful?

The BMPL is a 10 page document used to record and plan the maintenance of each building in the CS scheme throughout the lifetime of the agreement. Although there was a requirement to use the BMPL to support payment claims for options HS1 and HS8, Figure 3.4-16 shows that only 56 per cent of agreement holders were using the form and of those agreement holders, the survey found that 26 per cent said they did not keep their forms up to date. Some of the agreement holders explained

that they had only recently joined the scheme and had not started recording information yet, but it was more common for agreement holders to question the usefulness of the BMPL. When asked how helpful the BMPL was for organizing the maintenance work only 6 per cent of agreement holders said it was very helpful, whilst one third (32%) said it was not helpful at all (Figure 3.4-17).

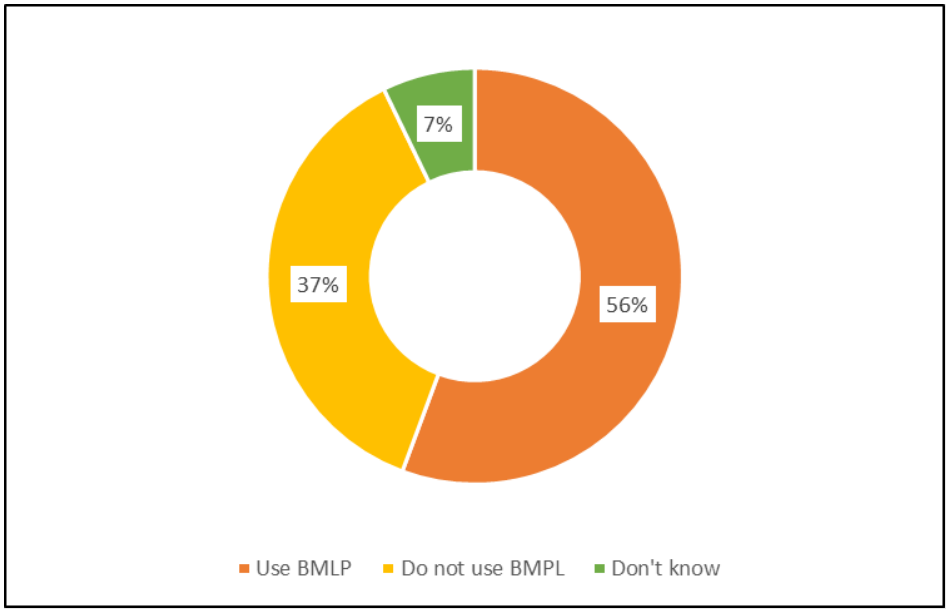


Figure 3.4-16 Use of BMPL by agreement holders

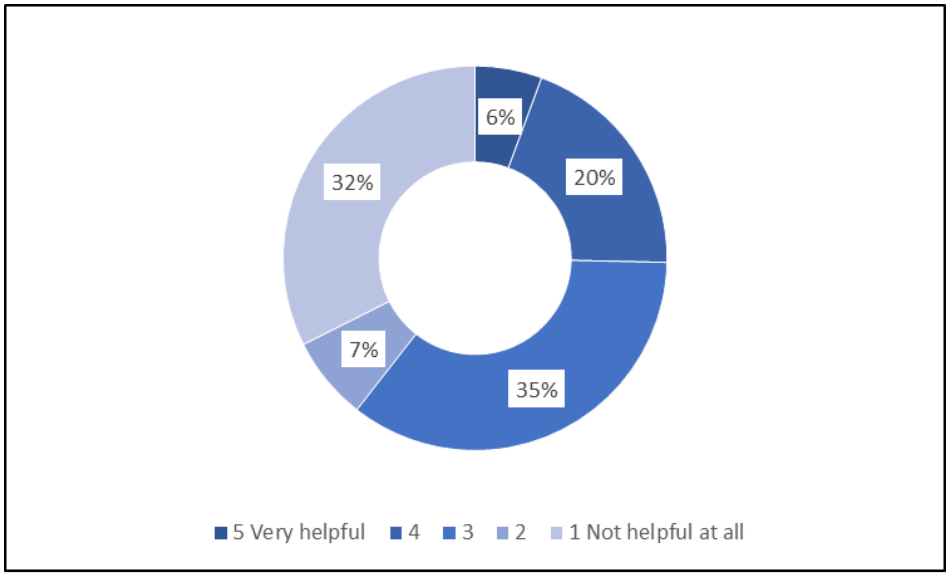


Figure 3.4-17 How helpful was the BMPL for organising the maintenance work?

It was reported that the BMPL often acted as an extension of the agreement holders day to day farming practice. A frequent response was that farmers know how to maintain their buildings and they would fit in the work around their other farming activities. From these types of responses it would appear that checking for defects and carrying out maintenance work was often an informal activity which was not structured and organized around a timetable:

"I'm not sure where that is to be honest, I know what you're talking about, If you know about buildings, you know what needs doing."

"Work needs doing when it needs doing, not when a plan or log says it should be done."

As and when repairs needed, they are done; difficult to find time and energy at end of a busy day to complete more paperwork. It is the responsibility of the agreement holder, but human nature is to get on with work that needs doing rather than spend time recording what has been done and why.

"Not used, except visual assessment. If it needs repairing I repair it."

However, it was apparent from other agreement holder responses that the BMPL was helpful in making them think about and plan their maintenance work:

"It does refresh your memory, it reminds you what to look out for when you're walking round."

Finds BMPL very useful as keeps updated, "focuses the mind". However, finds the itemised side of it overcomplicated and repetitive.

"It is helpful (…). It makes you think about stuff (…). Yes, because when you read through it, it's sort of says like, tick what sort of roof you have got, tick what sort of walls it's got, that sort of stuff. It's just trying to remember then, when you've done a job, to write it on the sheet. You can forget that you've done this job or that job. Right now the big barn door on this one [points to map] blew open and knocked the end of the guttering off just there. So that needs doing, and it's remembering to do it and then get the log out and write it all in it. It is quite handy, it is a useful tool, it's definitely worth having it there to print out."

The agreement holder said that he goes through and updates the plan once a year with his agent. They enter in all the work that they have done and all the work that they have to do over the coming year. Says that it is a useful reminder and checklist.

Agreement holders produced a wide range of responses when asked if the BMPL could be improved. Some questioned the reason for having the BMPL at all and considered the form to be more "red tape" and "just a box ticking exercise", while others considered the BMPL a reasonable way of accounting for payments made for the maintenance of TFBs:

"The land agent deals with it, it is a tick box exercise."

"Get rid of it, a waste of time."

"When you farm, you don't farm to do paperwork, but it's fair enough I guess (…) Because we are getting paid we should be doing the paperwork."

The agreement holder said it was a bit of a pain the first time they did it but once all the information was entered it was relatively easy to keep up to date. Thought it was a useful check on how the buildings were being maintained as it is public money that is being spent and it needs to be monitored. Also a good checklist for the buildings and a prompt to do the work. "It wasn't too difficult, again it is one of those things you think oh God I haven't done that I'd better get on with it. The first time you do it, it is a bit of a pain, but you can't have money for nothing. I'm not saying that the form couldn't be simplified but I don't think it's too unreasonable to expect you to go through and check that the windows are okay, the doors are okay, and the roof and gutters are okay, because at least it has been checked hasn't it? You know, you are showing that you are doing something for the money you are getting."

Where specific suggestions for improving the BMPL were made they tended to focus on simplifying the form in various ways. It was reported that:

- It may be possible to prioritise what repairs are required for the site as a whole, rather than building by building.
- The questions were repetitive and could be reduced in number.
- The same results could be achieved by reducing the whole form to a two-page check list.
- Taking before and after photographs of everything was not necessary.
- The form should be available online for data entry. Many data fields could then be pre populated. At present many of the questions won't apply to the majority of agreement holders.
- TFBs are not houses and the standard of maintenance has to be fit for purpose. For example, many TFBs do not have rainwater goods and are open and drafty.

3.4.8 What have the agreement holders learned from implementing the options?

Just over half the CS agreement holders (54%) said they had not learned anything from implementing the TFB maintenance options. It was reported by some of the agreement holders that the options were relatively straight forward and there were not many opportunities for learning:

The agreement holder said he hasn't learnt much about the buildings because it's not that sort of option. The local builder has all the knowledge and just gets on with it: "We are probably not learning a lot from it, he [the builder] knows how to fix things and I know to point things out."

The agreement holder said he learnt a lot of building skills from his father and from a craftsman who was a builder and also worked part-time on the farm. Considers the farm family and farm staff to have pretty much all the skills required for building maintenance work. However, if buildings needed major structural work, such as new roof timbers or stabilising walls structural cracks they would get in professional local builders.

Agreement holders who had restored buildings with capital grants under ES and the previous ESA scheme said that there were more opportunities to engage with NE advisors, architects and builders to learn about the buildings:

> *"We learned a huge amount about the buildings as part of the HLS restoration grant. Through doing that we had historians come onto the place, it was their passion, and it was nice for us (…) We were a little unsure if we should spend that amount of money on the buildings, but the HLS project officer took us to another farm to see how their buildings were being restored and it was just staggering the work that had been done. Then [the project officer] said to us that as we were going to include educational access as part of the scheme why not adapt the farm buildings as part of that."*

Where the agreement holders said they had learned things from undertaking the maintenance options (46%), over two thirds (70%) said they had learned more about the TFBs contribution to the history of the area, while half (50%) said they had learned more about traditional construction techniques and materials (Figure 3.4-18):

> *"[I've] enjoyed learning about and understanding the history of the area and the barn has been central to it. Learning about the evolution of the landscape and contributing going forward.*
>
> *"I've learned new skills, doing all the wall re-pointing myself, self-learning journey. It was difficult to obtain lime mortar during lockdown."*

Implementing the maintenance options had also helped agreement holders (40%) learn more about the wildlife potential of their TFBs. It was reported that the BWAF was particularly instructive in describing the suitability of surrounding habitats and the conditions required to make the buildings attractive to barn owls, kestrels and bats.

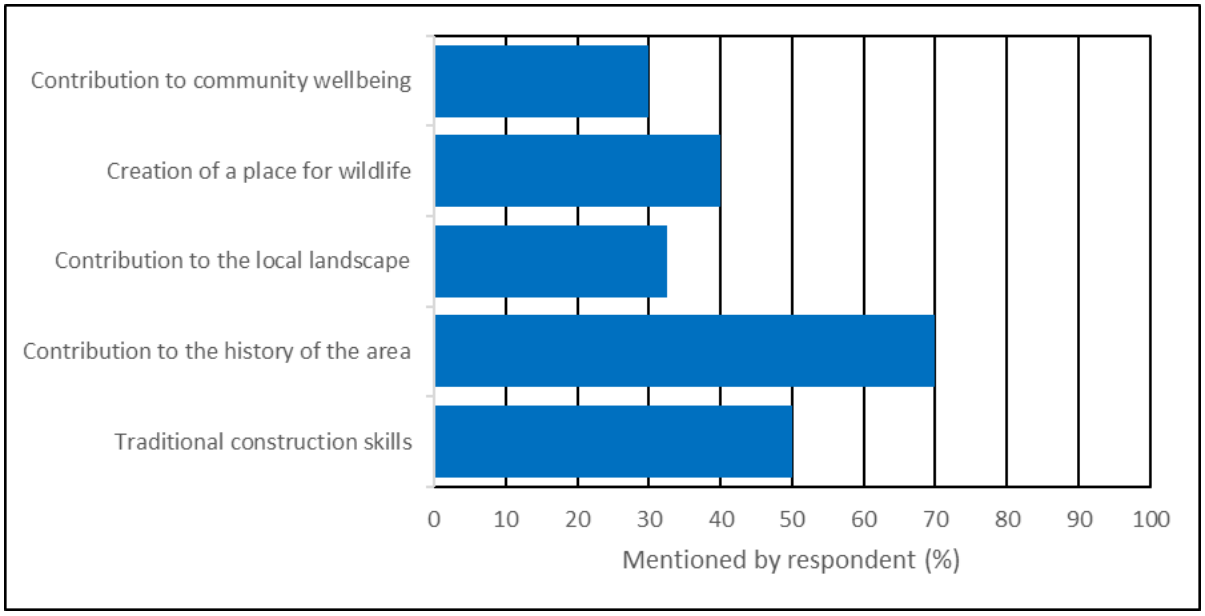


Figure 3.4-18 Learning from implementing CS TFB maintenance options

3.4.9 What are the blockers to repair?

Building maintenance

The vast majority of agreement holders said they had undertaken maintenance work during the agreement period (CS 92%, ES 100%). Where work had been undertaken the majority of sites had been subject to minor repairs (CS 67%, ES 94). Major repairs to sites were less common (CS 17%, ES 10%). When asked about the nature of the maintenance work, CS agreement holders reported that nine out of 10 sites (85%) had undergone roof repairs, which was seen as essential to keeping the buildings weathertight and sound (Figure 3.4-19).

> *"It's mainly gutters and tiles. Every time I go to work I am looking at the roofs, I'm looking for tiles, in fact I was up on the roof of this house today, my dad was good he said, 'if you keep the water out you've won '."*

Just under half the CS sites (47%) had maintenance performed on rainwater goods, 35 per cent had repairs to external walls, 23 per cent involved work to doors and windows and 9 per cent had repairs to internal fixtures and fittings. Roof repairs was also the most frequently cited type of maintenance activity carried out on the sites covered by ES agreements (87%).

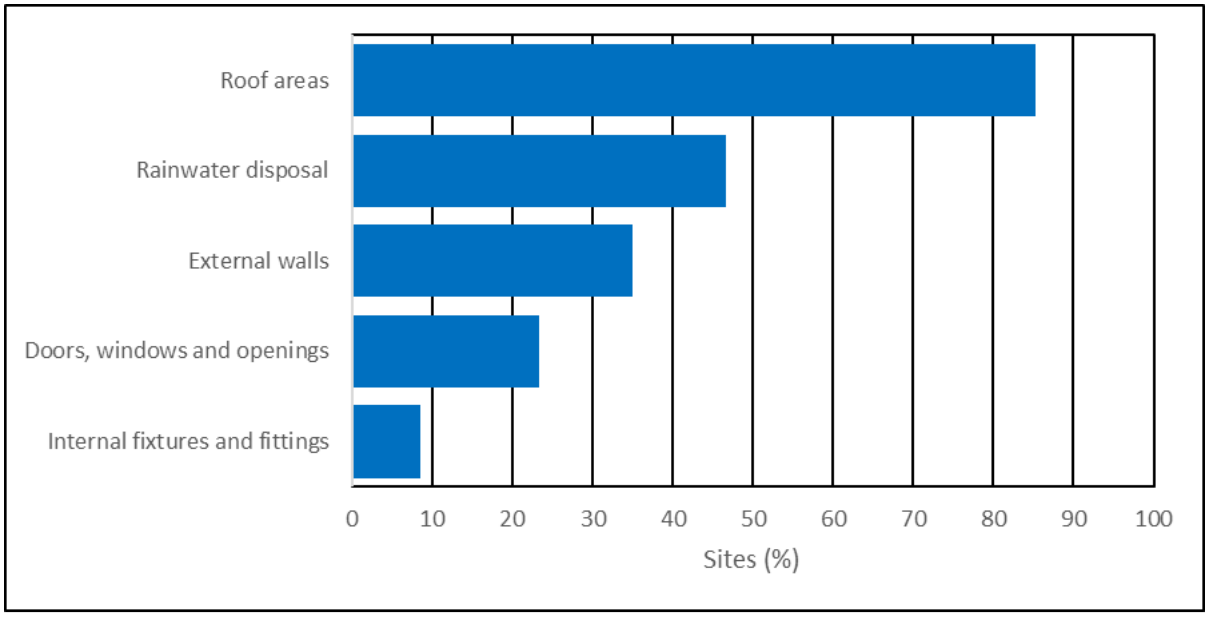


Figure 3.4-19 Type of maintenance work carried out on CS TFBs

Who carried out the work

The interview survey found that the maintenance work carried out on CS sites was fairly evenly split between local building contractors (66%), and the agreement holders and their staff (60%) (Figure 3.4-20). It was clear from the interview responses that there was often a close working relationship between agreement holders and local builders, with them often working on the same building ranges.

"I've got a good local builder who lives in the village. He helps a lot, and he is quite good for the storm damage. When we had one of those gales the other day he just turned up in the yard after the storm looking at the roofs. I'm lucky to have a guy like that who knows what he's doing, he's happy to get up heights and help with the gutters and tiles and that."

"We are very lucky that this guy is a blooming genius, he charges £200 a day, and fixes everything really quickly. He is extraordinary, he's done all the work here and all the other buildings. He's a real old-fashioned craftsman. When we have a problem with a roof, he strips it all down, replace any timbers that need replacing, and then put all the tiles back on again."

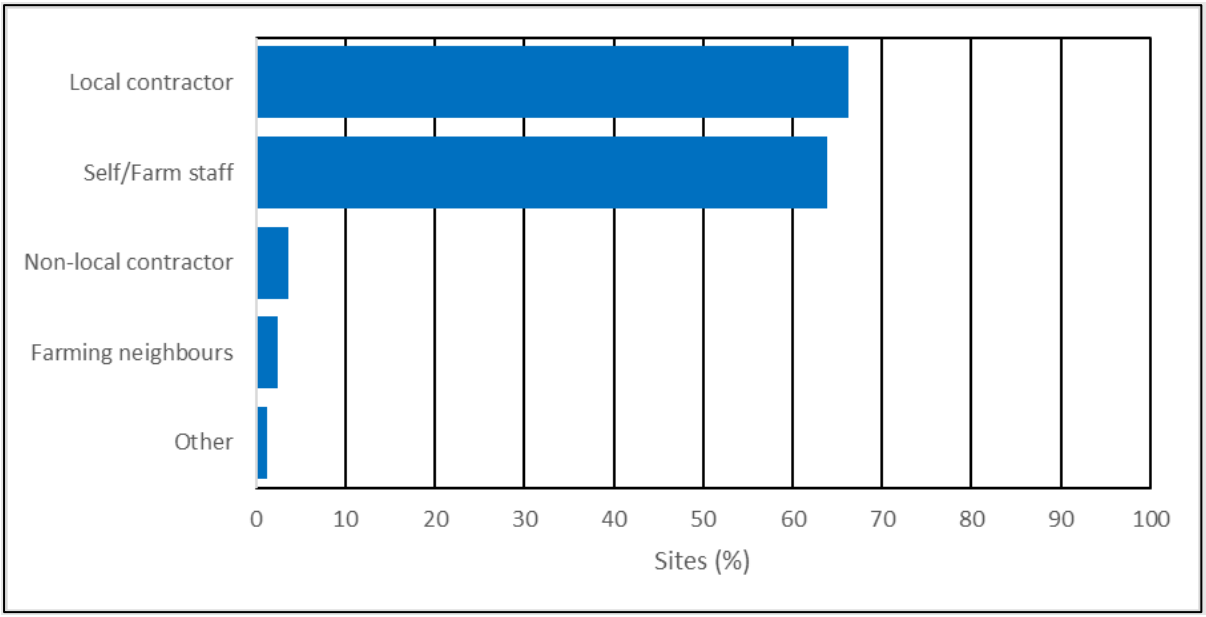


Figure 3.4-20 Who carried out the work on CS TFBs

Sometimes the relationship between agreement holder and builder had developed over many years. In some instances, this was because agreement holders had used local builders to restore TFBs funded by restoration grants as part of previous CCS, ES and ESA schemes. Through the restoration project the builders were able to show their abilities and competence, and this helped to develop trust with the agreement holders who now employed them to carry out maintenance tasks. It was also clear from the interviews that local farming and building communities often possessed a considerable degree of knowledge of traditional techniques and materials, and the maintenance of TFBs.

Takes the advice of his builder who has a lot of knowledge on how to repair the old buildings in the traditional way.

"When you meet [the builder] you will see he is very much part of that kind of, maintaining the heritage, and they are part of what this used to be and still is."

The agreement holder says he learnt a lot of building skills from his father and from a craftsman who was a builder but also worked part-time on the farm. Considers the farm family and farm staff to have pretty much all the skills required for building maintenance work. However, if buildings needed major structural work, such as new roof timbers or stabilising walls they would get in professional local builders.

It was suggested that in areas where there had been a high uptake of restoration grants there was a strong repository of knowledge about using traditional techniques and materials to repair TFBs and that the restoration grants had also helped to develop a network of reliable local builders. However, it was also suggested that these builders were now in demand for other types of building work:

> *"When there were restoration grants for the buildings, I think the builders got sick of them in the end, they would do a lot of them, but maintenance on a little job like that it's difficult to get builders for putting a couple of slates back, because they probably have six months or a year's work in front of them, there's more profit doing that. There are plenty of qualified builders about, they just seem to have bigger jobs to do."*

Difficulties experienced in maintaining TFBs

Introduction

Over half the CS agreement holders (53%) and nearly three quarters of ES agreement holders (71%) said that they had not experienced any difficulties in maintaining their TFBs. However, 47 per cent of CS agreement holders had experienced problems of various kinds. Where agreement holders said they had experienced problems, Figure 3.4-21 shows the proportion of sites which had experienced different challenges.

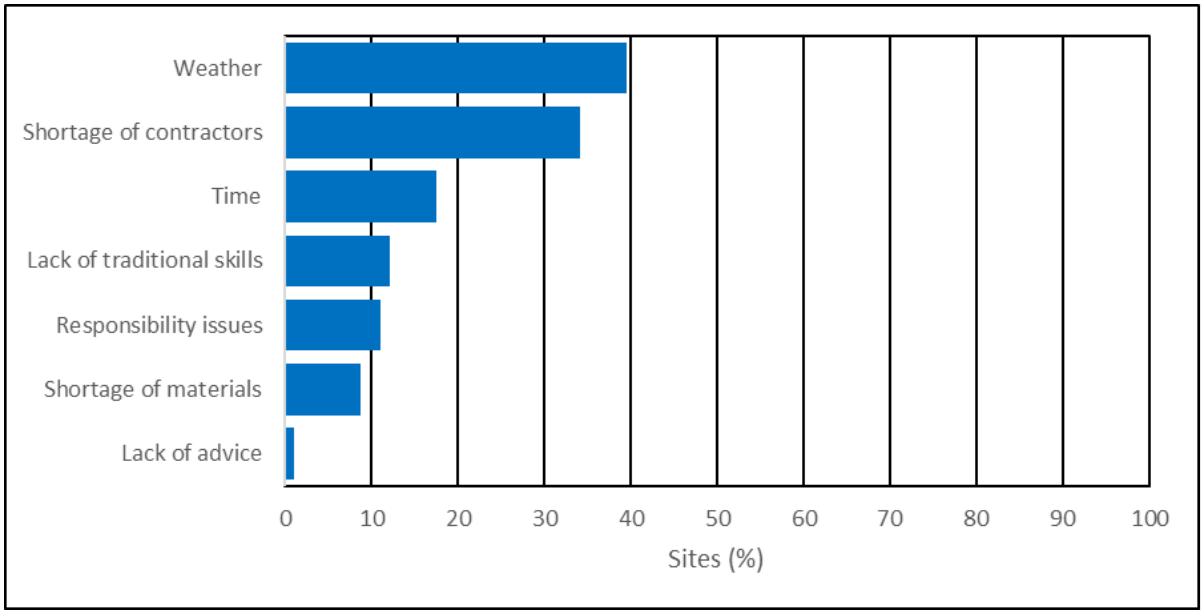


Figure 3.4-21 Difficulties experienced in maintaining TFBs covered by the CS options

Weather

The most frequently cited challenge was the weather which was mentioned as an issue for 40 per cent of the sites in the CS scheme (Figure 3.4-21). It has to be remembered that the survey took place between January and April 2022 when a series of major storms had affected much of the country and the weather may have been uppermost in agreement holder's minds as illustrated by the following quotation:

"Our approach to maintenance is completely out of the window now, because all the roofs have blown off. We are waiting for the insurance assessors, a lot will depend on that. We had a big storm before Christmas and another one just a couple of weeks ago. Maintenance is ongoing, but they are old buildings and it is a constant struggle."

Shortage of contractors

Agreement holders said that a shortage of building contractors was a problem for getting the maintenance work completed on a third of CS sites (34%). Price and availability were the two most common issues raised. Discussions around the availability of contractors sometimes included more general comments about the payment rates for the maintenance options not keeping pace with increases in the cost of employing builders to carry out the work. There were also instances when traditional skill shortages within building firms were seen as an issue.

"Round here the builders are that busy, and they charge that much don't they really, especially this last two or three years. Probably what they are paying now for these buildings goes nowhere towards it really."

"We always try and use local, but it is more and more difficult with what I class as farm buildings and farm building repairs because a lot of builders nowadays are quite happy to repair what I call gin palaces. I am not saying that you do farm buildings to a lesser quality. But, for example, when I asked for a quote to replace some doors the builders quoted for brand-new seasoned oak, because they are used to dealing with a gin palace country property that looks pretty, but we need farm repairs done by farm builders and they are very few and far between. It's doing it for farming functionality rather than making it look pretty."

The agreement holder says he has had a problem getting contractors with the right skills, but that might be a short-term thing due to BREXIT and COVID.

Time

Finding the time to do the maintenance work was a constraining factor on a fifth of the CS sites (18%). Time was a particular issue for agreement holders who undertook the work themselves, often because they could not afford to pay contractors. The weather was also mentioned as a contributing factor in conjunction time constraints. Here agreement holders mentioned that when the weather was suitable for undertaking building maintenance work there were always other pressing jobs to be done around the farm and that maintenance work frequently got pushed down the "to do list".

Lack of traditional skills

A lack of traditional skills was mentioned by agreement holders as a constraining factor on getting the maintenance work completed on one in 10 CS sites (12%). Sometimes the reason for this was because collectively, the agreement holder and staff no longer possessed the skills. These skills were being lost as people retired or got older and therefore, for example, could not get up onto roofs to put slates and tiles back. Other agreement holders had noticed a decline in the range of traditional construction skills and ability to work with traditional materials within the building trades.

Traditional felt roof with horse -hair insulation. Requires application of hot tar to seal joins between pieces of felt. Because of fire risks, insurance costs are high for contractors and they are increasingly reluctant to take it out, so diminishing pool of suitably skilled (and insured) contractors for hot-tar work, which has implications for the traditional roof.

The agreement holder says there is a shortage of lime mortar knowledge locally and it is difficult to find people.

Responsibility for the maintenance of TFBs

Although the majority of agreement holders in the interview survey owned the buildings in the schemes (CS 75%, ES 71%) there were examples where tenants had experienced tensions with landlords over who was responsible for the maintenance work.

"Our landlord has washed his hands of these buildings, he said we had an option of looking after them ourselves or knocking them down. This is where we live and the buildings are important to us. We've always said, 'we live here and we keep it to how we like' (…). As a tenant farmer, what relationship you have with your landlord is very important when it comes to building maintenance (…). So is that another thing that Defra needs to look at, as a tenant should you perhaps be offered a better incentive if your landlord isn't willing to do it. Should it be something different, I don't know how you get round that one."

landlord is very reluctant to do any work on the buildings, sometimes gets a local contractor to do the work on his own buildings.

However, there were also instances where landlords were reported to have been very supportive and helpful in expediting the maintenance work.

The agreement holder says the National Trust, as the landlord, has maintained the buildings. It helped to reroof some of them 20 years ago, so they are in good condition and were suitable for this option. This is in contrast to another landlord who never spends anything on the buildings, and they are falling down so they were not entered into the scheme.

Shortage of materials

Difficulties in sourcing materials to carry out the maintenance work was cited by CS agreement holders as an issue for nine per cent of the sites. This appeared to be a particular problem in the northern uplands where stone slates – flagstones, were reported to be in short supply for the roof repairs for field barns and farmstead buildings. There can also be problems when flagstones are re-cycled from industrial urban buildings as many are heavily stained by pollutants.

Lack of information or advice on the extent or method of repair

The interview survey shows that lack of advice on how to maintain TFBs was not cited as a major issue by the agreement holders. While one quarter of CS agreement holders said they had sought information or advice, a lack of advice was seen as an issue for building maintenance on only one site.

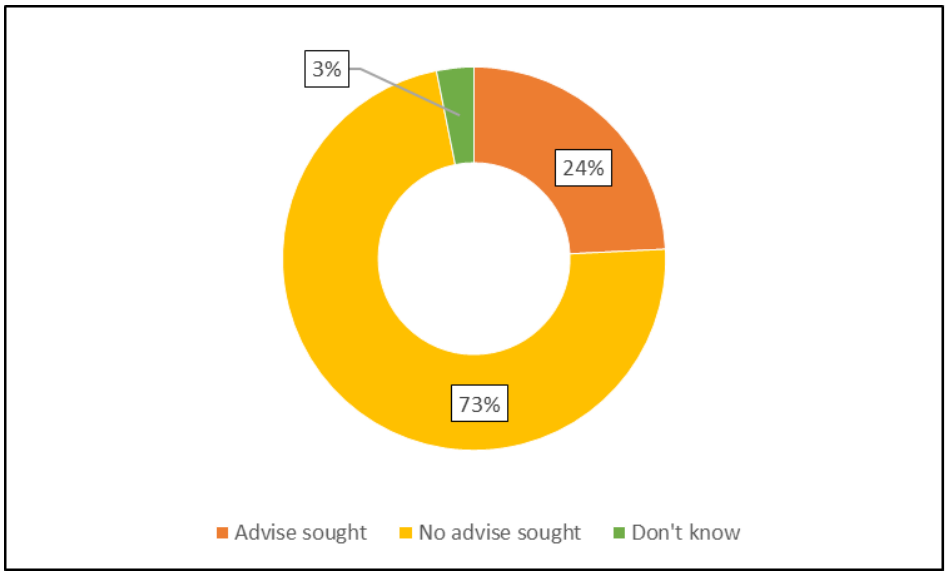


Figure 3.4-22 Information or advice sought by CS agreement holders on the extent or method of repair

3.4.10 Agreement holder views on the overall impact of the TFB maintenance options

When asked whether they felt better able to maintain their TFBs as a result of being part of the scheme Four out of five CS agreement holders (CS 81%, ES 69%) said yes and only 15 per cent said no (Figure 3.4-23). Furthermore, when asked if, knowing what they know now, would they select the building maintenance option again, nine out of 10 CS agreement holders (CS 88%, ES 86%) said yes and only 6 per cent said no (Figure 3.4-24).

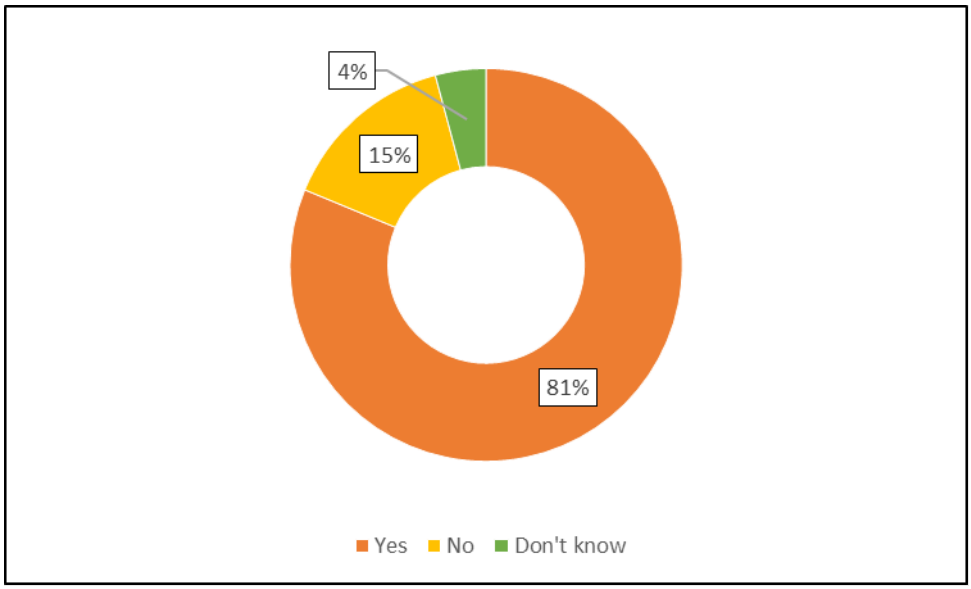


Figure 3.4-23 Feel better able to maintain TFBs as a result of being part of the CS scheme

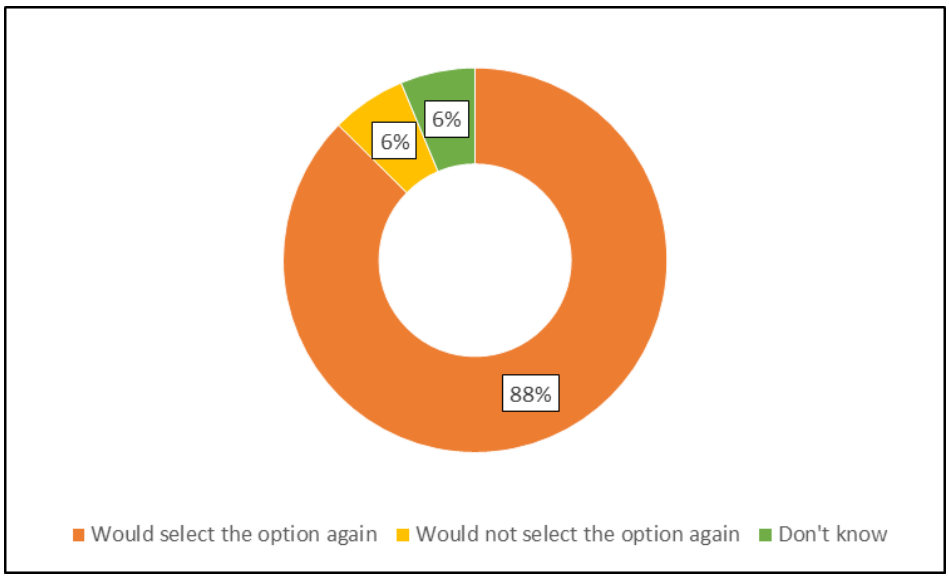


Figure 3.4-24 Selecting the CS TFB maintenance option again

Those agreement holders who chose to expand upon the reasoning behind their willingness to choose the option again drew attention to payments and how they helped with the maintenance of the buildings and the way in which the options fitted in with and complemented their farming activities:

> *The scheme recognises these buildings need to be maintained, and that they do cost, which is appreciated. They are very difficult to reuse for other purposes, given the very long driveway to this farm and domestic use would get in the way of the working farm.*
>
> *The agreement holder said that it was imperative for Defra to continue the option as the farm had spent a lot of money restoring the buildings and making them weathertight. He thought it would be dishonest of Defra to stop the grant after all this investment.*
>
> *Not a difficult thing to do, so worth doing. A contribution. [The scheme] helps with wider farm maintenance and is not always focused directly on the buildings but also includes fences, ponds and hedges.*
>
> *Nearing retirement age, children not interested in farming. Not sure if he will sign up for another 5 year agreement. If he does, then he would be happy to include the buildings.*
>
> *The agreement holder liked this option because it did not restrict his farming activities. Also, the payments help to cover the costs of maintaining the buildings. "Yes, putting the buildings into a scheme would be fine, because that isn't restricting you in any way, your income. It's a bonus in fact, you know, although there is work to do it, but you are getting paid for that work."*

Agreement holders who said they would not select the TFB maintenance option again commented on the failure of the payments to cover the actual maintenance costs and the maintenance prescriptions associated with the options:

"No, I wouldn't have done. The amount of maintenance needed has been much greater than we thought. I know it's not the right thing to do to reroof with steel, but it's the only way forward after the storms. It's the only way that we can actually afford to preserve the structure of the buildings. I think it is easier for us to maintain the buildings outside the scheme."

"No, the process is becoming all too difficult and, while the contribution towards maintenance costs is welcome, it is becoming a smaller and smaller proportion of the actual costs that are incurred."

3.4.11 Does option use appear to the agreement holder to offer good value for money?

Introduction

To assess the agreement holders' perceptions of the value for money of TFB maintenance option use they were asked about the value to both the 'tax payer' and themselves. Here the agreement holders were asked to provide a score from one to five, where a score of one was not very good value at all and a score of five was very good value.

Value for moment for the tax payer

Figure 3.4-25 shows that over two thirds of CS agreement holders (69%) felt the maintenance options provided positive value for money for the tax payer (very good 21%, good 48%) and only 17 per cent felt it the value for money was poor (Not good value at all 7%, Not very good 10%).

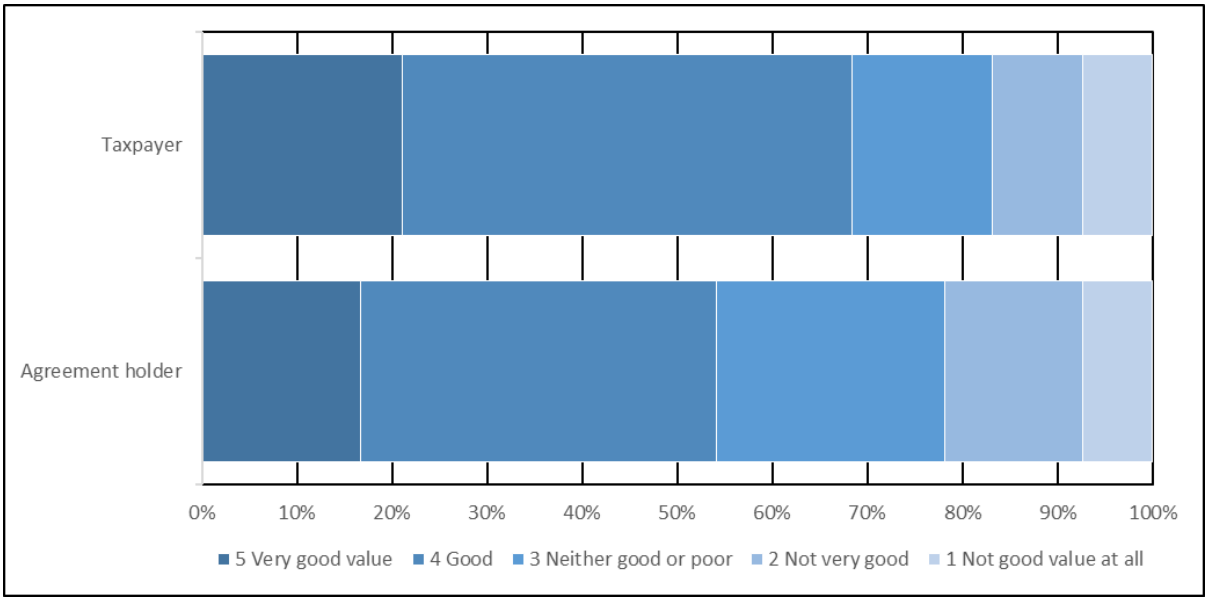


Figure 3.4-25 Value for money of CS TFB maintenance options

In providing context for the score agreement holders often drew on the answers they provided when asked why they had entered their buildings into the scheme. Here the broad range of public benefits were articulated again:

Value for taxpayer as it's better to keep historic buildings up rather than demolishing them, they also provide a habitat for wildlife alongside providing a heritage function.

Good value as it means the buildings are not converted into housing. They also host local parties on site which heavily features the buildings (and resident bats).

"I think for landscape importance, yes. Because I think the majority of farmers don't care. I know a land agent around here who advises every farmer to demolish their old buildings. We rent a farm not far from here and our neighbour, and he has got an enormous Victorian steading, and the whole thing has been demolished last year and just crushed. So, I think it's a huge landscape loss and that whole thing going."

"[For the taxpayer] personally I would say the same [4], because these are buildings that are part of the landscape, they have got a history, they are visible, there are environmental advantages with the wildlife."

for an individual- drop in the ocean, but it is good value for the taxpayer, maintaining part of heritage

Buildings would have been demolished and replaced with more-convenient modern buildings if it wasn't for the support options.

The agreement holder thought that the TFB maintenance payments did more for the landscape and history of the villages and countryside than a lot of the options in CS.

Value for money for the agreement holder

Figure 3.4-25 shows that over half of CS agreement holders (54%) felt the maintenance options provided positive value for money for themselves (very good 17%, good 37%) and 22 per cent felt the value for money was poor (Not good value at all 7%, Not very good 15%). The comments provided to explain the scoring focused on the payment rates:

It is not enough for the works that need to be done. It is a very small amount, used it to pay for materials and equipment and have done all the work myself, without any paid labour. The funding did not allow to purchase and re-fit the doors, only to re-point the external walls.

Sees the payments as essential. Would not have started on the restoration programme without Defra's commitment to maintaining TFBs.

The agreement holder made a comment about there being no fat in farming and the maintenance money was important to help cover costs but also to show that the buildings were valued and deserved to be maintained.

"it's not a huge amount of money, but to help keep buildings up I think it's probably about right. So I would give it a four."

"[For you] it is of value yes, but whether it is excellent value, I don't know. I will give it 4 out of 5."

3.4.12 Has participation in the maintenance options influenced agreement holder feelings about their TFBs?

Introduction

To assess the influence of TFB maintenance option participation on agreement holders' feelings about their TFBs they were asked to provide a score for five benefits. A score of 1 denoted that participation had made no difference to their feelings about the benefit, while a score of 5 suggested that participation had a very positive influence on their feelings.

The influence of option participation on agreement holder feelings about their TFBs

The results from this question (see Figure 3.4-26) must be treated with some caution, however, as it was clear from the comments provided by some of the agreement holders that they were scoring their feelings towards the benefit per se, rather than the influence of participating in the maintenance options.

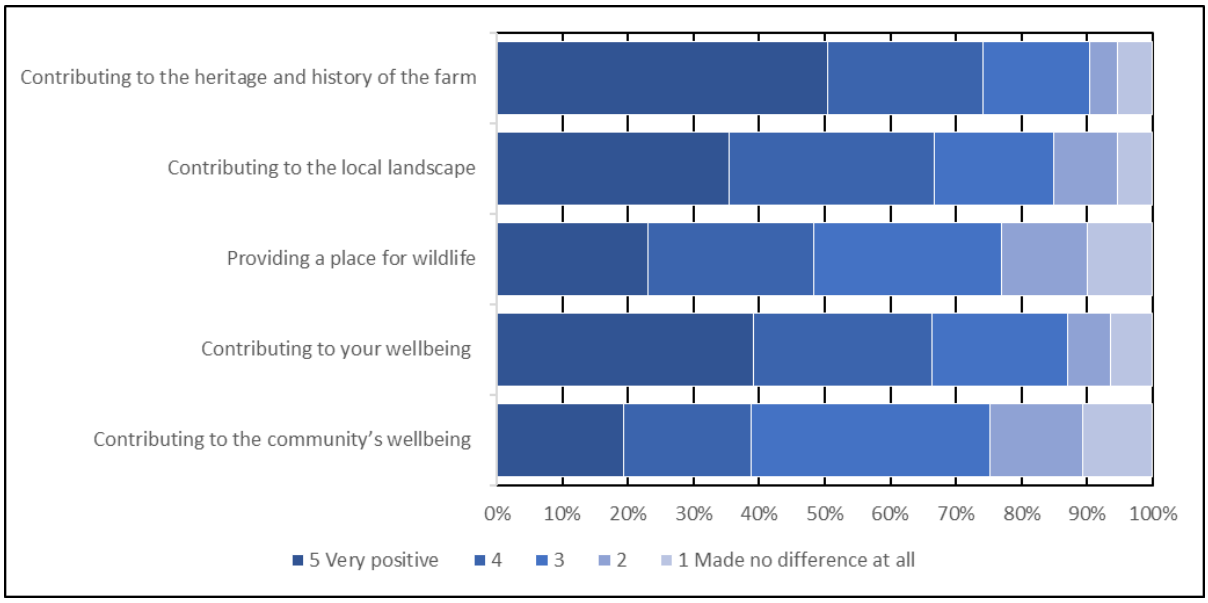


Figure 3.4-26 Has participation in the CS maintenance options influenced agreement holder feelings about their TFBs?

Overall, the evidence suggests that participation in the schemes had a positive influence on agreement holder views on the benefits delivered by their TFBs. Figure 3.4-26 shows that less than 10 per cent of CS agreement holders indicated that participation had made no different to their views for four out of five of the benefits. This pattern was broadly repeated among the 14 ES agreement holders with over 85 per cent indicating a positive influence from participation across all five benefits.

Agreement holder views on the value of TFBs

A follow-up open question asked the agreement holders to describe, in their own words, what the value of TFBs meant to them personally. Although it was stressed that there were no wrong or right answers, it should be acknowledged that the sequencing of questions in the preceding sections of

the interview schedule would, to some extent, provide a frame for the response. All but 10 of the CS agreement holders (90%) provided a response, which ranged from a couple of words to in-depth justifications replete with context and nuance. In answering this question some agreement holders circled back to their reasons for entering TFBs into the scheme. It was very clear from the responses that agreement holders expressed both instrumental and intrinsic values, but with references to intrinsic values outnumbering instrumental values by a ratio of two to one.

Utility

The instrumental values centred around the utility of the TFBs and what they could contribute to the farm business, for example:

> *Not a lot of value, they are an eyesore but being in the scheme will make them good.*
>
> *"The biggest problem with those traditional buildings, is what you do with them. You know, you can turn them into houses, which we don't want to do, that's why we are going down the storage route. We don't want people living in the middle of our farm, but the buildings need a lot of money spent on them."*
>
> *The agreement holder feels that the field barns with no use should be allowed to be converted into houses, just as long as they are not too far away from the services, electricity and water. Feels that the NPA is too strict on allowing the buildings to be reused.*
>
> *Just that it's a useful building for the milking operation.*
>
> *The agreement holder says the ones he owns are an asset and eventually they will be adapted to new uses probably outside agriculture.*

Historic environment

Agreement holders valued TFBs for their contribution to the heritage and history of their farms. Although not articulated in this way it was clear that for some agreement holders the buildings held evidential and historical value as described in section 3.2.2. So, for example, TFBs were seen as tangible, physical links to past farming practices that were no longer evident in the landscape:

> *"Because, you know, the fields have always been here, but you can't see people with horses and ploughs working them, the buildings do give us a link over a couple of hundred years, it's still visible."*
>
> *"The buildings are central to the character of the holding, although they are not listed they are of historical interest. We just felt that they were manageable to restore, gradually over the length of the scheme."*
>
> *"I think they are lovely, I'd hate to have modern concrete buildings all around us. I'd hate it if they came and steamrollered them all down. We need our heritage."*
>
> *The agreement holder thinks the buildings are not particularly beautiful but there is a historical reason for them being there and it shows the history of farming in the area.*
>
> *The buildings show the history of the area. The two sites are very different in character. One is like a model farmstead the other has grown over time.*
>
> *The buildings are part of the history and heritage of the farm.*

Landscape

Many of the agreement holders talked about the pleasing and aesthetic contribution the TFBs make to the immediate farm surroundings and local landscapes. Well maintained buildings were described as attractive, beautiful, better to look at, impressive and adding to the character of the countryside:

> *"I use the word trophies, it's like having a trophy. It's almost a work of art, it's something that is of no financial value, but it is something that is very attractive to look at. They are very beautiful."*
>
> *They are attractive and an important part of the local landscape*
>
> *The farmsteads are prominent features in the landscape here, especially Ness Farm set against the Stour.*
>
> *recognises value in landscape and as built heritage*
>
> *"In Norfolk you see these red brick buildings, you go into Suffolk and you still see the timber buildings. Whether it was the prosperity of Norfolk, we must have had timber buildings to start with, but we replace them with redbrick. It doesn't seem to have happened in Suffolk for whatever reason. They are the flavour of Norfolk, definitely."*
>
> *Farmstead and its TFBs reflects the rural nature of the neighbourhood, it embodies the character of this farm and others in the vicinity; it's aesthetically pleasing to see the brick buildings, which have some architectural detail rather than being just utilitarian and where the development of the use of the buildings over time can be seen.*

Some agreement holders went further saying TFBs in disrepair were frequently negative elements in the landscape:

> *The agreement holder says it was right for the barns and walls to be maintained and that he didn't like to see them tumbled down the roofs caved in.*
>
> *They are an eyesore but being in the scheme will make them good.*
>
> *"You go round some of these farms, with all their magnificent buildings, and they are in a state. The Ivy has all come up the roof, the roof has collapsed, the water has got in, maybe the corner of the wall is sort of coming out, maybe the bricks have tumbled down."*
>
> *They are part of the traditional farmyard, the farm would look odd without them or if they were dilapidated.*

Wildlife

When talking about the intrinsic value of TFBs agreement holders rarely led with the benefits for wildlife, which was often mentioned as a second or third benefit. However, while not the first mentioned, agreement holders were often expressive about the value of their buildings for nature conservation and pointed to their references barn owls, bats and other species made earlier in the interview.

The buildings are enjoyed by the public and the owners. The historic interest is very rewarding and they are of value for wildlife.

The buildings are well used by barn owls. They mainly see the buildings of the capital asset. They contribute to the value of the farm, they are an asset.

"It's a tricky balance. If you have an educational building you don't want bat muck everywhere. But the barn owls do well in the quiet building."

Agreement holder well-being

Pride, pleasure, the satisfaction of seeing the buildings well maintained, and the affirmation of their farming identity were all emotions experienced by agreement holders, often echoing the reasons given in section 3.4.2 for entering the TFBs in the schemes. Personal and family connections to the TFBs were also seen as important reasons for valuing them.

"In most of my daily life I am too busy to think about it. When you sit here in the barn at the moment like this, when you have the educational visit there is definitely a feelgood factor. I would worry (…). I would miss them if they weren't here."

Pride, as 5th generation owners of the holding and the history that is embodied in the buildings and the landscape. Not wanting to be the one that saw the farm fail so takes whatever is available in order to be able to carry on.

They are part of our small farm, close to the house and so an important part of our daily lives

"These buildings are important to me and it is important to protect them, by being in the scheme they are protected from developers (…). Our service manager used to drive by our farm every day, once said to me 'when I see your orchard I feel that everything is going to be OK'."

The farmer became slightly nostalgic for a few moments, saying how he and his father had both signed their names in the building. It has also been repurposed as a cookery school for a close family member, making it a valued part of the enterprise.

The buildings are part of the family's history and heritage, and the agreement holder wants to get the farm looking neat and tidy, as it was in the 1960s. Wishes to improve the condition of buildings so that they are admired and not seen as an eyesore and the work done to date and intended to be done provides a sense of pride in the holding and in the achievements so far.

Seen as invaluable part of the farm and reflect the family's length of tenancy – now 4th generation – as well as good conservation.

The agreement holder stressed importance of the farmhouse and farm buildings for the family farm and their sense of belonging and identity

"Both my grandfather and father were born here on the farm. The farm was purchased by my great grandfather in 1876 and its very closely linked to our family history, do not want to lose it and would like to preserve it… my reasons are purely philanthropic."

Family connections with the heritage of the farmstead having arrived in the area with Bonny Prince Charlie in 1745 and stayed, then moved to the farm in 1790. Keenly aware of that heritage, proud of it and wants to share it with others. Sees himself as a custodian of the landscape and wants to pass it on within the family in better shape than when he inherited it.

Community

Valuing buildings for the benefits they provided for locals and visitors was also mentioned by some of the agreement holders, and it was this type of public benefit that appeared to be most influenced by the interview schedule. On more than one occasion agreement holders mentioned that they had never really considered the benefits that maintaining TFBs may have for the public to view and experience the buildings in the landscape until the interview, for example:

> *"I hadn't really thought about it like that, the fact the barn is appreciated by a good deal more people than what I would have probably imagined. A lot of people come here on holiday and use the footpath through the farm, and they are actually thinking that's a nice bit of Norfolk heritage."*
>
> *"Community? I would give it a 2, because I haven't really considered it."*
>
> *"I will just say, you get various lorry drivers coming into the yard and they say 'can I stop overnight' because it is such a lovely place for them. They count as community, do they?"*

However, other agreement holders were very familiar with community benefits and valued them accordingly, especially those in popular tourist areas with good public access and footpath networks:

> *"the farm is full of footpaths, last summer it was heaving after lockdown, lots of people stop to talk. One or two can maybe a bit lost with maps out, and I say to them 'can I help you?' And they'll start to talk to you, and they think the barns are absolutely marvellous like, they really do. One of the most popular walks in England goes across our farm, so I've been told."*
>
> *Strong sense of how special the buildings are, sometimes people on footpaths remark on how remarkable they look, including some holidaymakers.*
>
> *The venue has been used for village functions, charity barn dances and wakes. The buildings receive many compliments from those using the venue.*
>
> *"One person asked us what they were all for, he couldn't understand what all these barns were for. Then when I said they all kept a few cows in each one he was gobsmacked really then, he didn't realise that there would be so many cows (…). Through on the Internet we follow this website 'We love the Yorkshire Dales', and there are loads of folk that often take photographs of the barns in the Dale and that sort of thing, folks have them on the photos don't they."*
>
> *"When we have the doors open on the barn people stop to talk and ask what we are doing. The inside of the barn is very impressive when the big doors are open, and people look inside and ask questions."*

3.4.13 The case studies

Five in-depth illustrated and five lighter-touch case studies have been created to showcase the key processes and outcomes resulting from agreement holder adoption of CS and ES TFB maintenance options (see Figure 2.6-1). Each case study highlights different features of the project and its objectives, such as improvements in agreement holder well-being through participation, greater appreciation of cultural heritage and the provision of public benefits, the role advice plays in the choice of appropriate TFBs, recognising barriers and blockages and how to overcome them. The case studies use evidence generated by Tasks 3 and 4.

Historic farmsteads on the North Northumberland Coastal Plain

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

The farmsteads sited in the North Northumberland Coastal Plain NCA, and the Northumberland Sandstone Hills NCA, include some of the largest courtyard-plan farmsteads in England. These are often distinguished by the housing of farm workers ('hinds') in terrace rows and by the 1820s the use of threshing and fodder-processing machines powered by horses, steam, water and wind. This is a designed landscape of large-scale regular enclosures with some earlier sinuous boundaries, plantations and straight routeways, intermixed with the earthworks of medieval villages and earlier cultivation and prehistoric settlement concentrated on areas that survived as common land.

A typical large-scale planned farmstead set in the large-scale enclosures with hawthorn hedgerows and plantations and the sea forming the backdrop (not the case study). © Peter Gaskell/CCRI

2. Farmstead character

Two farmsteads are included in this Countryside Stewardship agreement using the traditional farm building maintenance option (HS1), and both survive as extant traditional farmstead groups dating from around 1860; the farmhouses and some buildings are listed at grade II, the houses facing south into their own gardens and each group having also a row of hinds' cottages. The

largest one of these sites comprises a regular multi-yard plan, typical of the large mechanised farmsteads of this area, and includes a U-shaped yard with a barn, granary and housing for cattle, and additional detached ranges – pigsties, stables and a long cart and implement shed range with a smithy. The scale and range of building types illustrates the range of functions needed for large arable farms in this area, and the need to house beef and later dairy cattle. The dovecote is an ornamental device used by estates across this area. At the core of the farmstead was the threshing barn and also a straw barn for the receipt of the large quantities of straw from the sheaves of corn which were fed into the threshing machine. The survival of an in-situ threshing machine, which was powered by a water wheel, is a remarkable and exceptionally rare survival, enhanced by 19th and early 20th century graffiti. In addition, the stables have retained their stalls.

Another farmstead in this agreement is a more compact arrangement, also with a dovecote sited over the main entrance to the farm buildings which are set around a courtyard and are listed at grade II. A chimneystack indicates that the threshing and fodder-processing machinery was steam powered, and – again - the survival of stalls, fixtures and an in-situ threshing machine is a remarkable and exceptionally rare survival.

A view into one of the farmyards, showing the fine detail to the masonry and the tall dovecot which was used as a symbol of high status on farmsteads in this area. © Peter Gaskell/CCRI

Stables and wide-span building for fattening cattle, typical of this area. © Peter Gaskell/CCRI

3. Public benefits

These large-scale farmsteads with early evidence for mechanisation have considerable historic value in illustrating the wholesale remodelling of farmed landscapes by large estates from around the 1780s, part of a pattern that extends into the Lothians and other parts of Scotland and complementing also the evidence for local industries including coastal fishing which is such a distinctive part of this area. Retaining the integrity of such farmsteads in the landscape, and features of exceptional rarity such as threshing machines, is key to interpreting the story of agriculture in this landscape and how it has shaped habitats and complements the rich heritage of its coastal and other industries.

The sites are accessible and hold prominent positions in the landscape. Both sites are within 100 metres of roads and adjacent to other publicly accessible land.

Barn owl boxes have been erected in the buildings at both farmsteads and although it is early days one of the boxes is already occupied. The agreement holder received advice from a local bird group about the siting of the boxes. The bird group surveys the buildings each spring. The agreement holder explained the value of the buildings for wildlife:

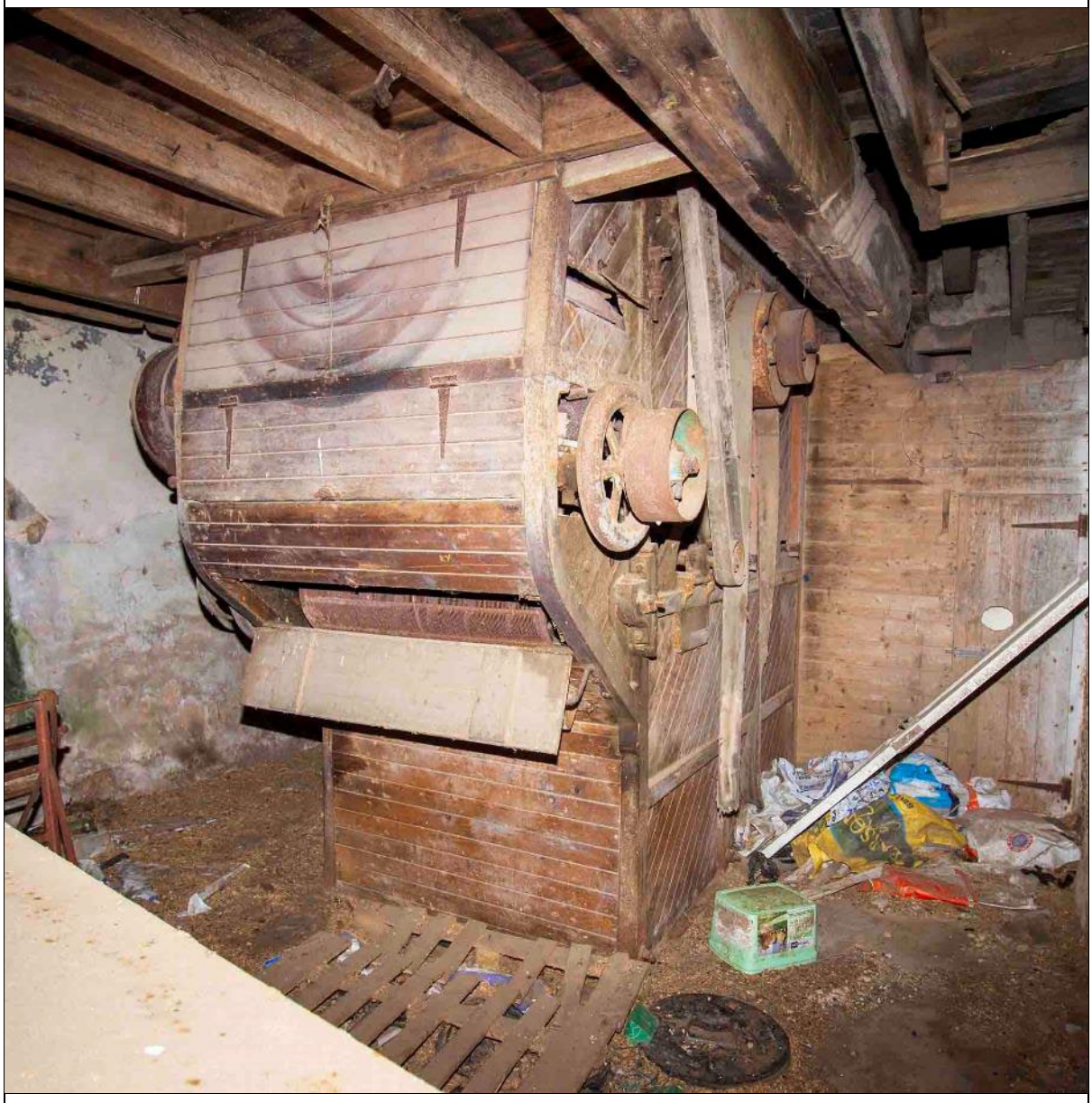
> *"Yes, bats and birds and barn owls, they are all regular users. That's one of the advantages of quite a lot of our buildings being disused (…). There are definitely bats and owls and swallows and martins and there probably is other stuff as well."*

The agreement holder has a deep understanding of the features and history of the farmsteads and how they have developed over the centuries:

> *"This farm has been in the records for a very long time. It was mentioned by Edward III in 1215. There has never been a lot of money around and they just added buildings over the centuries. There is a big variation in quality and use. Whereas at [the other site] it was very different. It was sold in about 1860, and they flattened it and started again from scratch, so it's like a model steading. They have both got threshing machines in them. This [site] was powered by water, there is a disused lake out the back (…). [The other site] has an engine house and chimney for steam powered threshing (…). They both have a lot of features in place, remarkable really."*

As set out in one of the headline Statements of Environmental Opportunity (SEO) for the conservation and enhancement of this NCA, the continued maintenance of the farmsteads and their presence in the landscape helps to:

> *Improve public enjoyment and understanding of this wild coastal landscape, enabling people to experience the peace and beauty of the area and learn more about its coastal processes and biological, geological and heritage assets. (SEO 1)*



The threshing machine is still in-situ, an exceptionally rare survival. © Peter Gaskell/CCRI

4. Participating in the scheme

Both of the farmsteads are still used for farming, although only 40 per cent of the floor area is actively used, mainly for housing cattle in the winter. The agreement holder has many years' experience of working with agri-environment schemes, but Countryside Stewardship is the first scheme that has included the traditional farm building maintenance option. The maintenance payments are helpful, but the agreement holder thinks the farmsteads would benefit from a

restoration capital grant as many of the buildings had suffered badly in the recent storms that devastated the North East.

The farm has a good roofer and joiner who has been working on the buildings on and off for the past couple of years. The main activities are replacing slates and gutters with some door replacement as well. There was significant damage to the roofs in the autumn storms, which will require a lot of work.

The agreement holder thought that the maintenance option was good value for money for the taxpayer:

> *"For the taxpayer, that's a good question, is it a public good? (...). Yes, in my opinion yes, I like old buildings."*

However, the agreement holder fears that the payments for maintenance are too low and that and the maintenance rules for farm buildings can be over specified. They are working buildings rather than domestic houses. Over specification can double the costs.

Nesting boxes for poultry. © Peter Gaskell/CCRI

Community engagement in the Mid Severn Sandstone Plateau

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

This farmstead is set within the Mid Severn Sandstone Plateau NCA in an area where most courtyard farmsteads either developed in a piecemeal fashion after the enclosure of medieval open fields set around villages or were built in designed landscapes as large-scale courtyard farmsteads for large farms and estates in the late 18th and 19th centuries.

A typical courtyard farmstead resulting from piecemeal development (not the case study).
© Historic England 2900/03

2. Farmstead character

This Countryside Stewardship agreement has a single site with buildings covered by the HS1 option. The farmstead had developed in a piecemeal fashion around all sides of a courtyard, to one side of which is a large 18th century farmhouse (listed grade II) which has retained a smokeroom and granary. Part of the courtyard was destroyed by fire in the 1960s but over 50 per cent of the traditional buildings remain. The threshing barn range is notable as a survival of an earlier timber-framed barn. It shows that a farmstead has been here since at least the early-18th century, and with its later attached granary and stables illustrates the growing importance

of arable farming in the area. The threshing barn also retains the flywheel and drive shaft from a mobile steam engine. This farmstead illustrates how it was common in the area to continue building barns in timber frame whilst houses were built in fashionable brick, and also for the daubed or open wattle infill in the timber frames to be replaced by brick.

The exterior of the barn range, showing the brick infill to the exposed timber frame. Part adapted as an education centre for school children. © Peter Gaskell/CCRI

3. Public benefits

Despite partial destruction by fire, this group retains more than 50 per cent of its historic form. The threshing barn range also contributes to local distinctiveness through the way that it complements the later brick farmhouse, in its use of timber frame with brick infill and in its high visibility within the landscape. Two footpaths meet in the farmyard and the buildings can be viewed in their landscape setting from the public road which passes within 500 metres.

There has been a high level of public engagement and access on the farm for over 20 years. This includes educational access, permissive access, school visits, open days for the public and the press. Part of the threshing barn range has been converted into an educational space, with a kitchen, toilets and washing facilities. The agreement holder is passionate about informing school children and the general public about the farmstead, farming, and environmental management:

> *"Some of the children can't believe how old the buildings are and that we used to have horses on the farm before the tractors. We talk to them about the working horses and that opens up a whole new world for the kids. They go back to school and tell the teacher all about it."*

Barn owls, kestrels, and bats are currently breeding on the farm, but not in the buildings. A variety of small birds, particularly dunnocks and sparrows, regularly use the old buildings in the

winter. A bat survey was undertaken when adapting part of the threshing barn range for educational use.

The agreement holder is very proud of the traditional buildings and that they are protected for the next generation to enjoy:

> *"When my grandfather came a hundred years ago I imagined the buildings would look pretty swish. It would have been busy the buildings would have been housing horses and not tractors. It's been nice to put something back."*

In this respect, the agreement delivers one of the Statements of Environmental Opportunities (SEO 4) for conserving and enhancing the natural and historic environment of this NCA, specifically in encouraging visitors and interpreting the role that habitats, artefacts and historic buildings have had in the development of the landscape over time.

The interior of the threshing barn range, showing the flywheel and drive shaft from a mobile steam engine which powered threshing and fodder-processing machinery inside the barn. © Peter Gaskell/CCRI

4. Participating in the scheme

The agreement holder has over 40 years' experience of agri-environment schemes and the threshing barn range benefitted from an Environmental Stewardship traditional farm building restoration capital grant to stabilise and reroof the structure. The agreement holder learned a lot about the history and construction of the traditional buildings during the restoration project which now helps him with the maintenance regime:

> *"We wanted to (…) have buildings that were part of our history if you like. And it was (…) the project officer who showed us where we could potentially be. We learnt a lot about the building, the structure of the building, and about how it had evolved, where the timber had come from, the fact it had been used previously on ships."*

The threshing barn range was restored to a very high standard using traditional materials so current maintenance is quite light touch, such as keeping the gutters clear:

> *"We check the gutters, the drains, the roof caps, the pointing. We've done some work on the pointing, it's traditional lime mortar and the sand washes out, so we've had a local craftsman doing some repointing during lockdown. We have a problem with the little birds sharpening their beaks. We also have some problems with bees living in the bricks because the bricks are hundreds of years old. We've done some joinery as well, we've had to rehang a door and had to replace the stable door completely because it was hanging off, it was built on site using traditional methods and that'll be safe for another hundred years."*

The building maintenance plan and log and the building wildlife assessment forms, which were required as part of the HS1 option, helped the agreement holder manage the buildings and the option provided good value for money, both for himself and the taxpayer:

> *"As long as people are investing the money on keeping the buildings looking good. I think it's important, I think it's great value. You have to bear in mind we have a footpath that walks right through the middle of the yard. So we have people from all over literally walking right past that building on a regular basis and they would notice."*

Being part of Countryside Stewardship and using the maintenance option has helped the agreement holder think through his approach to environment management:

> *"It's kind of formalised the way we think about the countryside… I think more so now, particularly with people's mental health. How important it is for people to be in the countryside and out of their own home. I think it's formalised it a bit more in our heads."*

Timber framing with carpenters' joint marks © Peter Gaskell/CCRI

Village-based farmsteads in the Leicestershire Vales

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

The farmstead is sited in the Leicestershire Vales NCA, in the heartland of 'village England' where from the medieval period village-based farms worked large open fields around them. Some farms remained in villages, but relatively few as here survive.

A typical farmstead built of brick and including a 17th century timber-framed barn set around a courtyard on the edge of a village and close to medieval ridge and furrow (not the case study). © Historic England 27968/ 007

2. Farmstead character

This Countryside Stewardship agreement uses the traditional farm building maintenance option (HS1) to maintain buildings at two sites; a central farmstead located in the village and an outlying field barn. The buildings are typical examples of brick and slate structures of the type built in the early to mid-19th century, probably soon after the grade II listed house had been built in around

1800, they are thus remarkable as survivals of village-based farm buildings still in agricultural use. There is also a small single-storey field barn for housing cattle, built to serve some of the fields at a distance from the farmstead, noted as a distinctive type of building in the Farmstead and Landscape Statement, which were built in relationship to 'village-based farms in landscapes of piecemeal enclosure'.

The mid-19th century stables. © Peter Gaskell/CCRI

3. Public benefits

A working farm within a village is an increasingly rare sight. Most farmsteads still in farming use – typically large and more formally-planned courtyard groups – are sited away from villages to manage farmland that was enclosed either gradually or as part of a planned phase including by parliamentary act. It follows that although 69 per cent of farmsteads recorded from late 19th-century maps in part of this area retain more than half of their historic form, there has been a high rate of loss for the last 200 years in villages.

The farm family has a personal connection to the buildings which has been a motivation to protect and maintain them:

> *"We like the old buildings they're part of the farm, we want to keep them for posterity (…). We've had enquiries from people who want to convert them, we don't want to (…). They are part of the history of the farm (…). When they are gone they are gone (…). Many are not really usable, but they are beautiful and we should keep them."*

The farmstead is highly visible. The Leicestershire Round long-distance footpath passes within 100 metres of the farmstead, which can be seen from two roads and houses in the village. The field barn can also be seen from nearby paths.

Swallows and martins regularly nest in the buildings and the agreement holder makes sure that they always have access.

In this respect, the agreement helps to deliver the recommendations for conservation and enhancement of the natural and historic environment set out in the Statements of Environmental Opportunity (SEO) for this NCA - particularly SEO 1 to:

> *Protect and appropriately manage the strong historic character and heritage assets within the rural and urban landscapes maintaining the evidence of past land use and connections between agriculture, settlement pattern and topography, and the significant places and events that took place within the area so that the area can be enjoyed by all.*

The field barn. © Peter Gaskell/CCRI

4. Participating in the scheme

The agreement holder joined the Countryside Stewardship scheme because it supports the way in which the farm is managed along traditional principles. The buildings are maintained because it is the right way to farm and the agreement holder does not like to see buildings falling down and being neglected. The agreement holder was brought up to look after the farm, whether it be laying the hedges in the traditional manner or keeping the buildings in good condition. HRH Prince Charles once stopped when he was passing to congratulate him on the state of his farm.

> *"We love it here, I was born here, it's our history. This farm is in our blood. I try and farm it how it should be, our main priority is the cattle and sheep, our animals, and keeping it. This is our history, why rip it all out, why?"*

The payments provided by the HS1 option have helped to maintain the buildings, but maintenance can be a challenge for the remote building:

> *"They used to milk cows across the road by hand in that building [field barn]. But it's the vandals, you can't put anything in it because of the vandals, so we have had to seal it up. They frequently take slate off the roof. We sealed it up, so it doesn't get wrecked, and it is there for posterity."*

The agreement holder has spent a lot of money maintaining the buildings and appreciates the financial help. He does not want to see the field barns disappear from the countryside because there are very few of them left in the area.

Maintenance is viewed as good farming practice, and the agreement holder checks the buildings after every storm and replaces slates and cleans gutters as he has always done. He has also replaced some of the doors to the buildings with traditional materials because they needed replacing.

All the fixtures and fittings in the oldest buildings have been retained as it's all part of the farm's history.

The agreement holder is concerned about the future of traditional farming in and around the villages:

> *"In the village all the buildings have been converted (…). We are the last man standing in the middle, I'm the only farmer going. I'm the last of the Mohicans."*

Dairy with Lister water milk cooler. © Peter Gaskell/CCRI

Conserving heritage and wildlife, and enabling public enjoyment of landscape, in England's National Parks

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

This farmstead is set within the Yorkshire Dales NCA in the Pennine uplands. There are over 4,500 field barns and outfarms in the Yorkshire Dales National Park (YDNP), a greater concentration than anywhere else in the British Isles, although only around 60 per cent of those present in around 1900 survive. The field barns and their walled landscapes with routeways leading to summer grazing on moorland are an integral part of the pastoral landscape and economy that has developed in the dales since the medieval period, and they are explicitly recognised in the *National Park Management Plan* as an element of the YDNP's 'special qualities'.

Field barns and outfarms make a critical contribution to the character of upland landscapes in northern England, and as here (note the stepped lynchets for former arable cultivation) can relate to medieval and earlier earthworks which illustrate the story of farming from the prehistoric period. © Peter Gaskell/CCRI

2. Farmstead character

This Countryside Stewardship agreement uses the traditional farm building maintenance option (HS1) to maintain buildings at 12 sites consisting of 11 field barns and one farmstead. Field barns mostly date from the late-18th to mid-19th centuries, and are so numerous because they served as places for milking and housing cattle in scattered holdings over the winter months. This avoided the need to bring the cattle back to farmsteads for these purposes. The farmsteads are mostly small-scale linear plans with the houses and working buildings attached in-line. Some field barns also served as hogg houses for housing yearling sheep over the winter, a type of building found in the upper dales here and also in the Lake District and North Pennines. The field barns also relate to the earthworks of medieval lynchets and other field systems and settlements dating from the prehistoric period which have been preserved because of this long history of pastoral use, and which in turn relate to floristically-rich former hay meadows.

These field barns are sited in a lower dale, where farms specialised in making butter and cheese for export and local consumption by families working in local industries. They are built of locally-quarried stone and slate. Farmsteads Mapping has shown how this area has a higher proportion of farmhouses with 17th century origins which are sited in villages and hamlets or on the edges of in-bye land. The mapping of traditional farmsteads and field barns in the National Park has shown that this area has one of the highest concentrations of field barns, and 68 per cent are still in agricultural use.

A field barn for housing cattle, now used as a sheep shelter. © Peter Gaskell/CCRI

A hogg house for yearling sheep. © Peter Gaskell/CCRI

3. Public benefits

The agri-environment schemes are vital for the conservation of field barn landscapes which, as elsewhere in the Yorkshire Dales, make a critical contribution to sense of place and the 'offer' which draws so many visitors from Britain and abroad into this landscape. They are visually prominent from and close to public footpaths and other publicly accessible land. Many provide habitats for barn owls, a variety of other bird species and bats, and also contribute to the earthwork and built traces of land use, settlement and industry which as in other upland landscapes extend into the prehistoric period and are remarkable for their visual prominence and variety in an international context. The agreement holder noted that the numbers of barn owls seemed to have increased:

> *"There is a barn just there [points to map] we drove up the road one night and there was three hopping about near the moor. Then a few days later we ran some sheep into this barn and there was two in there. We have a barn owl box in that barn but they weren't in the box they were up on the baux (…). It's difficult to talk about bats, they are about, and you see them out of the corner of your eye at night. But whether or not they are in the buildings I'm not so sure."*

The agreement holder described the farmstead as being steeped in history and explained the importance of the Iron Age sites on the farm and the terraces (strip lynchets). Although the farm is now isolated from the main road the family said that it was once on an ancient routeway.

In some ways the condition of the farm buildings reflected the way in which the farm was being managed. Although the field barns were not in daily use the agreement holder felt they provided broader benefits to the local community and visitors:

> *"We have quite a tidy farm and I suppose it's nice to have them looking sound and roofs on (…). They are nice to see (…). It seems a shame to let them go once they're there."*

The agreement helps to deliver the recommendations for conservation and enhancement of the natural and historic environment in this National Park, as also set out in the Statements of Environmental Opportunity (SEO), particularly SEO 1, which mentions the contribution of field barns to sense of place for this NCA.

A barn owl box in an isolated field barn. © Peter Gaskell/CCRI

4. Participating in the scheme

The family had been involved with agri-environment schemes for many years dating back to the 1980s. The farm had used capital grants as part of the Environmentally Sensitive Areas scheme and the Environmental Stewardship scheme to restore a number of field barns which were now in excellent condition and had been entered into the Countryside Stewardship scheme.

According to the agreement holder, regularly checking the condition of the buildings was just part of good farming but that the building maintenance plan and log was needed for those farmers who need a reminder:

> *"When you live here all the time, you automatically do it (check the buildings) without thinking (…). Once a year we have a walk round."*

The agreement holder noted that maintenance is no longer a simple matter of *'putting a couple of slates back,* due to issues with getting skilled labour:

> *"In the old days you would do the work yourself, but we always get someone in now, just for health and safety, you need a loadall and an extendable boom to get onto the roof, and builders are qualified to do it."*

The agreement holder also said that whilst all the barns that were in good condition had been put into the scheme there were three others that were in poor repair which they would like to put in the scheme. They had applied to the YDNP for a Countryside Stewardship pilot restoration grant. They are very interested in restoring the barns where they need major work.

The agreement holder felt that the mid-tier scheme was very complicated, and they had to get an agent to fill in the forms. He also stressed that the dry stone walls were just as important to the landscape as the field barns and there should be grants for helping to maintain the dry stone walls as well.

Barn and wall landscape. © Peter Gaskell/CCRI

Historic character in the Bedfordshire and Cambridgeshire Claylands

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

This farmstead is in the Bedfordshire and Cambridgeshire Claylands NCA. This is an area of contrasts. There are village-based farmsteads which worked fields enclosed from medieval open fields. There are 17th century and earlier aisled barns and other buildings including some set in earlier enclosed landscapes and next to the earthworks of medieval settlements and there are some large-scale estate farmsteads of the 1840s-1870s set in estate landscapes with thorn hedgerows bounding large regular fields. These estate landscapes and farmstead types extend into the Bedfordshire Greensand Ridge.

One of the planned courtyard Victorian farmsteads on the Duke of Bedford estate, a chimneystack marking the position of a steam-powered threshing machine and set in a landscape of large fields suited here to steam ploughing (not the case study). © Mike Williams/Historic England

2. Farmstead character

This large E-plan farmstead is typical of the estate farms found in this area which date from the Victorian High Farming period. The farmhouse is listed at grade II, and there are four building ranges, the largest of which is the E-plan comprising cattle yards facing south and attached to a barn with attached granaries and cart sheds. This is a type of plan which is most commonly found in the Eastern Arable part of England and Chalk and Limestone Mixed areas extending from the East Midlands into Scotland. The use of brick and Welsh slate was typical of the estate farms of this period in this area, and the style of the whole group complements that of the estate workers' cottages of this period.

Part of an E plan multi-functional range with cart sheds, granaries and a large central threshing barn. © Peter Gaskell/CCRI

Internal fixtures and fittings in the cow housing. © Peter Gaskell/CCRI

3. Public benefits

This is a virtually intact large planned farmstead from the 'high farming' period that is still used as part of a working farm. The cow houses, stables and other buildings retain their internal fixtures and fittings. The whole group has historical significance for illustrating the way in which

these large-scale and industrial farmsteads were planned to save on the labour that was needed, process harvested crops with steam power, produce meat for growing urban markets and the large quantities of manure that were essential to maintain and enhance fertility of the soil. These farmsteads are an integral part of the 'open, arable landscape of planned and regular fields' on the estate lands of this NCA and the agreement helps to deliver one of the Statements of Environmental Opportunities (SEO 4) for conserving and enhancing the natural and historic environment of the NCA.

The farmstead is accessible with a public road passing within 100 metres on two sides of the farmstead. The farmstead holds a prominent position in the landscape and can be viewed at a distance from a public footpath. The agreement holder enjoys providing informal access to the buildings:

> *"We walked them round and they were blown away by it all, we were three or four hours walking round, it was lovely. It was not just the buildings it was the tractors and everything (…). We've had three or four families walking round from the village."*

The wildlife potential of the buildings is being realised with owls nesting in the east range and smaller birds nest in many of the buildings.

Stable block and tack room with horse harnesses and collars in situ. © Peter Gaskell/CCRI

Farm forge with implements still hanging from the walls. © Peter Gaskell/CCRI

4. Participating in the scheme

The agreement holder, having had a positive experience of the Entry Level Scheme in Environmental Stewardship, decided to use the traditional farm building maintenance option (HS1) to maintain the buildings. The buildings on the farmstead have been in the family for over a hundred years and the agreement holder hopes they will be in the family for another hundred years.

The agreement holder achieves a lot of satisfaction from seeing people appreciate buildings. He recognises that the buildings are visually very impressive, being part of an extensive estate which invested a lot of money in developing the farmsteads in the 19th century.

The agreement holder's father told him how the buildings were constructed and where the claypits were on the farm that were used to make the bricks:

> *"I've known about it since I was probably 10 or 12 years old. That sort of thing interests me. About the actual farm buildings, what they were used for, I suppose I've known since a young age."*

Although the traditional farm buildings are part of a working farmstead the agreement holder estimates less than 10 per cent of the floor space is used on a daily basis and pays for its upkeep. The maintenance option payments have enabled the buildings to be maintained to a higher standard:

> *"I'd be investing the time but certainly not the money into it if it wasn't for the scheme now. I wouldn't be doing it to the same scale or the same standard."*

As part of the option the agreement holder has undertaken some major work on the buildings as well as regular maintenance. The work has involved re-roofing on the middle part of the E plan

range, new gutters to some of the buildings, and replacing some rotten doors. Advice on how to maintain the buildings was sought from the specialist contractors who did the work.

The agreement holder used the farm building maintenance plan and log for organising maintenance work but thought it would be more efficient if it could be accessed and updated online:

> *"Have it online, so you just login every now and again when you do it, and it's as easy as snapping a photo and uploading it so it's all on the cloud. Then you can see that they can see it. I think that would be a lot more useful and up-to-date than perhaps the booklet. And there is a photo record as you go, isn't there?"*

The agreement holder would be interested in entering his buildings into a successor scheme.

Roof repairs. © Peter Gaskell/CCRI

Celebrating landscape character in the South Suffolk and North Essex Claylands

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

The farmstead is set in a part of the South Suffolk and North Essex Claylands NCA, which is noted for its dispersed medieval settlement pattern of scattered farmsteads, hamlets and small settlements around 'tyes' (commons) or strip greens as here. Large fields, enclosed by around 1700 and enlarged or otherwise changed since then, also illustrate how large mixed farms developed from the medieval period.

The farmstead is prominently sited next to an ancient holloway. © Jeremy Lake/CCRI

2. Farmstead character

This Countryside Stewardship agreement uses the traditional farm building maintenance option (HS1) to maintain buildings at two farmstead sites. The farmhouses and barns on both sites are listed at grade II, as also is a granary which is not in the scheme (as it is converted to an office) at one of the sites. The farmstead illustrated here has retained all of its historic form from 1900, and has a range of buildings which illustrate the importance of corn (17th century and earlier threshing barns with a later granary), of teams of horses for working the fields (stables) and carting manure and produce (cart shed) and of cattle for their meat, milk and manure (cowhouses and shelter sheds). The whole group also illustrates how timber-framing was for centuries the main building technique for houses and farm buildings, and also the use of plain clay tiles and pantiles for roofing, and weatherboarding, flint and brick for walls. These features

are some of the defining characteristics of this NCA. The solid thatch roof on one of the buildings is a very rare survival.

Tile roofs, weatherboarded timber frame and the use – often to decorative effect – of brick to add strength to flint walls are all characteristic of this area. © Jeremy Lake/CCRI

The solid thatch roof on one of the buildings is a very rare survival. © Jeremy Lake/CCRI

3. Public benefits

This farmstead sits to one side of an ancient holloway, used as a public footpath, and like the other well-preserved farmstead in this scheme is prominent in the landscape. The profile for this NCA notes that farmsteads are one of the many heritage assets, *clearly visible throughout this landscape* which provide *a strong sense of history and how the landscape has developed over time* and deliver a range of ecosystem services noted in the Statements of Environmental Opportunity (SEO), particularly SEO 2 to encourage measures that conserve and enhance the characteristic historic settlement patterns and features.

4. Participating in the scheme

For the farm manager they are beautiful buildings, an integral part of the farming landscape and offering a great sense of identity and belonging. The owners value both of these sites, and whilst the agreement acknowledges the work that is put into their maintenance they are committed to their retention in their existing condition for the foreseeable future.

Conserving farmstead heritage in the Herefordshire Plateau

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

This farmstead occupies a prominent position on higher ground, on the site of one of the many medieval manors and farmsteads scattered across this area, and contributes to the rich sense of history for which the Herefordshire Plateau NCA is noted.

One of the large brick ranges on this farm. This range has a cellar for cider barrels below the cider mill and a kiln for drying hops. © Jeremy Lake/CCRI

2. Farmstead character

This Countryside Stewardship agreement has a single site with buildings covered by the traditional farm building maintenance option (HS1). Most of the buildings here were built in around 1800, and were built on the site of a medieval manor surrounded by its own fields which were reorganised in the 18th and 19th centuries. The result was a large farmstead of a type found in this part of England, retaining a medieval dovecote and a fine Georgian farmhouse which commands views over the landscape. All of the buildings shown on the 2nd edition OS map survive, and are set around three courtyards; modern buildings have been built to one side of the historic group, overlying the former farm pond. This site also has a wide range of building

types – a hay barn and threshing barn, stables, hop kilns and cider mill and store - characteristic of this area which served its hop yards, cider orchards, pastures and arable fields. The construction of the weatherboarded timber frame barn and hay barn are typical of this area, and they are listed at grade II, and the tall unlisted brick buildings have a strong architectural presence that complements the fine farmhouse.

The weatherboarded hay barn and its attached waggon shed. © Jeremy Lake/CCRI

3. Public benefits

This farmstead is one of the 61 per cent of traditional farmsteads that have retained all or most (over 50%) of their historic character, which is a high figure by regional and national standards, this significance being enriched by its rich variety of functional types. It also occupies a very prominent position at the junction of several footpaths, and the agreement holder is often asked by walkers about the buildings. Over 70 per cent of field barns and outfarms have been lost from the landscape in this area, making the survival of a complete outfarm all the more remarkable.

The agreement helps to deliver the recommendations for conservation and enhancement of the natural and historic environment of this NCA set out in the Statements of Environmental Opportunity (SEO), particularly SEO 2:

> *Protect and appropriately manage the distinctive character of the Herefordshire Plateau's landscape, conserving and enhancing the historic landscape character, settlement pattern, geodiversity, tranquillity and sense of place. Protect and maintain public access to and the enjoyment of the wider countryside for residents and visitors.*

4. Participating in the scheme

The agreement holder felt that the scheme recognised the work that they put into maintaining these buildings. He is strongly conscious of the history and sense of place that this fine farmstead offers to the wider area.

Contributing to landscape and heritage in the Shropshire Hills

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

A farmstead and two outfarms are included in this Countryside Stewardship agreement in the Shropshire Hills NCA. This is an upland area, but it is marked by strong contrasts between the large-scale farmsteads of the vales and the small-scale ones concentrated around Clee Hill and the uplands along the Welsh borders. The farmstead buildings use the traditional farm building maintenance option (HS1), while the two outfarms are covered by the maintenance option for buildings in remote areas (HS8).

The late-17th century barn and stable. © Jeremy Lake/CCRI

2. Farmstead character

The courtyard farmstead here is substantially complete and has a range of buildings that are characteristic of this area. It straddles a routeway that led to upland grazing, and is sited on the edge of land that had been mostly enclosed by the 17th century and commons that were enclosed and then dotted with outfarms with barns and cattle housing set around yards in the late 18th and 19th century. Its large (and grade II listed) timber-framed barn and stable that dates from around 1700 illustrates the importance of arable agriculture in the vale landscapes of the

Shropshire Hills, most of the other buildings being for housing cattle; a large new stables dates from the late 19th century.

Whilst only part of one of the outfarms survives, repurposed to continuing agricultural use, the other is an extant courtyard group and includes a timber-frame barn which was either resited in its present position or survives as one of the earliest field barns in England. Timber-framed buildings as here continued to be built into the 19th century, and here combine with the use of local stone and imported brick in contributing to the strong sense of place that these upland and upland fringe landscapes on the Welsh borders offer.

The outfarm with its 17th century barn. © Jeremy Lake/CCRI

3. Public benefits

Farmsteads make a particularly striking contribution to this NCA, with 69 per cent of those recorded from late 19th century maps retaining more than half of their historic form. Many public footpaths converge on and pass through the farmstead, enabling walkers using this area's extensive network of rights of way – noted as a key opportunity for enhancement in the Statements of Environmental Opportunity for this NCA - to experience a Welsh Borders farmstead in its landscape setting. The buildings also provide habitats for birds and bats, and the barn on the outfarm is a roost for barn owls.

4. Participating in the scheme

For the agreement holder, the buildings are an important part of the farm and make an important contribution to the character of the landscape. The agreement has made a significant contribution to their maintenance, and 'having them in good condition puts a smile on my face'. Nevertheless, and whilst adaptation has enabled continued use for stock of one outfarm, it is difficult to find a beneficial use for the most complete of the two outfarms.

Communities and wildlife in the Severn and Avon Vales

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

The buildings here remain from a large farmstead of a type which developed on the edge of villages and hamlets, often in tandem with the gradual and planned enclosure of the open fields around them, in this part of the Severn and Avon Vales NCA. This is a landscape of large farms and estates with rich evidence for farming and settlement from the Roman and prehistoric periods, surviving as earthworks and buried archaeology to the north and east of this site.

2. Farmstead character

Two farmsteads which retain more than 50 per cent of their historic character and a field barn are included in this Environmental Stewardship agreement using the traditional farm building maintenance option (D1). A 16th century or earlier house, remodelled as a prestigious house with its own landscaped gardens in about 1860, stands to one side of a large multi-yard farmstead that had developed into its present form over the 19th century. One farmyard with hop kilns has been converted to residential use. Within the scheme is a very large timber-framed threshing barn with an attached stable or cowhouse, both built in around 1700, with a later brick-built stable to its east end. Close to the house is a large late 18th century stables with a granary, built of brick, which is attached to a long timber-framed cart shed range of the early-mid 19th century. All these buildings illustrate the importance of arable farming and how large arable farms had appeared and continued to develop in this area from at least the 17th century. The cider house survives as a reminder of the local cider industry, only fragments now surviving of the apple orchards that extended across the surrounding landscape; it forms part of a range which also includes the rare survival of a combined bakehouse and brewhouse with its bread oven and copper. The use of timber frame for the barn range, and use of brick, tile and slate for the other buildings, is also characteristic of this area.

The agreement also includes a small field barn for cattle, which provided manure for the strip of orchard in which it is sited. Over 72 per cent of these have been lost or demolished across Worcestershire, and in fruit growing areas they were often sited in orchards.

At the core of the care farm is a very large threshing barn with an attached stable or cowhouse, both built in around 1700, with a later brick-built stable to its east end. © Jeremy Lake/CCRI

3. Public benefits

Like 64 per cent of recorded farmsteads in this large NCA, this group has retained more than half of its historic form. Its buildings are prominently located on the edge of a small hamlet with other houses, including former farm buildings and also Victorian farm workers' cottages. The large scale of the barn makes it a visually impressive part of its community, and it is rare to find stables or cowhouses which date from or before the early 18th century. The barn range lies at the core of a care farm which provides therapeutic care to those in recovery as well as offering educational tours for schools and other groups. It is also included on one of the history trails for the parish.

The barn range offers a habitat for swallows, sparrows, other birds and bats. The field barn provides a roost for barn owls, and the bay at one end – by simply fixing a sheet to the underside of the rafters – provides a roost for bats. The modern farm has also received awards for wildlife-friendly farming.

In this respect, the agreement helps to deliver the recommendations for conservation and enhancement of the natural and historic environment set out in the Statements of Environmental Opportunity (SEO) for this NCA, particularly SEO 3 on reinforcing the existing landscape structure, for example, by:

> *Conserving the area's richly varied traditional architecture and farmsteads, vernacular and historic buildings in Cotswold stone, timber framing and deep-red brick, encouraging the use of appropriate styles and use of locally distinctive materials. Ensuring that the repair, restoration or conversion of vernacular buildings is carried out with due regard to this historic interest using local and appropriate materials, styles and detailing.*

The small field barn for housing cattle and producing manure, which provides a habitat for bats and barn owls. © Jeremy Lake/CCRI

4. Participating in the scheme

The buildings have been part of the family farm for nearly 100 years, and the agreement holder considers that the options are really important for buildings where it is hard to find an economic use, and also the scheme enables farmers to budget ahead. He also views the farmstead buildings as making a significant contribution to the character of the local area and having great potential for interpretation, in addition to being used by a variety of bats and birds and as part of the care farm, and the field barn as a significant habitat and heritage asset.

Conserving farming heritage in the Suffolk Coast and Heaths

1. Introduction

From its inception over 30 years ago Agri-Environment Scheme (AES) policy has consistently recognised the importance of protecting and managing the historic environment, including traditional farm buildings, to secure a range of public goods for society. In 2021 Natural England commissioned research to review the uptake and values of AES options designed to support the maintenance of traditional farm buildings. This case study is one of a suite designed to illustrate the range of public benefits provided by this investment. Actual site locations are anonymised but are described with reference to the National Character Areas (NCA) in which they are located. Understanding the success and value of such funding is crucial in supporting future conservation decision making, especially for AES development.

The farmstead illustrated here shows how farms in the Suffolk Coast and Heaths NCA benefitted from access to coastal marshes for grazing and fields, which from the medieval period were farmed from villages and isolated high-status farmsteads. Aerial survey has also revealed the cropmarks of routeways and farms with their enclosures dating from the Bronze Age.

The view of the farmstead looking towards the sea. © Jeremy Lake/CCRI

2. Farmstead character

This Countryside Stewardship agreement uses the traditional farm building maintenance option (HS1) to maintain buildings on four sites. The farmstead illustrated here is substantially complete, and was rebuilt and extended into its present form between the 1840s and 1880s. It sits alongside a medieval or earlier routeway extending towards the estuary and a quay which was used to export farm produce and import night soil for fertilising the fields, coal and other goods from London and elsewhere.

It is a very large farmstead, its 18th century and earlier timber-framed barns, stables and cattle housing being built and rebuilt in a regular fashion around three separate farmyards. Its scale illustrates how larger farms had emerged in parts of this area in tandem with the drainage of marshland and the reorganisation of farmland over the later 18th and 19th centuries. A fine stable range retaining its harness room, and a building for housing steam engines, used for steam ploughing and threshing corn harvested from other farms in the district, were added to the group later in the 1880s; another building was later converted into a carpenters' shop. There is also a small apple store which took the produce from a small orchard. The whole farmstead displays a variety of forms, from large barns and granaries to low shelter sheds for cattle, which

is typical of the largest of the farms that developed with access to grazing marshes as well as mixed farmland.

The range of materials is typical of this area but unusual for its presence on one site – timber frame clad in weatherboard which continued in use into the 19th century, different varieties and bondings for brick which had been used in this area from the 15th century but was seldom used for farm buildings until the 18th century, and for the roofs clay pantiles and Welsh slate imported by sea. These materials are found on the other sites on this agreement, one being an early example of the use of brick.

One of the farmyards with its 18th century threshing barn and later housing for cattle. © Jeremy Lake/CCRI

3. Public benefits

Besides the prominence and contribution to such a distinctive landscape close to the estuary, and its strong sense of place, it is very unusual to find such a complete traditional farmstead in this area. This significance is enhanced by the farmstead having such a wide variety of buildings that illustrate how arable farming developed and became more industrial in this character area in the Victorian High Farming era, and indeed in this part of England's Eastern Arable Agricultural Landscape Type.

The farmstead is part of a rich history of farming that extends into prehistoric period and is legible in the surrounding landscape, this time-depth being core to its sense of place and to increasing and enhancing the 'rich assemblage of historic landscapes' as stated in the Statements of Environmental Opportunity for conservation and enhancement of the natural and historic environment in this NCA. Traditional farm buildings on three other sites are also included in this agreement. These include a fine early 18th century barn and listed farmhouses, all of which are visible from public footpaths and minor roads. The owners of the farmsteads have been farming here since the 19th century, and are much involved in the local community, and so the farmsteads are important for the family as well as a source of pride.

This fine early 18th century barn, an early example of a brick-built barn close to later farm buildings and a 16th- 17th century high status house, remains in use as a grain store. © Jeremy Lake/CCRI

4. Participating in the scheme

Participation in the Countryside Stewardship scheme has assisted with the maintenance of the traditional group of buildings on the large farmstead illustrated here, and also the barn and other buildings on one of the other sites.

Whilst the option payments play an important role in continuing to maintain these buildings, the owners are conscious of how the pace of change in modern agriculture may require rethinking of the future use for the two of the sites which are less complete as historic groups.

Maintenance underway on early-mid 19th century buildings at the site with the 18th century brick barn. © Jeremy Lake/CCRI

3.5 Traditional farm building survey

3.5.1 Introduction

The project required an independent assessment of TFB maintenance option use. For the TFB survey NE specified two detailed research questions:

- Were the most appropriate buildings chosen for the option use?
- Have appropriate repairs been carried out?

To answer these questions the building survey was divided into two parts. To begin with an overall assessment was made of each site (farmstead, outfarm or isolated building) that contained a TFB maintenance option (see Appendix 4.1). The purpose of the site assessment was to determine the nature and character of the site, how it contributed to the local landscape and historic environment, what were the benefits for nature conservation, how visible the site was from publicly accessible areas, and were there any missed opportunities to provide public benefits.

After the completion of the site assessment a more detailed survey of the building ranges was undertaken (see Appendix 4.2). There could be as many as six or seven ranges for complex farmstead sites, or a single range in the case of a field barn. The purpose of the building range survey was to determine the nature and character of the buildings, assess their structural condition, determine if there was any visual evidence of maintenance activity, and if traditional materials had been used. The building range survey also looked for signs of wildlife inhabitation and the ranges' wildlife potential.

The analysis in this section focuses on the 230 sites and 435 building ranges that were part of CS agreements. The 40 sites and 59 ranges what were part of ES agreements have not been analysed in detail.

3.5.2 Were the most appropriate buildings chosen for the option use?

Three methods were used to assess whether the most appropriate buildings were chosen for option use. First, the provision of public benefits was considered as part of the site assessment. Second, a detailed survey of the building ranges was undertaken to determine the buildings eligibility for the TFB maintenance options and the public benefits they provided. Finally, a comparison of public benefits was made where there were building ranges within and outside the scheme existing together on farmstead sites.

The first step in the analysis was to establish if the sites covered by the building survey reflected the broader uptake of CS TFB maintenance options. This was achieved by comparing the distribution across the ALTs of the site survey with the 4,447 CS records on the RPA data base. As Figure 3.5-1 shows, the site survey broadly reflects the distribution of CS TFB maintenance option records. However, it should be noted there is an over representation of sites in the Upland and Upland Fringe ALT and an under representation sites in the Western Mixed ALT. The building survey recorded only four sites in the South East Mixed ALT which was insufficient for detailed analysis at the ALT level.

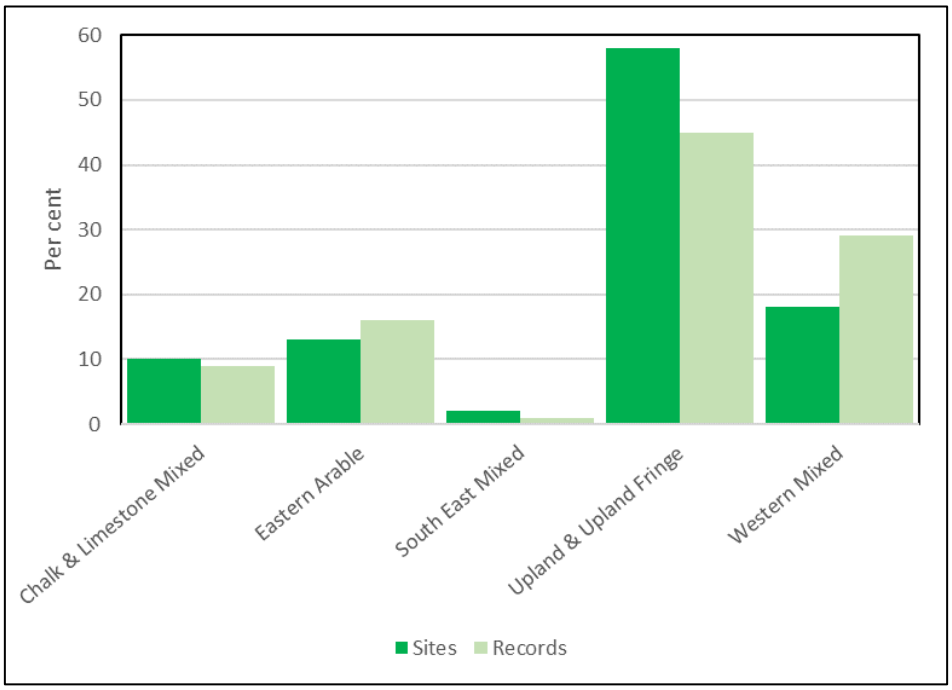


Figure 3.5-1 Distribution of CS building survey sites and RPA records by ALT

Site assessment

Site character

At a broad scale the character of the sites in the building survey tended to reflect the character of the farmed landscapes of the ALT regions (Figure 3.5-2), where the Upland and Upland Fringe areas in the north reflected a higher proportion of field barns and where the arable areas, particularly the Eastern Arable ALT, are dominated by farmstead sites.

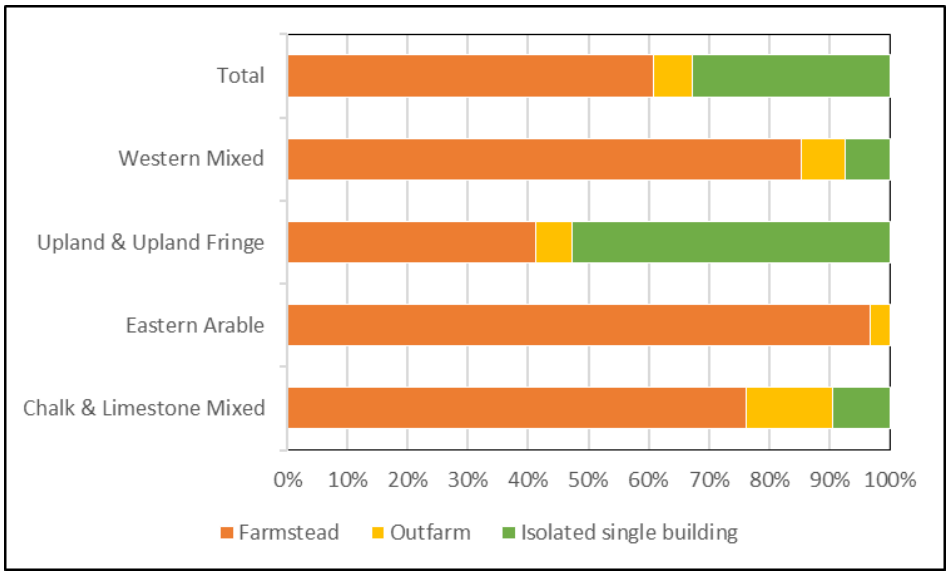


Figure 3.5-2 Distribution of CS site types by ALT

The site summary descriptions in the field notes provided strong evidence of the overall suitability of the TFBs for inclusion in the scheme and the benefits they provided in terms of their contribution to local landscape character, the historic environment, and nature conservation. Table 3.5-1 provides an example of a site summary from each of the ALTs. The site assessment recorded no instances where the fieldwork deemed the site to be outside the scope of the CS TFB maintenance options.

Table 3.5-1 Example site summaries form each of the ALTs

ALT: Chalk & Limestone Mixed. NCA: Cotswolds
This field barn is sited within and excluded from the Scheduled Monument which extends to the west, north and south of the church and which includes the earthworks relating to a large 15th-17th century house (extended with an 1827 datestone), gardens, farmyard and associated ridge and furrow. The barn is shown on 18th century maps in the possession of the owner. It is a 5-bay threshing barn built of stone, with the side walls of a porch remaining to the north side. Corrugated asbestos and iron roof to mid-20th century metal trusses.
ALT: Eastern Arable. NCA: Mid Norfolk
The farmstead is typical of Mid Norfolk NCA. Unlisted isolated courtyard farmstead with 16th century listed farmhouse adjacent. Historic plan shows some of the ranges have been demolished. No modern farm buildings on site. Surviving traditional buildings are in 7 ranges. Some buildings with fixtures and fittings. • **Range 1**: linear, two storey - stable, cart shed with granary over with steps. Adjacent building part demolished. Flint and brick with pantile roof. • **Range 2**: loose box incorporating yard walls. Brick with pantile roof. Single storey. • **Range 3**: L-plan threshing barn with lean-to loose boxes, cow house. 1 and 2 storeys. Brick and flint and brick with pantile roofs. Barn has sheeting roof. • **Range 4**: Uncertain use: single storey. Brick with pantile roof. • **Range 5**: linear, cart-shed and kitchen with chimney. Kitchen has hearth and 'coppers' in situ. Cart shed stanchions replaced with modern metal posts. Brick with pantile roof. • **Range 6**: L-Plan threshing barn and cow house across the road. 1 and 2 storey. Flint and brick with pantile roof. • **Range 7**: Cow house. Single storey. Earth (chalk Clunch) with pantile roof.
ALT: South East Mixed. NCA: Low Weald
Characteristic of Low Weald farmsteads on the Surrey-Sussex borders. Traditional building materials not currently listed. • **Range 1**: A rectangular-plan, single storey timber-framed building at three-bays in length originally, extended historically by a further bay at its southern end. Both timber-framed phases in situ by 1650, both probably constructed in the first half of the 17th century. The ground floor walls under-built in brick in 19th century, brick laid in Sussex bond. First floor walls still weather-boarded, clay tile roof with half-hipped terminals and gablets. Surrey-type principal posts (lacking jowled heads), walls foot-braced, braces thick each end bay of the first-phase three-bay building has an intermediate full-height studs carrying the inner ends of the side-girts, allowing long bays to the building. Central full-height stud to end walls. Roof is of clasped side-purlin type with half-hipped terminals, complete with high-set collar.

The high-set collar at the south end indicates the original roof terminal prior to its extension (extension in the same style). Open trusses with raking struts rising from tie-beam to clasp side-purlins against rafters. Convex head-bracing to trusses. Wind-bracing at each end only. South end bay of original three-bay building may have been partially lofted – details obscured by wood-pile, however mortise in central stud is apparent and the stub-gable may include an opening. Three-bay barn with early extension at its southern end, possibility of specialised end bay in whole or in part prior to extension. Brick floor, integral drains and metal gates indicate livestock accommodation function in the 20th century. Currently used to store logs, tools and machinery.

- **Range 2**: Brick of 1940s- 1950s fabric, tiled roof. Might be a milking shed, or cowshed. Integral ridge vents, integral roof-lights, a series of entrances, doors and pens on the north side.

ALT: Upland & Upland Fringe. NCA: Dark Peak

Building types conform with descriptions in NCA 51 Dark Peak Farmstead and Landscape Statement. Apart from brick-built block and adjacent stone-built single storey unit, all appear on OS 6" of 1854. U-shaped plan, loose courtyard, made up of L-shaped north-south section and east-west southern section, separated by access gap to south-west. West wing in the scheme, TFBs to north and south not in scheme – don't understand why not. Access limited to cruck barn and western end of north section.

- **Range 1**: West section principally a Grade II listed cruck barn, farmer says dated by dendrochronology to 14th century. Two-storey in 5th bay at north end, with external stone stair access and two blocked windows; comprised a small dwelling. Stone walls, Welsh slate roof, gritstone kneelers. Threshing door top raised above roof line, with brick sides. Opposing door (to west) blocked with gritstone. Single-storey addition to east side, stone-built, with front reusing gritstone gateposts as support pillars; Welsh slate roof. Not clear if originally open-fronted and blocked subsequently or always blocked. Single storey addition to north, butting north gable; stone-built with stone slate roof.
- **Range 2**: Northern section built up over time. Originated as two-storey cow-house; ground-floor doors later converted to windows. Downslope (eastwards) addition with cart (carriage?) shed at ground floor with initialled dated keystone of 1828 – now part of dwelling.
- **Range 3**: Further eastward two-storey extension, now main part of dwelling, with evidence of external access to now-blocked door at first floor level. Gap at western end filled by brick-built shed with Welsh slate roof and then a single storey, corrugated-roofed, stone-built building, butting against the extension on the north end of the cruck barn. Latter unit contains concrete boskins.
- **Range 4**: Southern section of U-shape comprises stone-built, slate-roofed building that was the dairy until recently. Attached to original farmhouse at east end by an open-fronted machinery shed. Separate Grade II listed farmhouse in south-west corner of complex, stone-built, stone-slate roof, has hood moulds above front windows and a date stone above the door of 1620.

ALT Western Mixed. NCA: Shropshire Hills

This is a substantially complete 17th century and later farmstead, typical of the larger mixed farms with barns, granaries, stables and cattle housing which developed in the Shropshire Hills. The house was rebuilt c. 1870-80, but has earlier origins. The traditional buildings remain from a

dispersed multi-yard farmstead plan, and include a large late-17th century building (Range 1, a barn, stables with dovecote and later cattle housing), a cattle yard to the north with an L-plan cowhouse (Range 2) and a mid-19th century cart shed to the west (Range 3). The yard buildings to the south-west have been rebuilt in the mid-20th century on the original footprint. The use of weatherboarded timber frame, local stone, brick, stone slates and Welsh slate also exemplifies the use of buildings materials that is found in this NCA.

- **Range 1**: The late-17th century structure forms a T-shaped plan, with the combination barn extending eastwards from a stable range. Most of this is weatherboarded over timber frame, except the stone-built southern stable range close to the house which has a dovecote with flight holes in the south gable. The stable extending to the north has an upper-floor granary, there are two additional mid-19th century cowhouses added to the north side and to the east is an early-19th century cart shed/granary which has brick infill to a timber-framed upper floor. The whole building is roofed in corrugated iron, except Welsh slate to the east granary (relaid c. 2010) and stone slates to the south stables (relaid c.2000). The interior has exposed timber frame and 17th century roof trusses. The floor to the barn with the feeding passage and timber cattle stalls to the ground floor dates from around 1900, when a mixing room was installed at its north-west. Upper floor of stables also has 17th century trusses.
- **Range 2**: Mid-19th century L-plan cowhouse, built of stone with a corrugated iron roof, facing south into a cattle yard; king-rod roof.
- **Range 3**: Mid-19th century 4-bay cart shed, built of stone with a Welsh slate roof; bolted king post roof.
- **Range 4**: Attached to the west end of Range 1 is an L-plan mid-19th century shelter shed, with stone walls and Welsh slate roof, and an open front facing south. This is NOT in scheme, as farmer was concerned about its condition – north wall leaning and becoming detached from wall plate and trusses.
- **Range 5**: It is possible that the buildings in the cattle yard to the south-west (Range 5) are of similar date rather than being rebuilt in the mid-20th century. They are built to an L-plan with a modern shed at the angle, and have similar constructional detail with segmental corrugated iron roofs and weatherboarded (rather than corrugated iron) walls.
- Part of the Dutch barn, to the north-west, is shown on the 1885 OS map. It has timber posts and braces to a composite roof. The long Dutch barn to its east has the maker's mark 'PERKINS & BELLAMY'.

Presence of listed TFBs at the site

The vast majority of TFBs that contribute to local character and distinctiveness are not designated through listing. Figure 3.5-3 shows only 11 per cent of the surveyed sites contained listed TFBs and these were predominantly situated within farmstead sites, reflecting the rarity of pre-19th century and listed buildings on outfarms and field barns; none of the outfarms and only two of the field barns were listed. Even so, 83 per cent of farmsteads do not have a listed building. These figures are in line with the statistics produced by the HEFMP survey. This broadly reflects the national situation, whereby the vast majority of traditional farm buildings that contribute to local character and distinctiveness are not designated through listing. In this respect, it appears that option uptake mirrors the national picture, and that the presence of listed buildings has not led to a concentration of uptake on these sites. The survey found a higher proportion of sites with the TFB maintenance

options in AONBs have listed buildings compared to National Parks and outside the Protected Landscapes, the main reason here is likely the location of many AONBs away from the northern uplands and in parts of England where the density of listed buildings is higher: the Shropshire Hills, Howardian Hills and the coastal areas of south-west England and East Anglia being prominent in this respect (Figure 3.5-4).

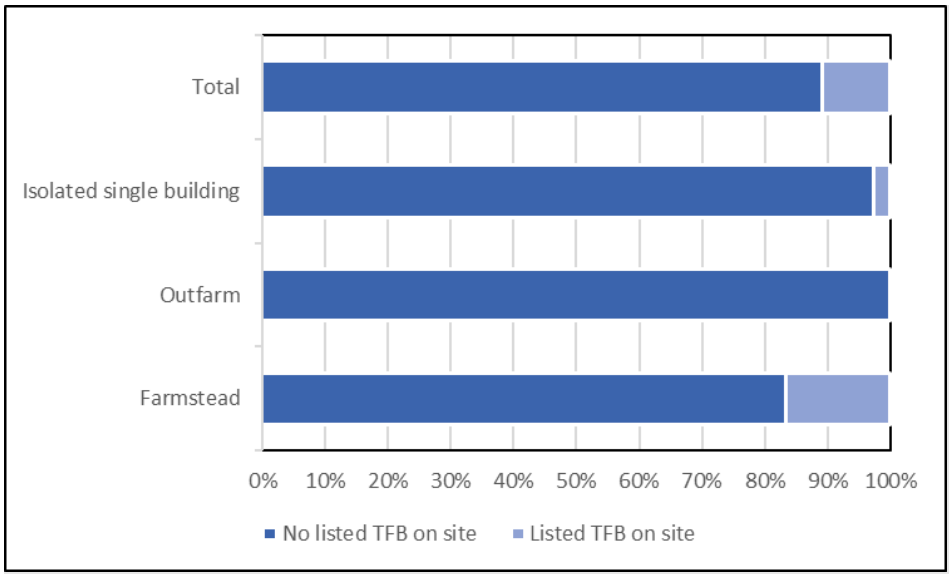


Figure 3.5-3 CS building survey site position and presence of listed TFBs

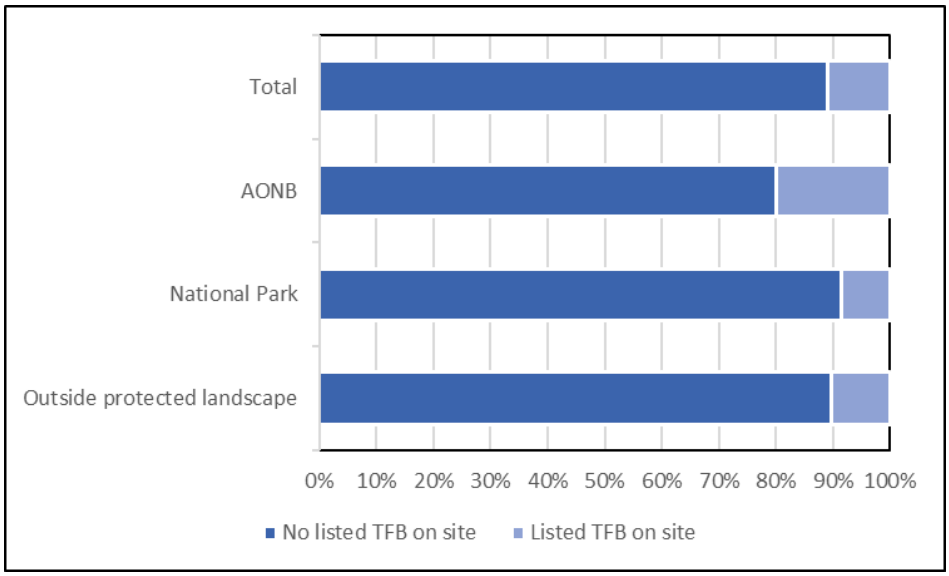


Figure 3.5-4 Protected Landscape status and presence of listed TFBs

Site survival and contribution to local character and distinctiveness

Comparison of the current layout of sites with their historic form shows that there has been a high degree of survival among the sites surveyed, with over half the sites (55%) being largely unaltered from their late-19th century form and a further 35 per cent retaining over half of their 19th century footprint. Less than one in ten sites (9%) had experienced considerable change, with less than half of the building footprint surviving. In addition the survey recorded one site with TFBs (pre-1940) which

did not appear on the OS 2nd Edition 25" mapping, indicating it was one of a very small number constructed at the very end of the traditional period (Figure 3.5-5). Figure 3.5-6 shows that the highest degree of survival occurred among isolated single buildings, which was to be expected as their footprint usually contained a single structure, although very occasionally (5 sites) an 'outshot' extension to the building may have been removed. Outfarms, by virtue of being more complex and vulnerable to partial loss, have had a greater degree of change than field barns. Farmsteads, with their more complicated layouts and often multiple buildings, have experienced the greatest degree of change, compared to the other site types, with 14 per cent retaining less than half of their building footprint. Most remarkable, however, is the fact that over a third of farmstead sites (35%) are largely complete, which rises to 86 per cent when those sites that are substantially intact with more than half of their plan form remaining are included. This far exceeds the level of site survival recorded by the HEFMP, demonstrating that the CS scheme is contributing to the widespread maintenance of TFBs that – by virtue of retaining their historic layout and the way that buildings and spaces relate to each other – make the strongest contribution to local character and distinctiveness.

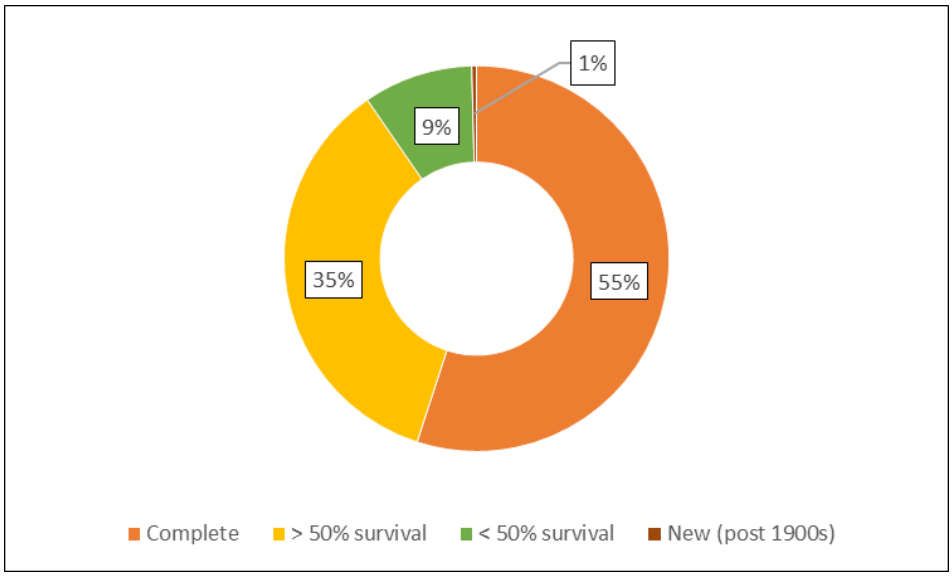


Figure 3.5-5 Survival of CS building survey sites

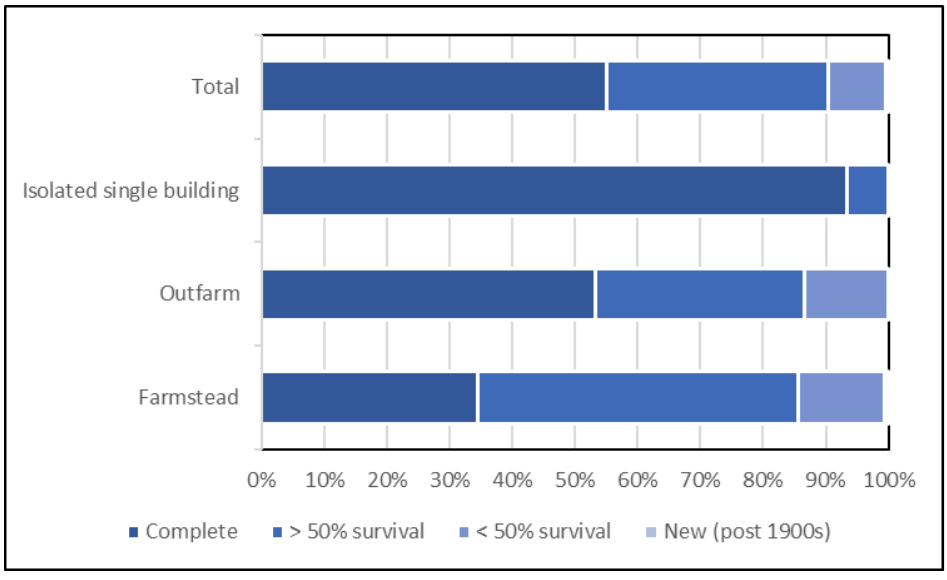


Figure 3.5-6 CS building survey site position and survival

The high degree of complete survival among field barns is reflected in the regional picture with the Upland and Upland Fringe areas showing a markedly high proportion of complete survival compared to the other ALTs where the presence of farmstead sites is more prevalent (Figure 3.5-7). The Upland and Upland Fringe areas, and particularly those in the uplands of northern England - are where the rates of survival of traditional farmsteads and of outfarms and in particular field barns, exceed the national average.

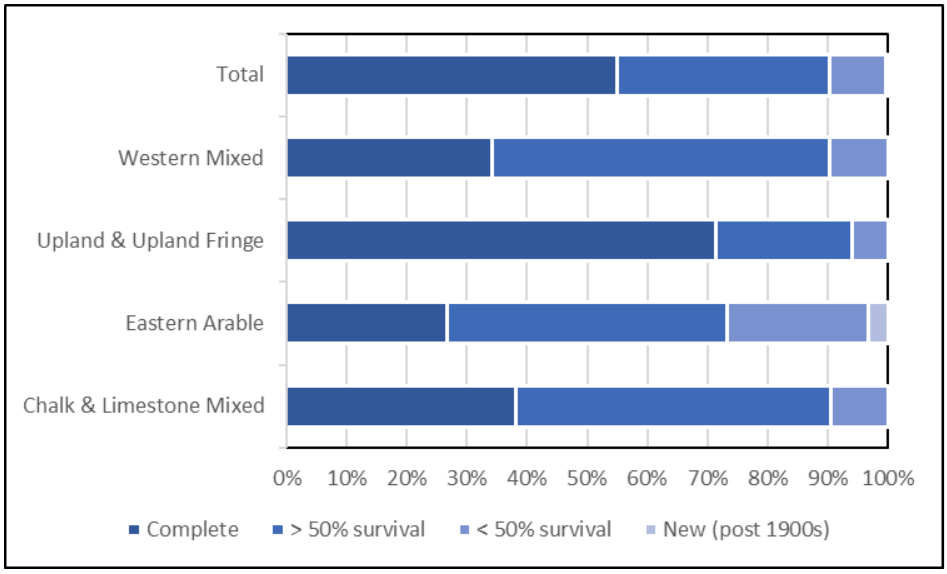


Figure 3.5-7 CS building survey site survival by ALT

The figures for the other ALTs again reflect national trends, showing that the pattern of uptake reflects differences in the density and survival of traditional buildings, and the proportion that remain in agricultural use:

- **Western Mixed:** Contains 18 per cent of sites, of which 34 per cent are complete and 56 per cent with more than half of the historic form surviving. This ALT has a great diversity of farmstead types, above-average levels of survival (60-69%) and a higher proportion in use for mixed farming including dairying and stock rearing.
- **Eastern Arable:** Contains 13 per cent of sites, of which 27 per cent are complete and 47 per cent with more than half of the historic form surviving. This ALT has experienced the most change. There has been a high degree of survival of very large courtyard farms built from the late-18th century which have continued in agricultural use (from Lincolnshire to Northumberland) and others which have earlier buildings surviving within farmsteads that have been rebuilt in the 19th century and are typically less complete.
- **Chalk and Limestone Mixed**: Contains 9 per cent of sites, of which 38 per cent are complete and 52 per cent with more than half of the historic form surviving. There are farmsteads built as large courtyard plans in the 15th to 19th centuries which may have been substantially built in stone where the survival is high (the Cotswolds) or where minor buildings have often been lost leaving large earlier buildings including timber-framed barns. There is also a relatively high proportion of outfarms situated in the downland and wold landscapes where they were built to serve large courtyard farms from the late-18th century.

These figures demonstrate that uptake of CS TFB maintenance options is reinforcing landscape character and conserving the character of farmsteads, which is also important as such a small proportion are protected through statutory designation.

Presence at the site of modern farm buildings and TFBs converted to non-agricultural uses

The agreement holder interviews (see section 3.4.4) found that the farmstead sites were far more likely to be integrated into modern farm businesses than the remoter field barn and outfarm sites and were more likely to have modern farm buildings and have TFBs converted to non-agricultural uses (see Figure 3.5-8 to Figure 3.5-11). The agreement holder interviews confirmed that presence of modern buildings was a reliable indicator of continued agricultural use. Their regional distribution reflects the pattern of farmstead sites. They are most likely to be found built within cattle yards in the Eastern Arable ALT and least likely to be encountered in Upland and Upland Fringe ALT. Converted TFBs were entirely located within farmsteads and least likely to be found in Upland and Upland fringe areas.

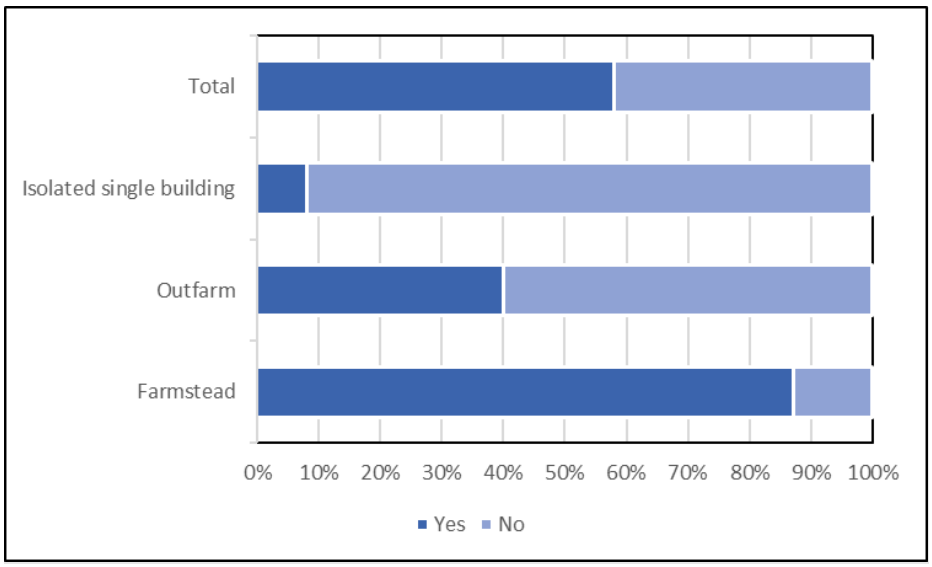


Figure 3.5-8 CS building survey site and presence of modern farm buildings

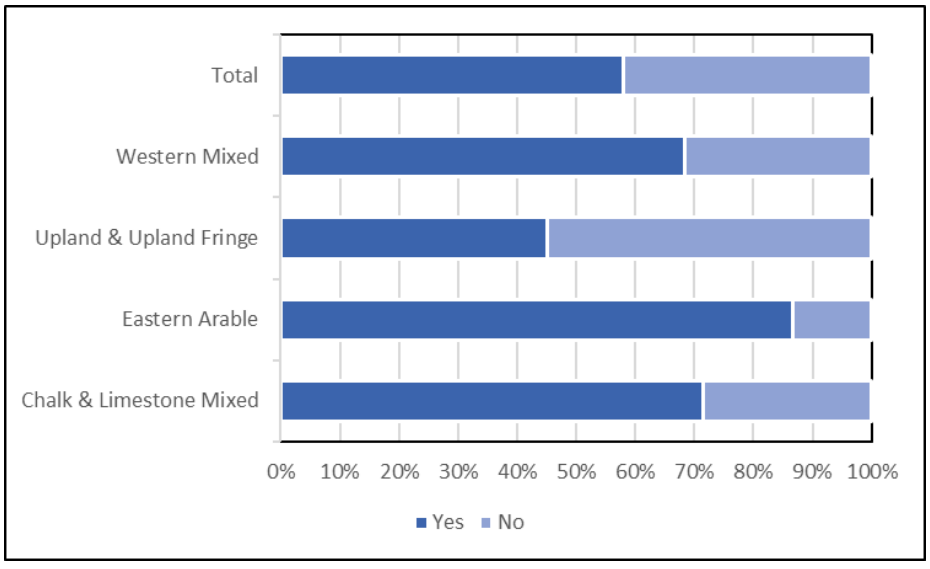


Figure 3.5-9 ALTs and presence of modern farm buildings

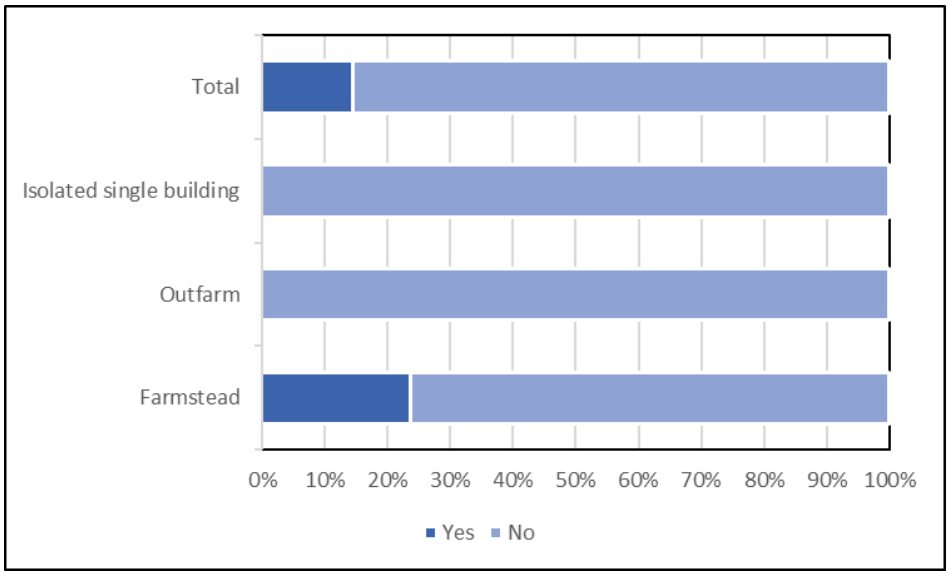


Figure 3.5-10 CS building survey site and presence of converted TFBs

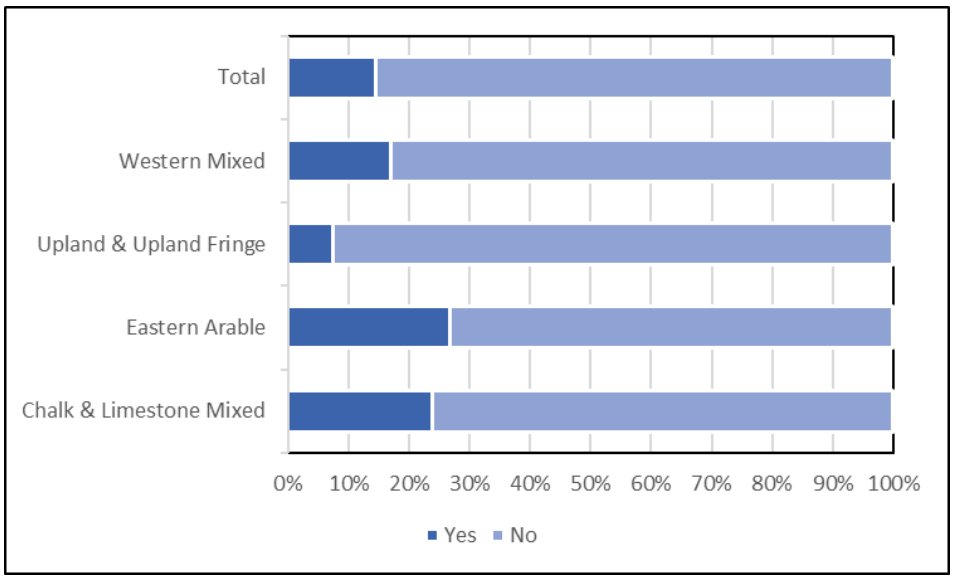


Figure 3.5-11 ALTs and presence of converted TFBs

Nature conservation benefits of the site

The site survey also assessed the benefits for nature conservation in terms of their potential to provide nesting sites for barn owls, kestrels and bats (Figure 3.5-12). Overall just under one-quarter of the sites (24%) were assessed as having high potential for wildlife with 54 per cent having medium potential. Just under one quarter of sites (23%) were assessed as not being suitable for wildlife. Farmstead sites had the highest proportion of sites (30%) that were assessed as being unsuitable for wildlife, mainly because of traffic, poor flight paths for building access, and high levels of disturbance through daily use. Field barns and outfarms occupied more remote and quieter locations, but they were often exposed to the elements and at an altitude of more than 150m, above which barn owls tend not to nest. This accounted for a large proportion of the field barns and outfarms being

assessed in the medium category. Figure 3.5-13 shows that the Chalk and Limestone Mixed and Eastern Arable ALTs had the largest proportion of sites assessed as having high wildlife potential.

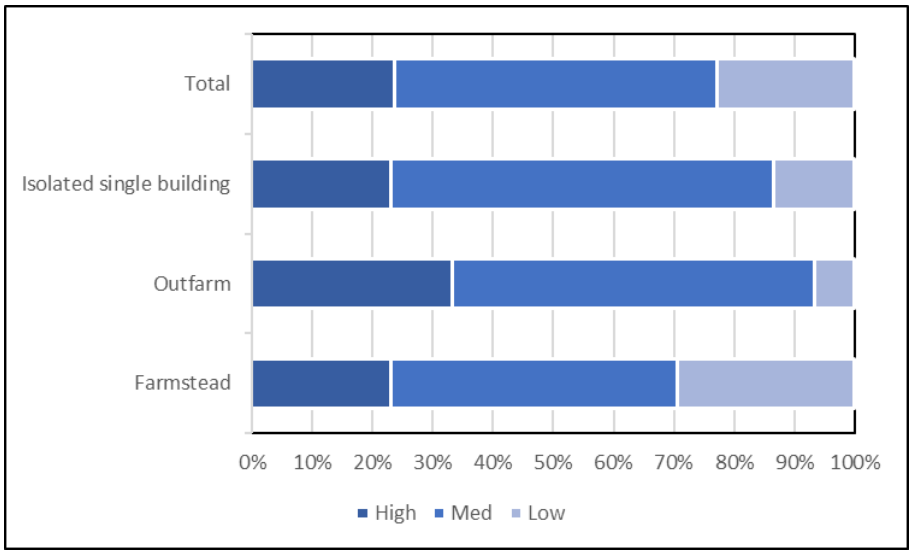


Figure 3.5-12 CS building survey site and potential for wildlife conservation

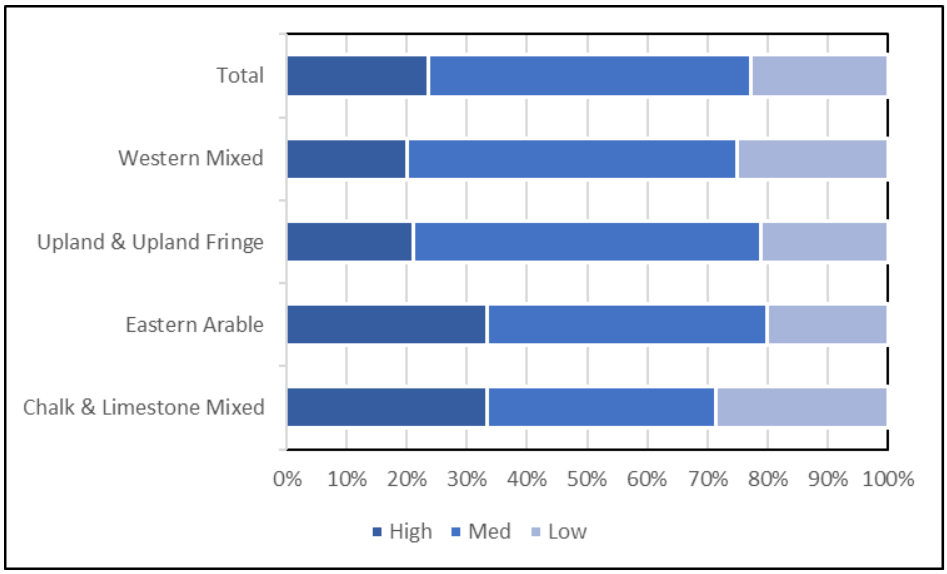


Figure 3.5-13 ALT and potential for wildlife conservation

For sites that were assessed as high for wildlife conservation the fieldworkers often reported evidence of wildlife inhabitation, as exemplified by the following extracts from SRFs:

Bats and owls in barn. 2 owl boxes erected. Close to woodland and pasture. Not currently used by kestrels. (Potential: High. Site type: Farmstead. ALT: Eastern Arable)

Barn owls known in area, buildings suitable. Bats known on site – variety recorded on Bat Roost Visit Report in 2009 Kestrels known in area. (Potential: High. Site type: Farmstead. ALT: Chalk & Limestone Mixed)

Occupied barn owl box in situ. Trees and woodland nearby. (Potential: High. Site type: Farmstead. ALT: Eastern Arable)

Many sites had some limitations (54%), such as occasional use, lack of clear flight paths to some building opening, or near-by traffic, and were assessed as having medium potential for wildlife inhabitation, where the fieldworkers could not detect current occupation:

BWAF says no kestrels, bats and owls using the buildings, but potential as seems quiet and close to pasture and woodland. More than 1 range over 3m tall. (Potential: Medium. Site type: Farmstead. ALT: Eastern Arable)

Range 5 would be suitable for bats, the TFB option ranges may be too low. Owl boxes are elsewhere on the farm, not within the option ranges. Kestrels seen in area. (Potential: Medium. Site type: Farmstead. ALT: South East Mixed)

Close to woodland and pasture, but exposed location, over 230m (Potential: Medium. Site type: Field barn. ALT: Upland and Upland Fringe)

No wildlife boxes present but plenty of bird nesting opportunities. I wouldn't be surprised if there is bat inhabitance. (Potential: Medium. Site type: Farmstead. ALT: Western Mixed)

Fieldworkers assessed the potential for wildlife inhabitation as low (23%) where the sites were heavily used, where the buildings were sealed, exposed to the elements, less than 3m in height and where they were adjacent to heavy traffic:

Busy farmstead with buildings fully occupied and in use, limited options for wildlife. (Potential: Low. Site type: Farmstead. ALT: Upland and Upland Fringe)

All roofs are being replaced, no opportunities for bat/bird inhabitation visible. (Potential: Low. Site type: Farmstead. ALT: Western Mixed)

No boxes for wildlife and building is largely sealed off. Some potential for bats. (Potential: Low. Site type: Farmstead. ALT: Western Mixed)

Working farmstead in arable landscape. BWAF says no owls, kestrels using buildings and not to construct boxes. (Potential: Low. Site type: Farmstead. ALT: Chalk & Limestone Mixed)

A more detailed assessment of the wildlife potential for barn owl, kestrel and bat inhabitation was undertaken as part of the building range survey. The overall pattern reflected the findings of the site analysis. Of the 389 ranges that provided evidence, the potential for bat inhabitation was greater than for barn owls and kestrels with only 30 per cent of ranges being assessed as unsuitable compared with 43 per cent for kestrels and 42 per cent for barn owls. Among the site types,

farmstead ranges stood out as having least potential for all three species (Figure 3.5-14, Figure 3.5-15, Figure 3.5-16).

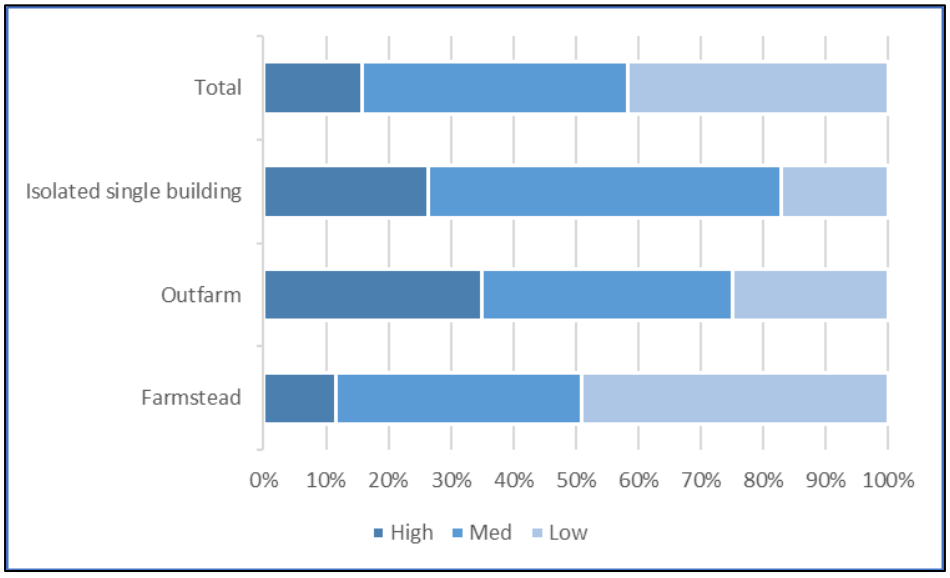


Figure 3.5-14 CS building range survey and potential for barn owl inhabitation

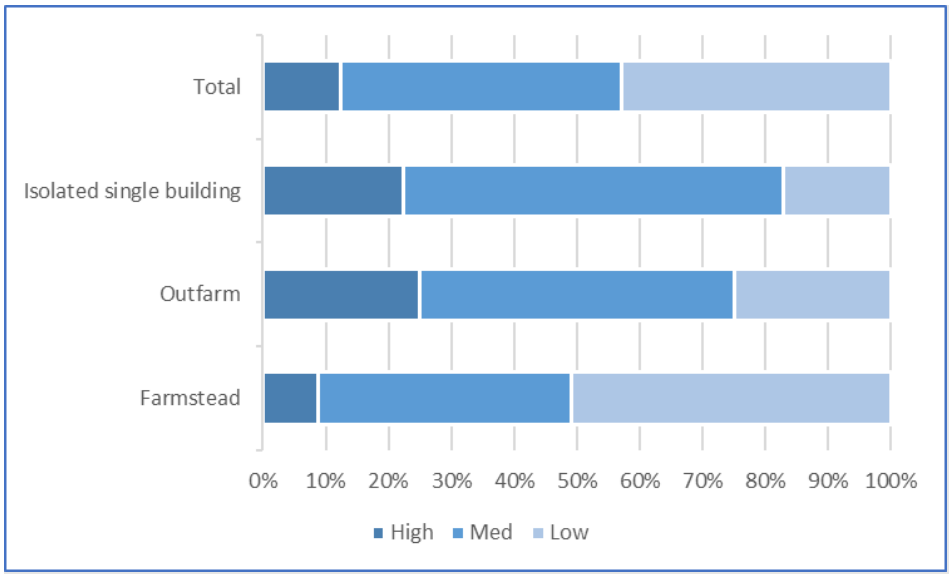


Figure 3.5-15 CS building range survey and potential for kestrel inhabitation

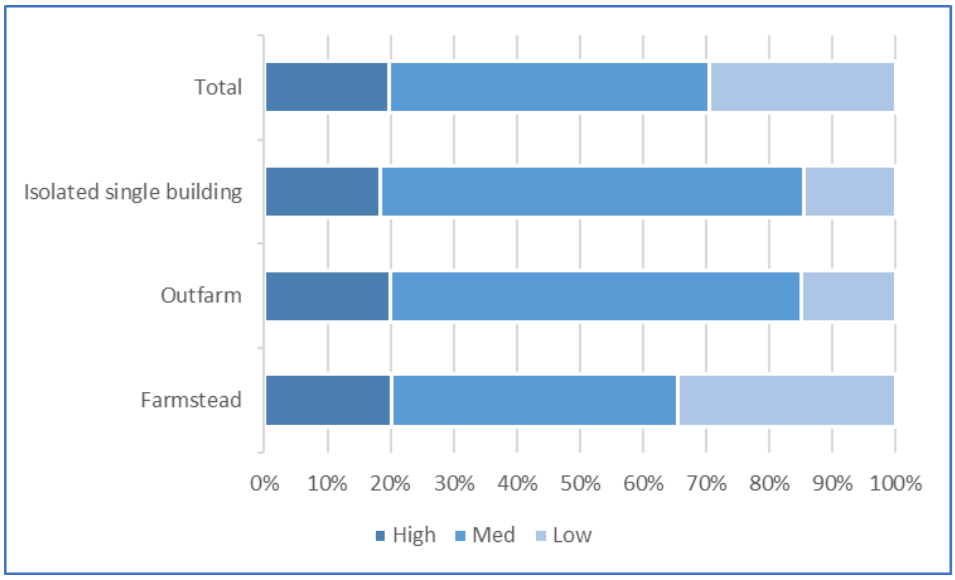


Figure 3.5-16 CS building range survey and potential for bat inhabitation

The results from the data analysis show that the sites and building ranges chosen for the CS TFB maintenance options possessed substantial potential as wildlife habitats.

Opportunities for public access and engagement at the site

Attention is now turned to the opportunities for public access and engagement with the sites and buildings. In section 3.3.2 two GIS-generated measures were created to estimate the visibility and accessibility of the national uptake of CS TFB maintenance options. The results of that analysis showed that the vast majority of the sites (99%) could be approached within 500m by the public and three- quarters of the sites (75%) could be approached within 100m. As part of the site analysis the fieldworkers undertook an assessment of how visible the site was from publicly accessible areas where they existed within 500m of the site:

- **High**: Open views of the TFBs from at least one area.
- **Medium**: Views partly filtered or blocked by modern buildings and/or planting.
- **Low**: Site not visible due to modern buildings and/or planting.

The results of the analysis show that over two thirds of the sites (71%) are highly visible in the landscape and a further 18 per cent were assessed as having medium visibility (Figure 3.5-17). Just one in 10 sites (11%) were obscured by modern buildings or trees. Field barns due to their exposed location in the farmed landscapes were highly visible (98%). There was good visibility of the sites across all ALTs (Figure 3.5-18).

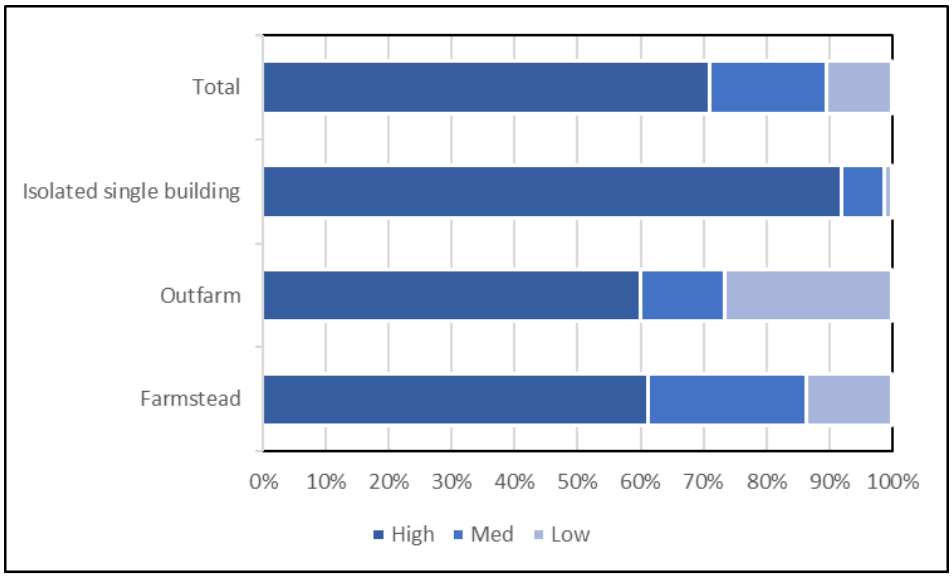


Figure 3.5-17 CS building survey site and visibility in the landscape

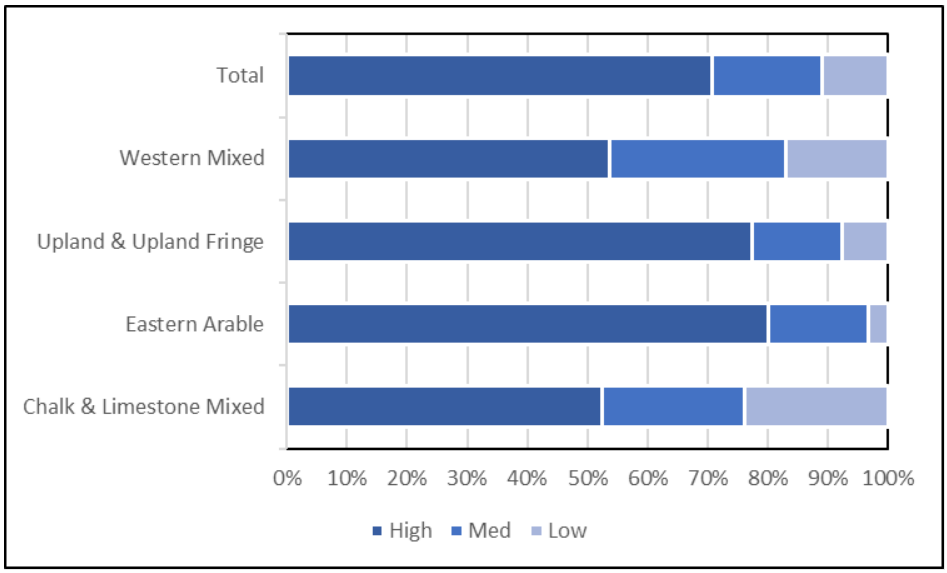


Figure 3.5-18 ALT and visibility in the landscape

These statistics are animated by extracts from the fieldworkers' notes:

> *Middle of village, on a National Cycle Network Route (see Figure 3.5 19)* (Visibility: High. Site Type: Farmstead: ALT: Western Mixed)
>
> *PROW passes immediately to the east of the farmhouse and adjacent buildings. There are distant views of the farm complex from the road to the south and the railway to the north.* (Visibility: High. Site type: Farmstead. ALT: Eastern Arable)
>
> *Leicestershire Round long distance footpath passes through the farmyard. Farmyard is in the village and surrounded by houses.* (Visibility: High. Site type: Farmstead. ALT: Western Mixed)
>
> *Courtyard partly hidden by modern buildings. Road passes with 100m. No footpaths within 1km.* (Visibility: Medium. Site type: Farmstead. ALT: Eastern Arable)
>
> *Site visible from adjacent High Peak Trail but as that is higher, and modern buildings intrude, mostly it is view of roofs.* (Visibility: Medium. Site type: Farmstead. ALT: Upland and Upland Fringe)
>
> *The farmstead is glimpsed from the neighbouring lane, this range is concealed by other buildings in the group*. (Visibility: Low. Site type: Farmstead. ALT: Arable East)
>
> *The farmstead is down a private lane so not particularly visible to the public at all.* (Visibility: Low. Site type: Farmstead. ALT: Upland and Upland Fringe)

It is concluded, therefore, that in terms of affording the public an opportunity to see and experience the buildings maintained under the scheme that the selection process has identified appropriate buildings.

National Cycle Network	
	
National Cycle Network Route 13: Norfolk	National Cycle Network Route 72: Cumbria

Figure 3.5-19 CS TFB maintenance option sites adjacent to National Cycle Network Routes

Building range assessment: materials, historic function and condition

The building range survey recorded information on construction materials, historic function, and condition of the buildings a total of 435 ranges on 230 sites. The Defra criteria[17] on the eligibility of buildings for the TFB maintenance options is that they should be TFBs or parts of buildings that:

[17] https://www.gov.uk/countryside-stewardship-grants/maintenance-of-weatherproof-traditional-farm-buildings-hs1

- Were built using traditional methods and using timber, brick, stone, tile or slate.
- Were built before 1940 for agricultural or forestry use, such as housing machinery or animals, or storing or processing crops, food or forest products.
- Are still in agricultural or forestry use on a land holding, whether or not this was the original use.
- Are sound and weatherproof.
- Are recorded on the FER or Woodland Management Plan.

And, in addition, for buildings in remote areas (HS8) they should be:

- At least 400m from the main farmstead.
- At least 200m from a metalled public road (a hard surface like asphalt, concrete, paving stones, bricks and cobbles) by the shortest practicable route.

Walling and roofing materials

Figure 3.5-20 shows that the dominant wall materials used in the construction of the building ranges include in the CS scheme are overwhelmingly traditional (98%). Less than one per cent of the wall materials were classed as non-traditional, mainly having parts of walls supported by modern rolled steel joists (RSJs). The walls of field barns were entirely constructed from traditional materials. There was more variation in the dominant roofing materials used with 81 per cent being assessed as traditional. Modern sheeting was used on 9 per cent of the ranges and corrugated iron on a further 7 per cent (Figure 3.5-21). The small number of outfarm sites (15) in the survey had non-traditional roofing on half the ranges (50%).

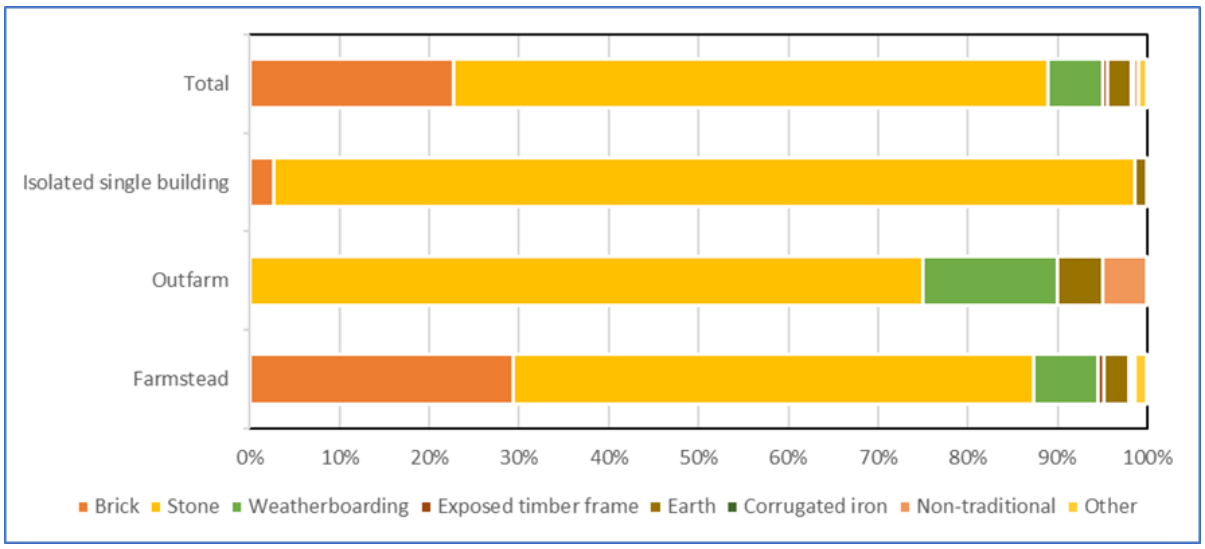


Figure 3.5-20 CS building survey range location and dominant wall materials

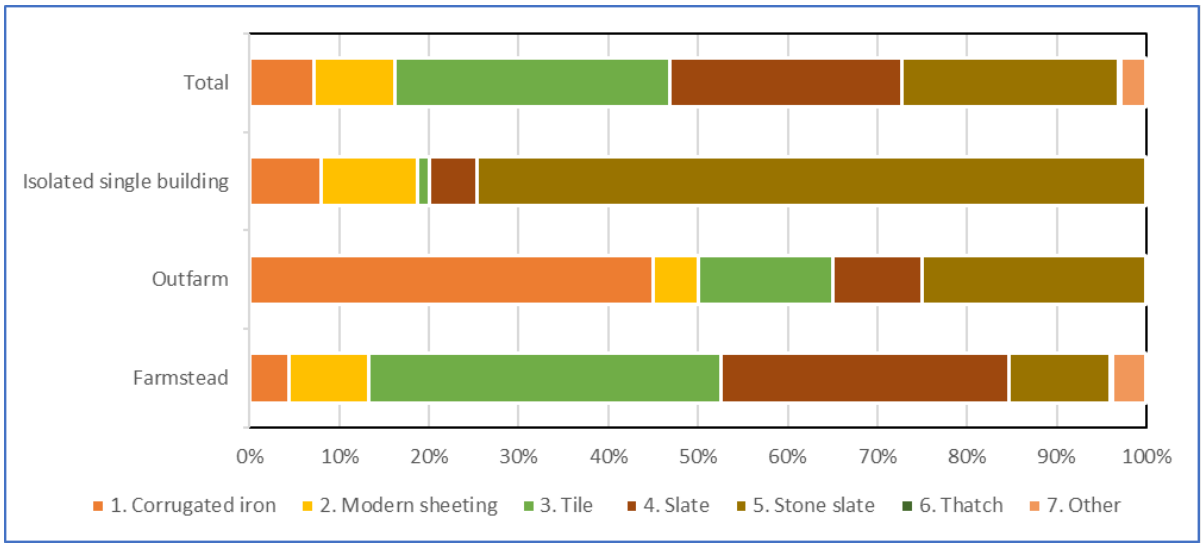


Figure 3.5-21 CS building survey range location and dominant roof materials

The use of traditional wall and roofing materials reflected the character of the ALTs (Figure 3.5-22 and Figure 3.5-23). In broad terms, brick (23%) and stone (66%) dominate the construction of walls in the building ranges, with weatherboarding being an important building material in Eastern Arable areas. As for roofing materials, stone slate and slate were dominant in Upland and Upland Fringe areas, whereas tile and slate were the most prevalent roofing materials in the other ALTs.

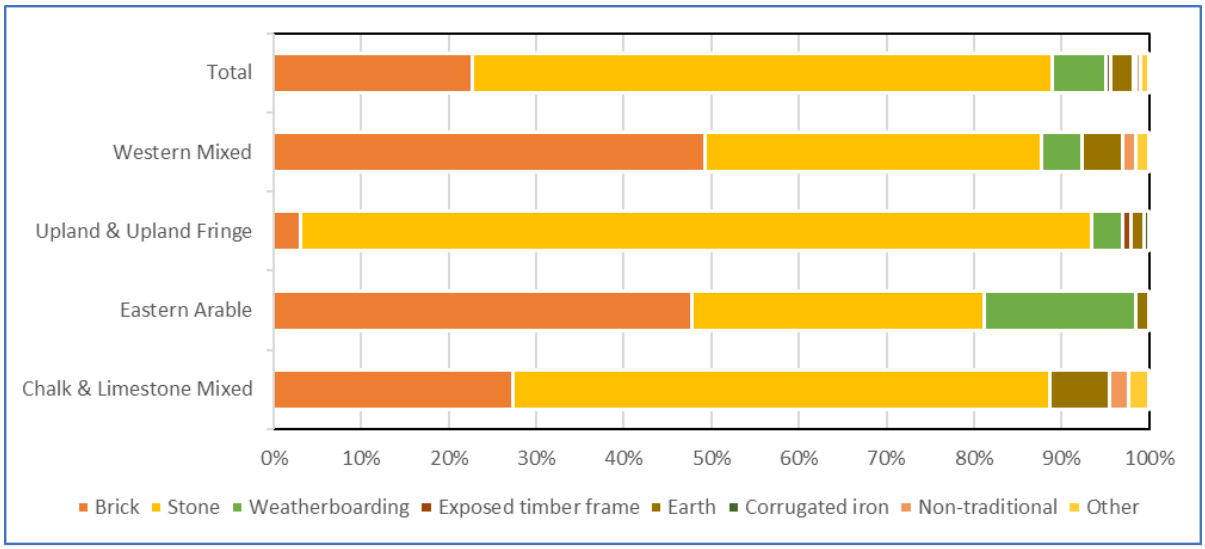


Figure 3.5-22 ALT range location and dominant wall materials

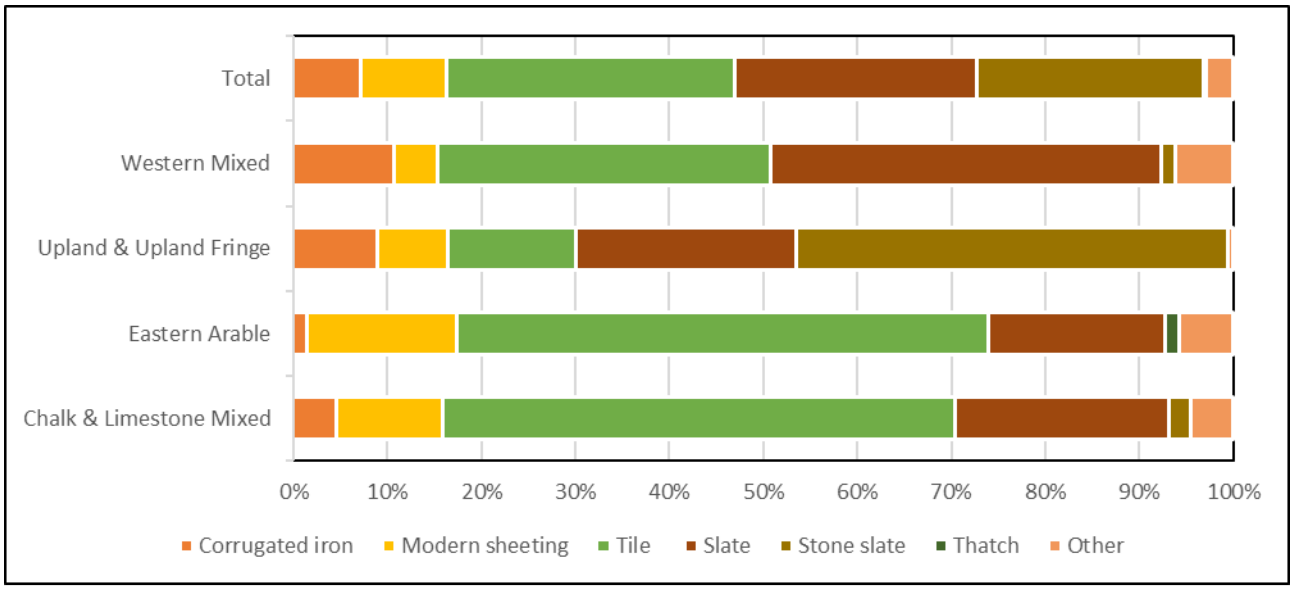


Figure 3.5-23 ALT range location and dominant roof materials

The TFBs recorded as part of the building range survey reflect the variety of building materials to be found across England, which in turn reflects the diversity of its geology. The inclusion of TFBs in the scheme makes an important contribution to maintaining and reinforcing local character and distinctiveness (see Figure 2.2-1 and Figure 2.5-8).

Historic functions

As well as being constructed out of traditional materials the vast majority of building ranges had discernible historic functions that due to a combination of their morphology and architecture could be identified as TFBs. Table 3.5-2 shows the variety of historic function recorded in the survey, and their relationship to the different types of site. The regional distribution of building range functions is shown in Table 3.5-3. From this analysis it is concluded that agreement holders had chosen buildings that were appropriate and eligible for inclusion in their CS agreements, as they are representative of the range of building types and local variations across the country.

Table 3.5-2 CS building survey range location and historic functions

Historic function*	Farmstead (%)	Outfarm (%)	Isolated single building (%)	Total (%)
Cow house	34.8	50.0	76.3	44.9
Stable	28.0	5.0	2.6	22.2
Cart shed	22.5	0.0	0.0	17.2
Shelter shed	19.8	30.0	1.3	16.1
Threshing barn	19.1	25.0	2.6	15.8
Combination Barn	16.4	15.0	2.6	13.7
Granary	17.4	5.0	1.3	13.5
Pigsty	5.1	0.0	1.3	4.2
Dairy	2.4	0.0	0.0	1.6
Forge	2.4	0.0	0.0	1.8
Sheep housing	0.3	5.0	6.6	1.8
Hay barn	2.0	0.0	0.0	1.6
Linhay	1.4	0.0	0.0	1.1
Poultry housing	1.4	0.0	0.0	1.1
Cider house	1.0	0.0	0.0	0.8
Dovecote	1.0	0.0	0.0	0.8
Hop kiln	1.0	0.0	0.0	0.8
Covered yard	0.7	0.0	0.0	0.5
Brewhouse/ bakehouse	0.3	0.0	0.0	0.3
Uncertain**	35.2	20.0	14.5	31.9

*Columns do not add up to 100% as a building range may have more than one historic function.
** Where part or all of a range's historic function could not be determined.

Table 3.5-3 ALT range location and historic functions

Historic function*	Chalk & Limestone Mixed (%)	Eastern Arable (%)	Upland & Upland Fringe (%)	Western Mixed (%)	Total (%)
Cow house	20.5	36.2	57.0	33.3	44.9
Stable	31.8	33.3	16.5	21.2	22.2
Cart shed	18.2	29.0	13.5	15.2	17.2
Shelter shed	29.5	31.9	9.5	10.6	16.1
Threshing barn	27.3	27.5	6.0	25.8	15.8
Combination Barn	18.2	10.1	13.0	16.7	13.7
Granary	15.9	17.4	11.0	15.2	13.5
Pigsty	2.3	4.3	3.5	7.6	4.2
Dairy	0.0	2.9	0.5	4.5	1.6
Sheep housing	0.0	0.0	3.5	0.0	1.8
Forge	2.3	5.8	0.5	1.5	1.8
Hay barn	0.0	1.4	0.5	6.1	1.6
Linhay	0.0	0.0	1.0	3.0	1.1
Poultry housing	0.0	1.4	1.0	1.5	1.1
Cider house	0.0	0.0	0.5	3.0	0.8
Dovecote	0.0	2.9	0.5	0.0	0.8
Hop kiln	0.0	0.0	0.0	4.5	0.8
Covered yard	0.0	2.9	0.0	0.0	0.5
Brewhouse/ bakehouse	0.0	1.4	0.0	0.0	0.3
Uncertain**	31.8	42.0	33.0	18.2	31.9

*Columns do not add up to 100% as a building range may have more than one historic function.
** Where part or all of a range's historic function could not be determined.

The tables above show how the selection of buildings for funding through the scheme reflects and thus conserves the historic character of TFBs in their landscape context. The number and combinations of different historic functions recorded in the survey closely reflects the national pattern of uptake. For example, the most commonly recorded historic function associated with the building ranges was for cattle housing (45%), which reflects the prevalence of agreement holders occupying livestock farms in the Upland and Upland Fringe ALT (57%). It also reflects the abundance of field barns to house cattle and their fodder (76%) in the Yorkshire Dales, the Lake District and the Peak District (see Figure 3.5-24). The relatively high figure for the Western Mixed ALT (33%) reflects the historic importance of housing dairy cattle in the wetter west of England; cow houses are commonly found in the combination barns of these areas. In the Arable East improvements in housing for cattle (36%) transformed farmsteads from the late-18th century and particularly during the High Farming years of the mid-19th century, resulting in their rearrangement and planning around yards.

Barns are typically the largest traditional buildings encountered on farmsteads in arable and mixed farming areas (see Figure 3.5-24). Threshing barns (16%), solely built for the storage and processing of the corn crop, were well represented in all ALTs apart from the livestock dominated Upland and Upland Fringe areas (6%). In contrast, combination barns (14%), housing multiple functions, were

less prevalent in the specialist Arable East. Multi-functional and storeyed combination barns can date from the 17th century or even earlier, but in Upland and Upland Fringe areas they are strongly associated with the rebuilding and reorganisation of farmsteads from the late-18th century.

As an essential part of most traditional farmsteads, stables (22%) and cart sheds (17%) were recorded across all ALTs (see Figure 3.5-24). The need for motive power provided by teams of horses and thus the size of stables rose in step with the size and arable acreage of farms, and again is reflected in the higher proportion found in Chalk and Limestone Mixed and Eastern Arable ALTs and the much lower proportion needed in Upland and Upland Fringe areas. This is again reflected in the figures for cart sheds, the largest being required for large arable farms and represented in some spectacular examples funded through the scheme.

Open-fronted shelter sheds (16%), typically provided shelter for fatstock facing cattle yards (see Figure 3.5-24), are most strongly associated with the arable landscapes of the Eastern Arable (32%) and Chalk and Limestone Mixed (30%) ALTs. In these areas farmyard manure played a critical role in enhancing the soil fertility. Granaries (14%) were recorded across all ALTs and were usually found in combination with cart sheds or stables. Some very large examples were found on large scale planned farmsteads in the Arable East and Chalk and Limestone Mixed ALTs (see Figure 3.5-24).

Major historic functions	
	
Field barn landscape (Yorkshire Dales)	Field barn (White Peak)
	
Cow housing part of a courtyard plan outfarm (The Brecks)	Cow housing on a large planned estate farm (Bedfordshire and Cambridgeshire Claylands)
	
Threshing barn (The Broads)	Cart shed and stable (Exmoor)
	
Open-fronted shelter shed (North Northumberland Coastal Plain)	Granary above cart shed (North Northumberland Coastal Plain)

Figure 3.5-24 Major building ranges covered by CS TFB maintenance options

The survey of TFB ranges also recorded a variety of smaller or regionally specific building configurations (see Figure 3.5-25). As Table 3.5-2 shows there were 12 historic functions that were relatively rare and were recorded in less than five per cent of the ranges. Some of these historic functions, for example cider houses and forges, are difficult to identify without close internal inspection which was only possible for 47 per cent of ranges. It is likely that some of these historic functions have been missed and recorded under the uncertain category during the fieldwork. Pigsties (4%) are the most numerous of the minor historic functions and if not provided with their own yard offer a good example of type of function that can be difficult to determine if they are part of a larger range.

Although the building range survey recorded relatively low numbers for some historic functions, their distribution broadly corresponds with national and regional patterns. Housing for sheep (2%) was recorded in the Upland and Upland Fringe ALT. Here isolated single buildings for yearling sheep (termed hogg houses) are located in the Yorkshire Dales. Forges (2%) were built to serve some of the largest industrial-scale farmsteads (mostly in Northumberland with other examples noted) for shoeing horses and making or repairing implements. Dairies (2%) are often found within multifunction ranges and are difficult to identify. In the more specialised dairying areas they are sometimes identifiable in their own right. Similarly, cider houses (0.8%), confined to south-west England and the West Midlands, can be built into multi-functional ranges. Linhays (1%) are open-fronted and storeyed buildings for housing cattle and storing hay, and are a building type confined to the south-west of England. Covered yards (0.5%), introduced following the publication of scientific research in the 1850s, were a specialist building type for fattening cattle and conserving their manure: they are uncommon, but again concentrated in arable farming landscapes.

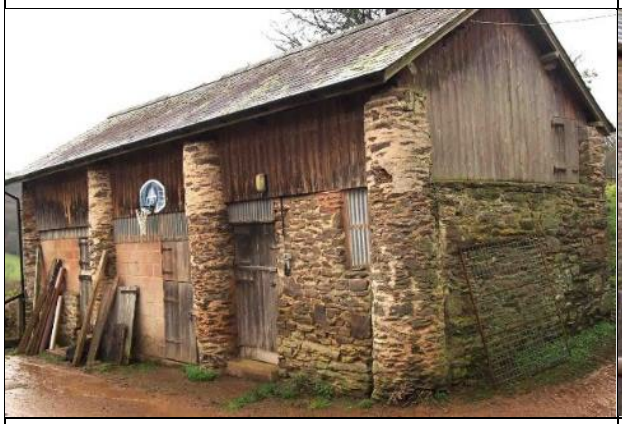
Minor historic functions	
	
Pigsty (Mid Northumberland)	Dairy (Yorkshire Wolds)
	
Sheep housing (Yorkshire Dales)	Forge (North Northumberland Coastal Plain)
	
Linhay (Exmoor)	Hen house over bull box (Eden Valley)

Figure 3.5-25 Minor building ranges covered by CS TFB maintenance options

This analysis demonstrates that the most appropriate buildings have been selected for the scheme, in that they reflect how farmsteads and traditional buildings illustrate the historic development and local diversity of agriculture and the farmed landscape across England.

Special features

During the building range survey it was possible to gain internal access to just under half (47%) of the ranges. No outfarms could be internally inspected. Where access was gained just over half the ranges (51%) were assessed to contain special features amongst their fixtures and fittings. (Figure 3.5-26). Almost three quarters of the building ranges (72%) were assessed to have external special features (Figure 3.5-27). These results show that the majority of the ranges chosen by agreement holders for their CS agreements had additional architectural and/or historic interest.

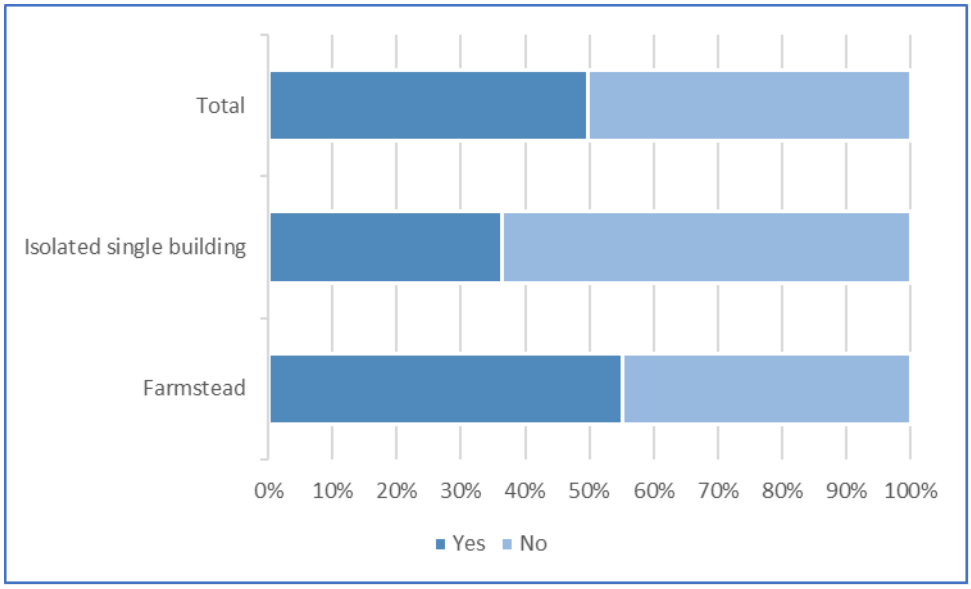


Figure 3.5-26 CS building survey range location and presence of internal special features

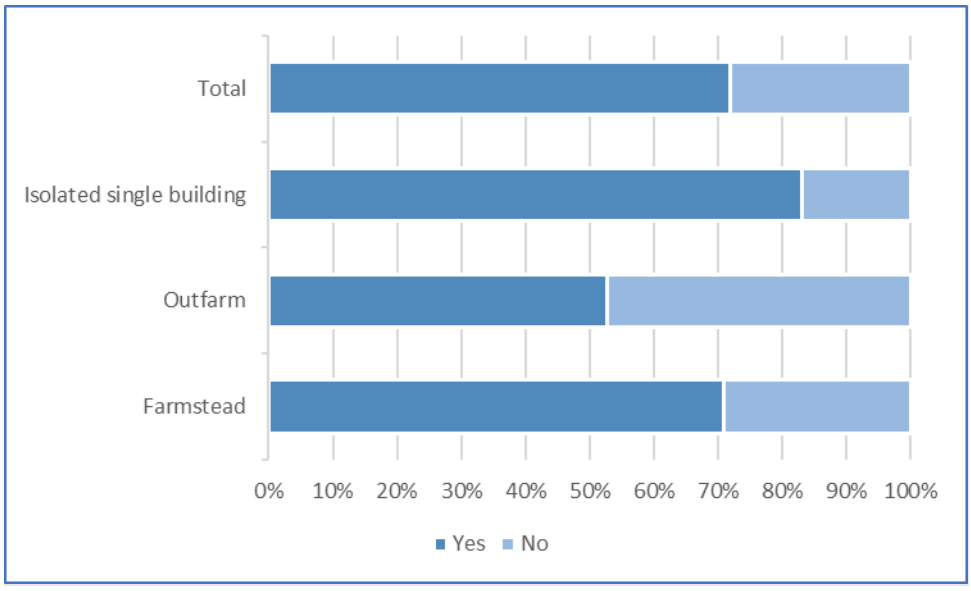


Figure 3.5-27 CS building survey range location and presence of external special features

The ranges not in the scheme were less likely to have external or internal features of heritage value compared to the ranges covered by the scheme. Windows characteristic of traditional farm buildings are far more likely to survive on ranges in the scheme (72% of recorded ranges) than those that are not in the scheme (39%). This is a reflection of the fact that ranges outside the scheme are more

likely to have lost features as a result of adaptive reuse. Field barns are most likely (at 83%) and outfarms (at 53%) least likely to have feature windows. The fact that feature windows survive best in Eastern Arable ALTs may reflect the continued utility of these features in buildings housing fatstock, in contrast to the removal and replacement of windows in building housing dairy cattle from the inter-war period. Internal features - mostly cow house and stable interiors, drive shafts for barn machinery and very remarkably some in situ threshing machines, were noted in 50 per cent of inspected ranges in the scheme, and only 16 per cent of those not in the scheme; their absence from outfarms is not surprising, given that few horses or dairy cattle were stalled on outfarms.

Structural condition

The building range survey also assessed the structural condition of the building ranges against a four point scale:

- **Very good**: Well-maintained with no signs of any repair that is required.
- **Good**: Building range is structurally sound and well-maintained with only very minor areas that may need attention.
- **Fair**: Building range is structurally sound and generally weatherproof, but with more extensive need for repair. May include structural cracks and need for repair of doors and windows.
- **Poor**: Building range at increasing risk of severe damage and even loss due to poor structural condition. Many elements of the fabric showing signs of decay and water ingress due to severe spalling/deterioration of walls, areas of roof admitting water, defective rainwater goods causing damage to fabric; structural cracks and evident signs of instability (leaning walls, internal propping).

Figure 3.5-28 shows that 95 per cent of the building ranges were assessed by the fieldworkers as being in the very good, good or fair categories and only 5 per cent were in poor condition. The results from the building range survey also show that the Eastern Arable ALT stands out as having a higher proportion of ranges in very good (24%) and, conversely, poor condition (11%) (Figure 3.5-29). From this evidence it is concluded that agreement holders are identifying appropriate weatherproof TFBs to enter into their CS agreements.

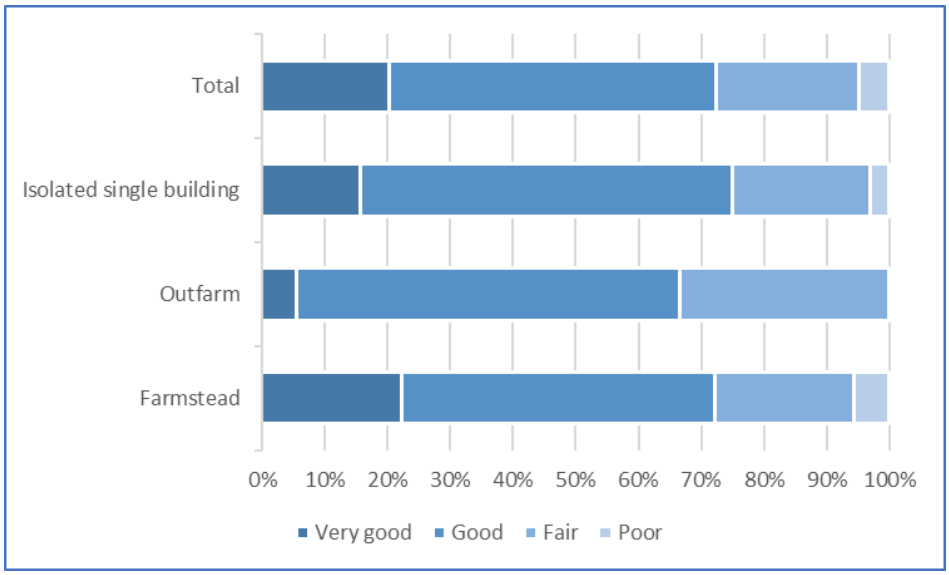


Figure 3.5-28 CS building survey range location and structural condition

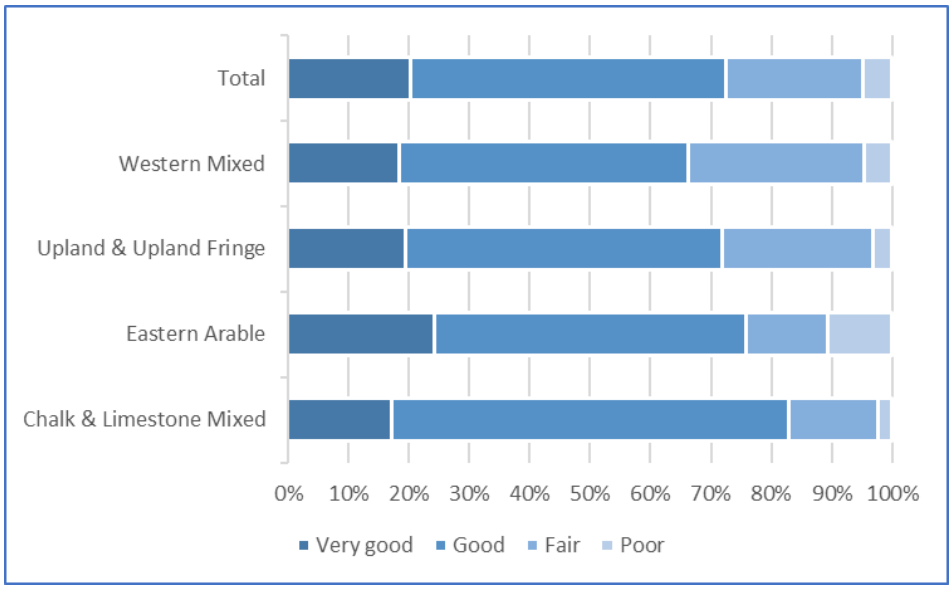


Figure 3.5-29 ALT range location and structural condition

Comparing the character, and condition of building ranges in and out of the CS scheme

The interviews with CS agreement holders identified 36 of the 139 farmstead sites (26%) that contained weatherproof TFBs that were not covered by the maintenance option. On these sites it was possible to compare the character and condition of the building ranges in and out of the scheme. Of the 229 building ranges found within farmsteads, 46 were not covered by the TFB maintenance option (14%). There was little difference in the wall materials between those building ranges in and out of the scheme but a larger proportion of ranges outside the scheme (17%) were roofed with modern materials compared to ranges in the scheme (9%) (Figure 3.5-30).

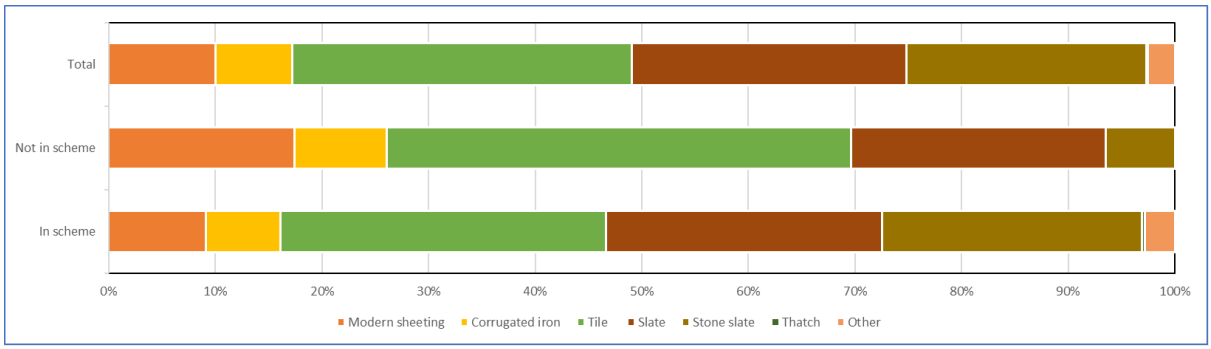


Figure 3.5-30 CS scheme status and dominant roof materials

Building ranges that were not chosen for inclusion in the CS scheme tended to be smaller in scale, having a single storey, than those in the scheme (Figure 3.5-31), with cart shed functions being particularly common (17%). These building ranges were also less likely to have special architectural or historic features (Figure 3.5-32 and Figure 3.5-33), but they were, however, more likely to be maintained in very good condition (Figure 3.5-34). A detailed inspection of the field notes on the building ranges outside the scheme found that some of the buildings may have been adapted for domestic use, such as garages for cars rather than agricultural machinery, or household storage, and therefore may have been misidentified in the agreement holder interview.

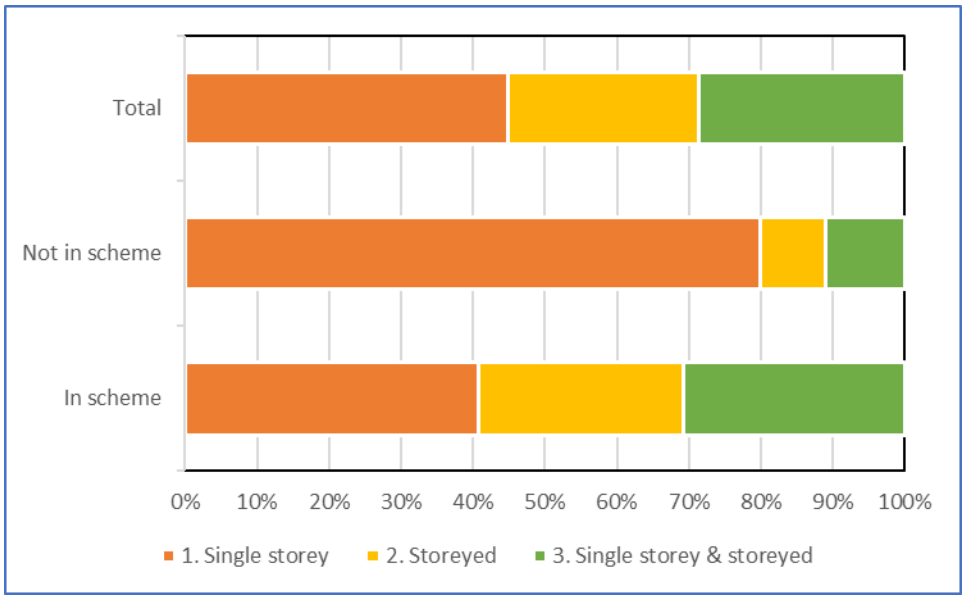


Figure 3.5-31 CS scheme status and size of building ranges

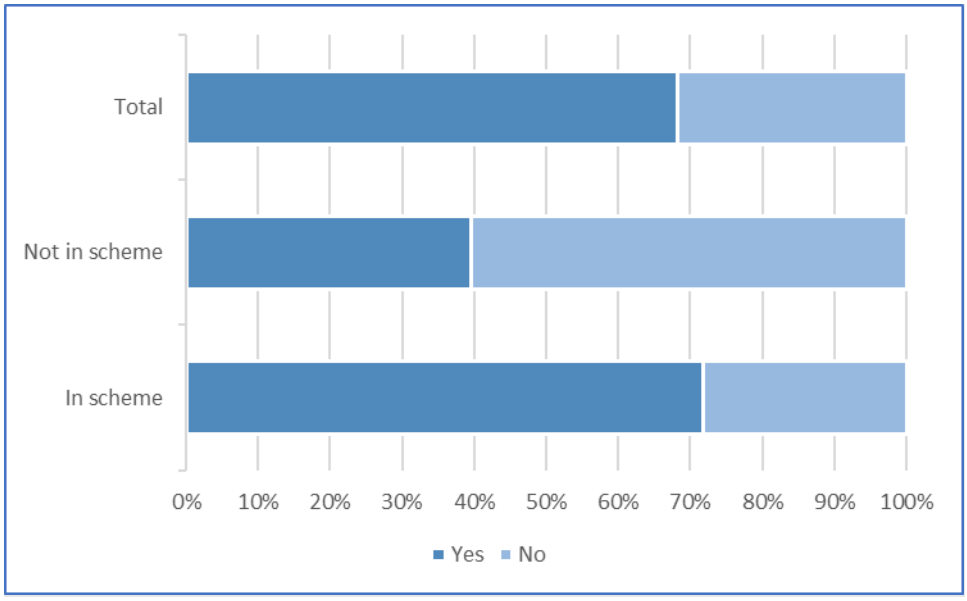


Figure 3.5-32 CS scheme status and presence of external special features

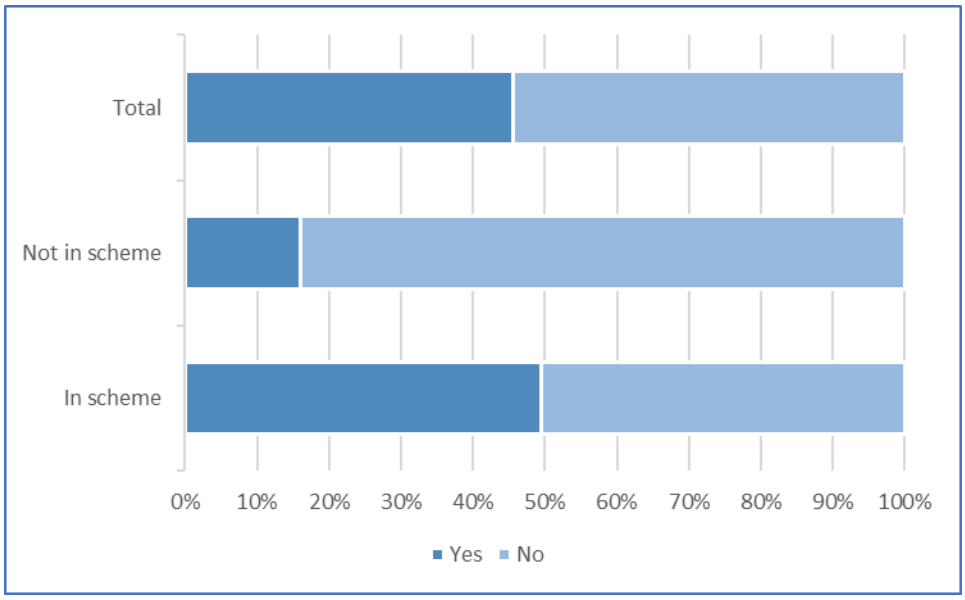


Figure 3.5-33 CS scheme status and presence of internal special features

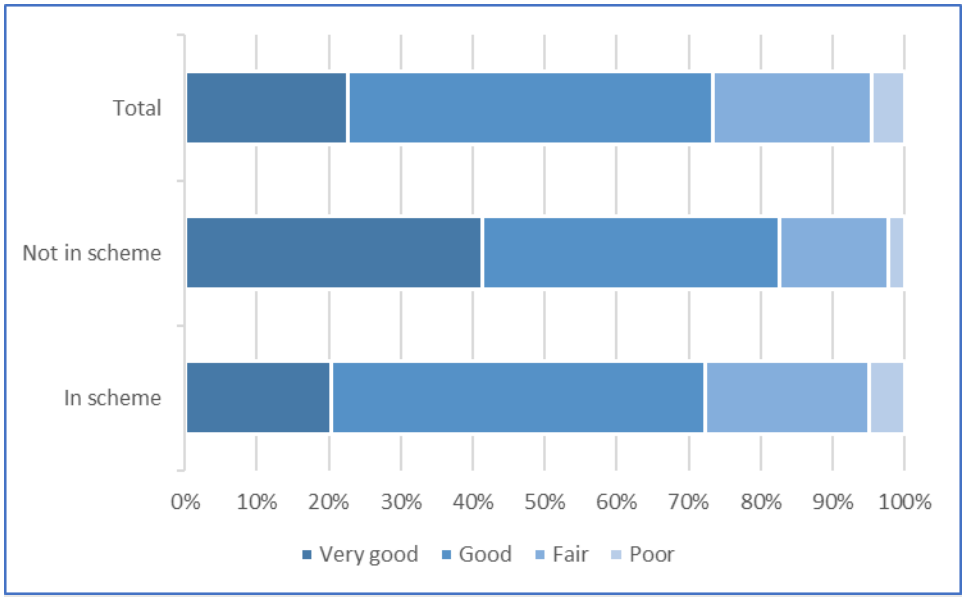


Figure 3.5-34 CS scheme status and structural condition

From these results it is concluded that majority of eligible TFB ranges in farmstead sites have been included in the CS scheme, and the ranges that were left out tended to be of lesser architectural and historic interest, have greater use of modern roofing materials and there was some evidence to suggest that some of the ranges may have been in domestic rather than agricultural use.

Summary

Overall it can be concluded that the sites selected by the CS agreement holders for inclusion in the scheme under the TFB maintenance option have been appropriately identified as weatherproof traditional farm buildings in terms of their historic functions, and construction materials. It is also concluded that these buildings contribute to maintaining and reinforcing local landscape character and the conservation of the historic environment, and that they also provide opportunities for access and engagement with the public and provide opportunities for nature conservation.

3.5.3 Have appropriate repairs been carried out?

The building range survey found that there was visual evidence of maintenance work having been carried out on 92 per cent of the building ranges (Figure 3.5-35) and that traditional materials had been used in nine out or 10 cases (91%) (Figure 3.5-36). However, the fieldworkers considered over half the ranges to require additional maintenance work (Figure 3.5-37).

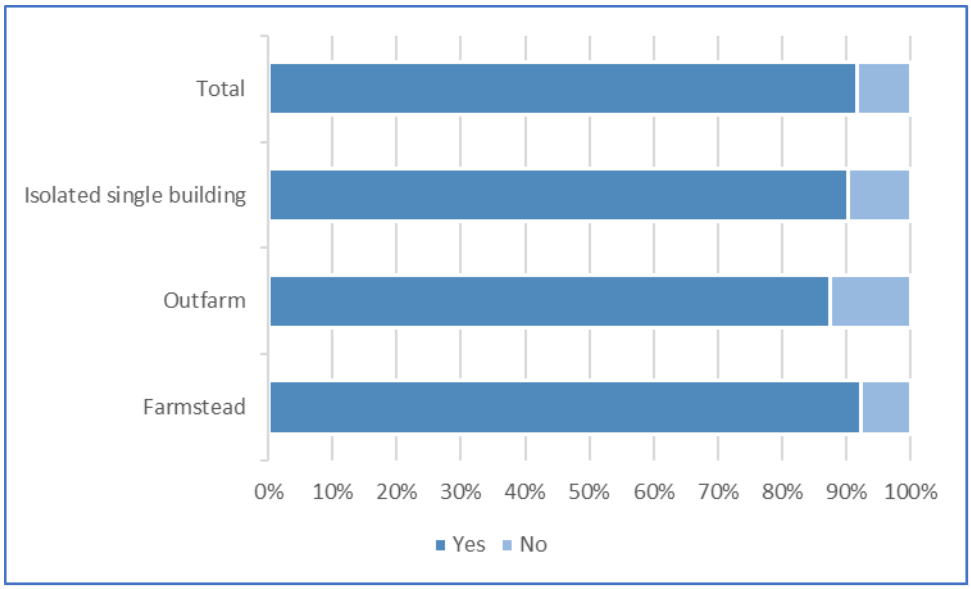


Figure 3.5-35 CS building survey range location and evidence of maintenance work

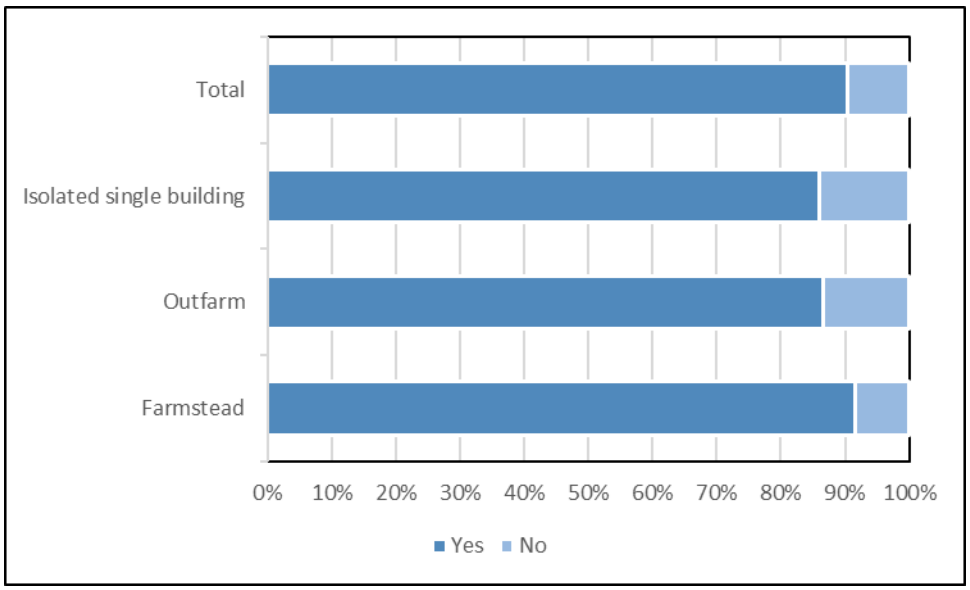


Figure 3.5-36 CS building survey range location and evidence of traditional material use in maintenance

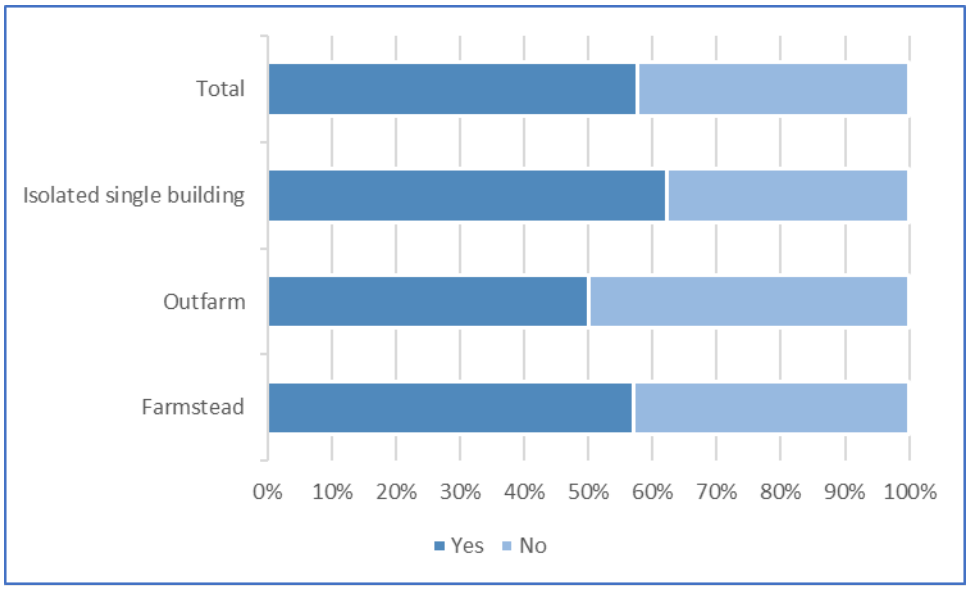


Figure 3.5-37 CS building survey range location and further maintenance work required

There were a number of factors that contributed towards further work being required:

- The survey took place during the winter months when a number of major storms took place. In November 2021, storm Arwen hit the North of England and caused widespread structural damage to buildings and whose impacts were particularly severely felt in Northumberland and Cumbria, with gust of wind in excess of 70mph (see Figure 3.5-38). Storm Berra affected the Midlands and North of England in December 2021 with gusts up to 60mph. In January 2022 two storms, Malik and Carrie, brought structural damage to the Midlands and the North of England. Finally, in February the Midlands and South of England were hit be three named storms within a week, Dudley, Eunice and Franklin, with gusts up to 80mph. Across the country the agreement holder survey found that many farmers were still dealing with the aftermath of these storms and had not been able to undertake the repair yet. The fieldworkers' notes recorded numerous instances of storm damage:

  > *Major storm damage. Exposed roof timbers, blocked gutters.* (Site Type: Farmstead: NCA: Cheviots)
  >
  > *Part of roof blown off in 2021 autumn storm.* (Site Type: Farmstead: NCA: North Northumberland Coastal Plain)
  >
  > *Roof in need of repairs – areas of slates moving; recent storms (Feb, '22) have impacted.* (Site Type: Farmstead: NCA: White Peak)
  >
  > *Roof in good order, only recent slippage due to mega-storms in early 2022. (Site Type: Farmstead: NCA: Low Weald)*
  >
  > *Roof in poor condition. Storm damage. Degraded mortar.* (Site Type: Farmstead: NCA: Mid Northumberland)

Storm Damage	
	
Mid Northumberland	North Northumberland Coastal Plain
	
North Northumberland Coastal Plain	North Northumberland Coastal Plain

Figure 3.5-38 Winter storm damage in Northumberland (2021-22)

- Some of the building ranges, while being weatherproof at present, had structural defects that would require future work. Some of these building ranges would benefit from a restoration option similar to those offered in previous AES (see Figure 3.5-39):

> *Roofline undulating. Some structural cracks in wall*. (Site Type: Isolated building. NCA: Yorkshire Dales)
>
> *Slates regularly replaced though an uphill battle as I think the battens are failing and ultimately barn will need reroofing.* (Site Type: Farmstead. NCA: Shropshire Hills)
>
> *Slipped tiles, roof timbers deteriorating, blocked gutters. Vegetation on walls and roofs*. (Site Type: Farmstead. NCA: Mid Norfolk)

Structural defects	
	
Roof plaster	Wall

Figure 3.5-39 Structural defects requiring major action

- Some of the identified future work was relatively minor and was likely to be addressed during the lifetime of the scheme (see Figure 3.5-40):

> *Blocked gutters, slipped tiles*. (Site Type: Farmstead. NCA: Mid Severn Sandstone Plateau)
>
> *Gutters require cleaning, wooden eves at gable end are unprotected.* (Site Type: Isolated building. NCA: Leicestershire Vales)
>
> *Remaining roofs need attention – mostly tile re-fixing. Barge boards etc and rainwater goods need attention/replacement/re-painting/clearing out*. (Site Type: Farmstead. NCA: Yorkshire Wolds)
>
> *Rainwater goods in need of maintenance in some areas; some pointing of brickwork needed now and in immediate future. Lick of paint needed on most doors and windows; one lower stable door needs some attention. Farmer just taken over from his father and starting process of maintenance and improving standard of care of TFB.* (Site Type: Farmstead. NCA: Lincolnshire Wolds)
>
> *Slipped and cracked tiles need rectifying*. (Site Type: Farmstead: NCA: High Weald)

Minor maintenace required	
	
Weatherboards	Slipped stone slates
	
Blocked rainwater goods	Detached rainwater goods

Figure 3.5-40 Minor maintenance required

- Some of the ranges did not appear to be maintained (see Figure 3.5-41):

> *Vegetation on roof and some structural cracks to walls.* (Site Type: Farmstead. NCA: Yorkshire Dales)
>
> *Walls of the extension show vegetation damage. Forking hole doors have decayed wood.* (Site Type: Isolated building. NCA: Yorkshire Dales)
>
> *Tiles slipped, some missing, some vegetation on roof shutter/window missing – now mesh screen at apex, east end.* (Site Type: Farmstead. NCA: Isle of Wight)
>
> *1st year of scheme so no work done yet but roof, walls, openings (doors and windows), rainwater goods all need attention.* (Site Type: Farmstead. NCA: Vale of York)

Missing regular maintenance	
	
Vegetation	Vegetation
	
Vegetation	Vegetation

Figure 3.5-41 Missing regular maintenance

3.5.4 Assessment of missed opportunities

On over half the 230 sites (54%) the fieldworkers recorded that the use of CS TFB maintenance options had not missed any opportunities to deliver public benefits and there were 39 sites (17%) where an assessment could not be made (Figure 3.5-42). However, there were 66 sites (29%) where the fieldworkers recorded opportunities to enhance public benefits beyond what was currently being delivered under the CS TFB maintenance options. On those sites, just under half (44%) would benefit from repair work that went beyond what was available under the TFB maintenance options (Figure 3.5-43). The level of work required on these sites was more in line with the capital option for restoration of historic buildings that was offered under ES (see Gaskell et al. 2014) and included work, such as the replacement of modern sheet roofs with traditional materials, the replacement of major roof timbers and stabilization and repair of walls to secure the long-term future of the buildings. Such work would help reinforce the sites' contribution to landscape character, local distinctiveness, and the historic environment.

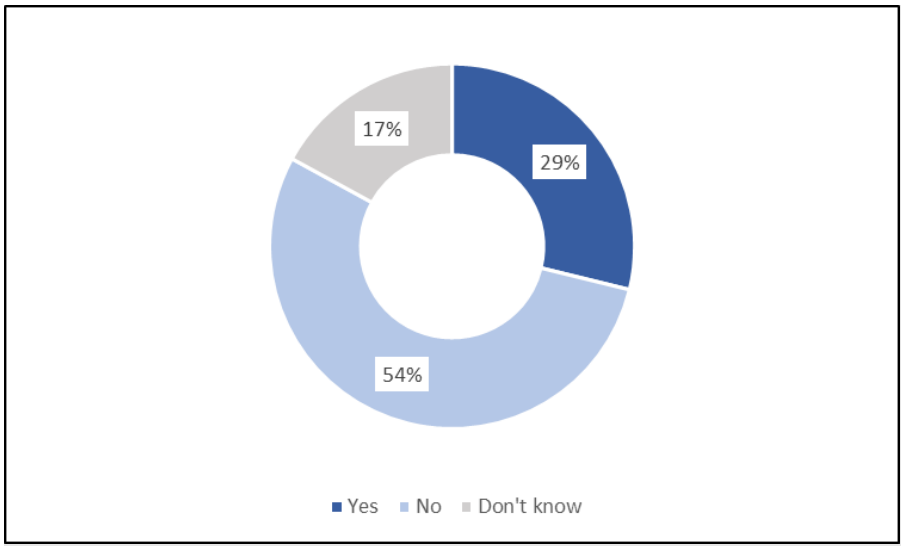


Figure 3.5-42 Opportunities to enhance public benefits from CS sites

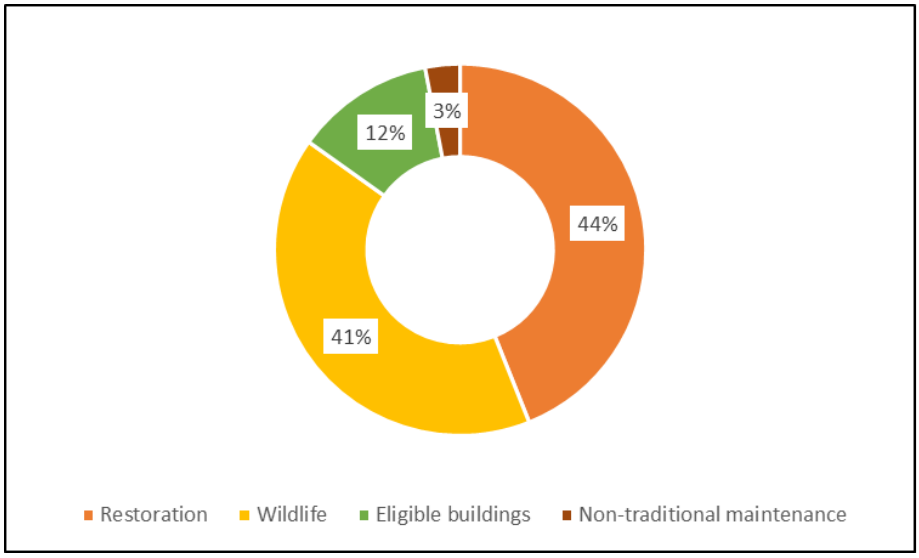


Figure 3.5-43 Type of public benefit enhancement on CS sites

There were opportunities to enhance benefits for nature conservation on 27 sites (41%) through the erection of barn owl, kestrel and bat boxes. There were eight sites (12%) where fieldworkers identified buildings that were eligible for the scheme, but for various reasons, had not been entered in the scheme. There were only 2 sites (3%) where non-traditional materials had been used to such an extent that it affected the public benefits being delivered.

3.6 Evaluation of effectiveness and value for money

3.6.1 Introduction

This task drew upon the findings of Tasks 1 through 5 to consider the effectiveness of the scheme and value for money. There were four detailed research questions:

- Have the wildlife assessment and building maintenance protocols introduced for CS been successful?
- Have the cultural and natural capital values of the buildings and farmstead been correctly identified?
- Is there potential to add value to TFB maintenance options through community/recreation use and to provide new opportunities for the health and well-being of visitors or those walking and cycling nearby?
- Does option use appear to offer good value for money for the farmer and in relation to the wider natural and cultural capital benefits delivered?

3.6.2 Evaluation of effectiveness and value for money

Have the wildlife assessment and building maintenance protocols introduced for CS been successful?

Introduction

In 2014 Defra commissioned an evaluation of the effectiveness of the ES TFB maintenance options (see Gaskell et al. 2014). The evaluation found that while the chosen buildings delivered multiple environmental benefits there was mixed success in relation to farm building maintenance. The evaluation concluded that the maintenance options had a limited impact on improving the condition of the farm buildings and that there was limited agreement holder awareness of the required standards of maintenance. The findings of this evaluation informed the development of the TFB maintenance options for CS, so they now have a requirement to undertake a wildlife survey (the BWAF) and to maintain a plan and log of annual repair works (the BMPL).

The wildlife survey recognises the value of TFBs for wildlife and provides base-line evidence of use of the building at the start of the CS agreement and considers the potential for erecting barn owl and kestrel nesting boxes, and roosting boxes for bats. The BMPL is completed in year one of the agreement and thereafter provides a standardised framework for annual, and post storm, inspection and targeted repair response. This aims to provide the agreement holder with a clear and easy way to keep their buildings in good repair throughout the agreement term. Details of maintenance evidenced by the log are required to support annual claims for these options.

Building wildlife assessment

Completed BWAFs were available for half of the agreement holders in the CS interview survey (50%). As the submission of completed BWAFs was a scheme entry requirement it is likely that the missing forms is an information storage issue rather than an indication of widespread noncompliance. A more significant issue is that the survey found that only one third of the agreement holders (37%) appear to have followed the instructions to complete a BWAF for each building. Analysis of the BWAF information and responses from the interview survey suggest that it was common practice to

complete a single BWAF for each site entered, irrespective of the number of building ranges present. This means that the value of the building specific questions on the form concerning building height, openings, fight paths, lighting and disturbance are of limited use unless all the buildings on a site are identical in every way for all the characteristics. Furthermore, the interview survey found that 42 per cent of agreement holders had low awareness of the BWAF and its contents. However, where the guidance on completing the BWAF was followed, there is evidence that sites were being identified with the potential for new wildlife boxes and the interview survey recorded some positive outcomes with barn owl boxes being erected at 58 sites and bat boxes at 14 sites.

From this evidence it is concluded that overall the wildlife assessment is having most impact as a means of raising general awareness of the benefits of TFBs for wildlife on the holding rather than at the level of the individual building range.

Building maintenance plan and log

The CS agreement holder survey found that only 56 per cent were using the BMPL and of those agreement holders, 26 per cent said they did not keep their forms up to date. When asked how helpful the BMPL was for organizing the maintenance work only 6 per cent of agreement holders said it was very helpful, whilst one third (32%) said it was not helpful at all.

The CS building range survey recorded information on the structural condition for 435 ranges on 230 sites. While only five per cent of the building ranges were in poor condition and bearing in mind the time of year the survey was conducted and the storm damage, only one in five of the ranges (20%) were in very good condition and maintained to the standards specified by the maintenance options. Just over 50 per cent of the building ranges were in good condition (52%) and while they were sound and weathertight there were features, such as unprotected woodwork associated with doors, windows and openings, that frequently required attention. The need for regular painting was seen by some agreement holders as being out of step with their approach to maintenance which led to suggestions that the TFB maintenance options were 'over specified'. There are also questions to be asked about the standard of maintenance required of the TFB stock to deliver the benefit streams desired.

An analysis was undertaken to compare the use of the BMPL, reported by the agreement holders, and the condition of the building ranges recorded by the fieldworkers. Figure 3.6-1 shows that while the agreement holders that kept their BMPLs up to date have a slightly higher proportion of buildings ranges in very good condition, they also had the highest proportion of building ranges in poor condition. As explained in 3.5.3, the timing of the survey (January-April 2022) and the numerous winter storms of 2021-22 makes the link between BMPL usage and condition difficult to interpret.

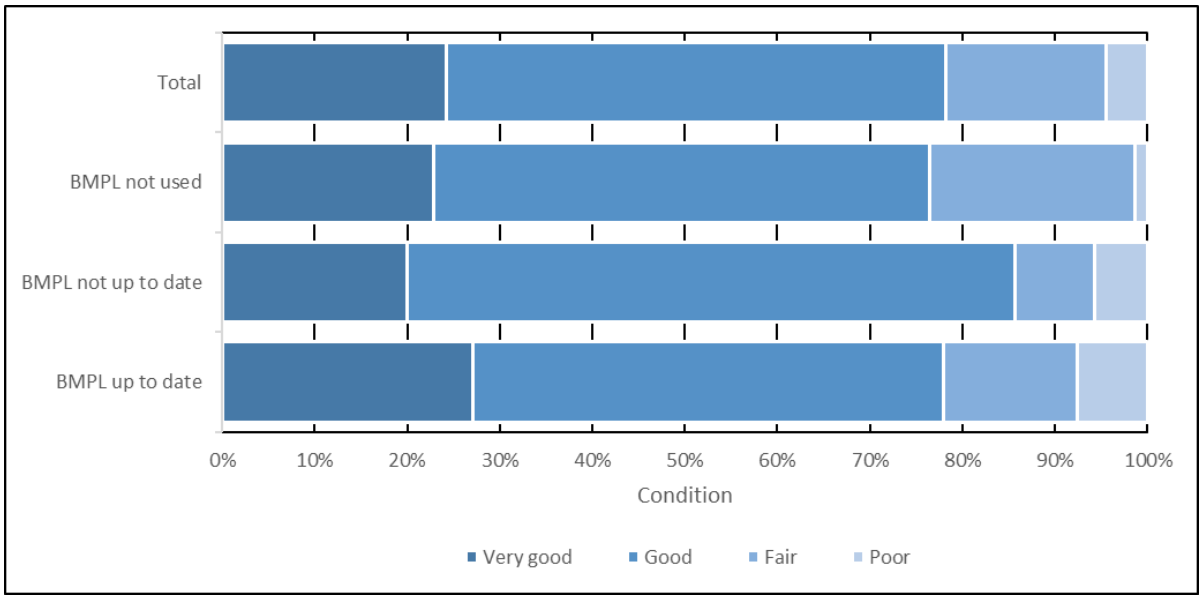


Figure 3.6-1 Relationship between BMPL use and condition of the building range

When BMPL use was compared with evidence of maintenance work on building ranges recorded by the fieldworkers it was found that agreement holders who had kept their BMPLs up to date were most likely to have undertaken maintenance work (Figure 3.6-2). This would suggest that the BMPL is having a positive effect on maintenance when it is being used and kept up to date.

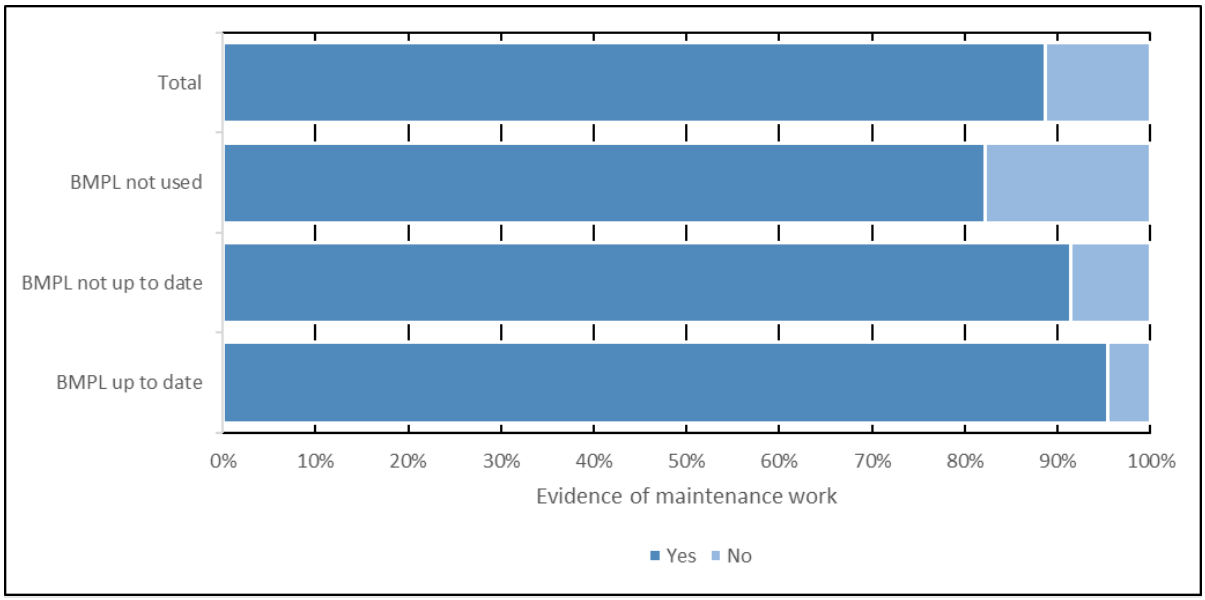


Figure 3.6-2 Relationship between BMPL use and evidence of maintenace work being undertaken

From this evidence it is concluded that although three quarters of the building ranges (72%) are in very good or good condition and 92 per cent show visible evidence of maintenance work, the fact that less than half of the agreement holders were keeping their BMPL up to date means that the introduction of the form has only been a partial success. This conclusion is supported by the finding that over half the building ranges (57%) were assessed as requiring further maintenance work at the time of the survey.

Have the cultural and natural capital values of the buildings and farmstead been correctly identified?

Introduction

Value arises from the ecosystem service flows generated by the TFB, modified by the condition of the stock, arising from the functions that they served in the past and perceived functions currently providing benefit streams that enhance social welfare (Powell et al. 2019). Powell et al. identify the following ecosystem services provided by historic buildings in rural areas:

- **Supporting services** which are necessary for the production of all other ecosystem services:
    - Primary production through synthesis of construction materials into organic material and surfaces including lichens and mosses.
    - Habitat formation, as a consequence of:
        - The materials used for the construction of their walls, roofs and surfaces.
        - Their time-depth and design, the former being linked to duration of habitat and the latter affording some species habitats.
        - Continued use or redundancy.
- **Provisioning services** which are tangible outputs that can be obtained from ecosystems that meet human needs:
    - The density, date and pattern in the landscape of buildings can provide:
        - Shelter for machinery, industrial plant and other forms of capital.
        - Commercial operating space for farming, businesses, commerce and industry.
        - Food from local landscapes through the processing of crops (e.g. barns, mills), the shelter and management of livestock (farm buildings) and the provision of fruit, vegetables and other food (e.g. horticultural/garden buildings).
        - Traditional skill maintenance and enhancement, including local geodiversity through use of traditional materials – stone, slate, brick, lime, timber.
- **Regulating services** which are ecological processes that regulate and reduce pollution and other adverse effects:
    - The density, date and pattern in the landscape of buildings can contribute to climate change mitigation through:
        - Reuse of traditional materials rather than replacement, utilising the embedded energy in the existing building stock,
        - Reuse of traditional materials to further reduce the environmental footprint generated in the use of new traditional materials, now often imported over great distances.
- **Cultural services** which are environmental settings that enable cultural interaction and activity. Buildings are fundamental to sense and place and history. Their diversity of materials, types and style offer benefits to:
    - Sense of place and aesthetic values as a result of:
        - Locally distinctive materials, styles and forms of architecture.

        - Traditional or specialist-designed forms and styles that are locally-rooted or influenced by national and international social, economic and aesthetic developments.
        - Their direct link to local environments through their use of local earth, clay, timber and stone (geodiversity).
    - Sense of history through offering a rich source of evidence for the historic development of places in their local, national and international context.
    - Spiritual and communal value through interaction leading to community cohesion, vibrancy and sustainability, capacity building and enabling opportunity.
    - Amenity value: Improve quality of life and health and well-being, both mental and physical, for example in attracting inward investment, visitor destinations, for people to interact with the natural and historic environment.
    - Educational and scientific value because of:
        - Inspiring the enjoyment of heritage assets and the historic and natural environment.
        - Providing opportunities for discovery, identification, education and research - for example in the transition from communal to more individual ways of living, the adoption of new building techniques and architectural styles and interaction with local ecologies, reflecting people's accommodation of changing ways of living and working.

Extent and condition of the TFB stock

In Natural Capital accounting the extent and condition of the stock of historic assets, in this case TFBs, determines which benefits the natural environment might receive (RPA & LUC 2018). Therefore, maintenance of the TFB stock, resulting from participation in the schemes, should help sustain the flow of benefits through time.

As Gaskell and Owen (2005) note TFBs are by far the most numerous type of historic structure in the countryside. The ES and CS TFB maintenance options have proved very popular among agreement holders and together have made a significant contribution to conserving and enhancing this historic asset. Between 2005 and 2010 nearly 13,000 ES agreements included 13,457 TFB maintenance options and between 2016 and 2021 over 3,000 CS agreements included 4,447 TFB maintenance options. The spatial pattern of uptake broadly reflects the national distribution of TFBs thought to be in agricultural use. The Staffordshire case study showed that the CS option use is reinforcing historic character. Of the 5,000 sites with TFBs in Staffordshire it is estimated that around 1,500 may be in agricultural use and about 10 per cent of these surviving sites are currently being maintained through the CS options.

The evidence for the building range survey shows that the maintenance options are having a positive effect on maintaining the TFB stock. Only five per cent of building ranges were recorded in poor structural condition and at risk of severe damage or loss. The vast majority of building ranges were structurally sound and weatherproof (95%) and 92 per cent show visible evidence of maintenance work. The building range survey also showed that traditional materials had been used in nine out or 10 cases (91%) indicating that appropriate repairs were being carried out to maintain the buildings. The agreement holder interview survey showed that in the absence of the TFB maintenance options the buildings would be maintained to a lower standard on nearly two thirds of the sites (61%), although only 20 per cent of the building ranges were recorded in the 'very good' condition category

with no repairs needed. This would suggest that there is still some room for improvement in the maintenance of the buildings. Overall, from the evidence review it can be concluded that the TFB maintenance options are helping to conserve the TFB stock.

The evidence shows that the TFB stock is being maintained through the use of the options, but are the buildings that will provide the most benefits being selected for the schemes? This question was answered in 3.5.2, which used three methods to assess whether the most appropriate buildings were chosen for option use. First, the provision of public benefits was considered as part of the site assessment. Second, the building survey considered their eligibility for TFB maintenance options and the public benefits they provided. Finally, a comparison of public benefits was made where there were building ranges within and outside the scheme existing together on farmstead sites. The evidence resulting from all three approaches showed that the most appropriate buildings were entered into the schemes.

The evidence on the effectiveness of the TFB maintenance options is presented below, using the language of Natural Capital accounting, in terms of the four main ecosystem services.

Supporting services

The main supporting service provided by TFBs is as a space for nature. From the BWAF analysis it is clear that agreement holders believe there is suitable habitat surrounding most TFB sites to support barn owls and bats (72% and 71%). Agreement holders recorded less suitable habitat for kestrels (49%). The potential to erect wildlife boxes was considered highest for barn owls (65%). Just under half the building sites had potential for bat boxes (49%) and one third of building sites (34%) had potential for kestrel boxes. The CS agreement holders also reported an increase in the use of the sites covered by the maintenance options by wildlife since entering the scheme.

The results from the building survey show that the sites and building ranges chosen for the CS TFB maintenance options possessed substantial potential as wildlife habitats. The site survey assessed the benefits for nature conservation in terms of their potential to provide nesting sites for barn owls, kestrels and bats. Overall, a quarter of the sites (24%) were assessed as having high potential for wildlife with 54 per cent having medium potential and 23% have a low potential for wildlife. A more detailed assessment of the wildlife potential for barn owl, kestrel and bat inhabitation was undertaken as part of the building range survey. The overall pattern reflected the findings of the site analysis and the potential for bat inhabitation was greater than for barn owls and kestrels. From the evidence it can be concluded that the TFB maintenance options are helping to improve roosting and nesting opportunities for wildlife.

Provisioning services

Traditional farm buildings play a variety of roles in supporting the production of food on farms. The CS agreement holder interviews found that buildings on four out of five sites (84%) were in agricultural use, although not many were being used for their original purposes. Few of the buildings were being used to directly produce or process livestock or crops. The main use of the buildings was for the general storage of farm related equipment and materials. The interview survey also found that the maintenance payments were important in helping to keep the buildings in agricultural use.

The TFB maintenance options were also helping to maintain and enhance traditional skills and techniques. The building survey found that maintenance work had been carried out on 92 per cent of the building ranges and that traditional materials had been used in 91 per cent of cases. The agreement holder interviews showed that where the agreement holders said they had learned things from undertaking the maintenance options (46%), 50 per cent said they had learned more about traditional construction techniques and materials. The maintenance work carried out on CS sites was fairly evenly split between local building contractors (66%), and the agreement holders and their staff (60%). It was also clear from the interviews that local farming and building communities

often possessed a considerable degree of knowledge of traditional techniques and materials, and the maintenance of TFBs. However, the interview survey also found that a lack of traditional skills was a constraining factor on getting the maintenance work completed on 12 per cent of CS sites. Overall, it can be concluded from the evidence that the TFB maintenance options are encouraging the utilisation of traditional skills and sustainable traditional materials.

Regulating services

Traditional farm buildings play an important role as a regulating ecosystem service in climate change mitigation. The objective of climate change mitigation is to minimise the carbon stock in the atmosphere by maximising sequestered carbon stocks. The TFB construction materials, such as timber, straw thatch, and lime mortar sequester and store carbon, which if released into the atmosphere as CO_2 is a major greenhouse gas (GHG) and contributor to global warming. Furthermore, if TFBs are demolished and their agricultural functions are replaced by the constructions of new buildings there is an impact on the climate through GHG emissions generated through the demolition and in the production of the new construction materials.

The TFB options are contributing to this ecosystem service by extending the life of the buildings by helping to keep the buildings well maintained and in agricultural use. The agreement holder interview survey found that the vast majority of the TFB sites were in use prior to entry into the schemes (CS 97%, ES 100%) and that financial support provided by the payments was important in maintaining the buildings. As noted above in the absence of the payments buildings on two thirds of the sites would be maintained to a lower standard and potentially hastening the end of their working lives. The maintenance options have an important role in extending the lives of the TFBs into the future as over half of agreement holders (CS 55%, ES 79%) said that they had plans for the buildings at the end of the current agreement period and of those with plans, over three-quarters of the sites (CS 76%, ES 82%) would be entered into a future TFB maintenance option, if one was available. From the evidence it can be concluded that the TFBs maintenance options are contribution to carbon storage by extending the working life-time of the buildings and retaining their embedded carbon.

Cultural services

Traditional farm buildings provide a range of important cultural ecosystem services which have been aptly summarised by Gaskell and Owen (2005, p15) quoted in the introduction and is repeated here in part for emphasis:

> *They are a fundamental and ubiquitous feature in the rural environment and help to define its character and historic interest and provide an important contribution to a sense of place for rural communities and visitors alike. As part of the fabric of our finest landscapes, these buildings provide a substantive asset for the tourist industry (…). In addition, the physical evidence of farm buildings helps us understand how earlier generations responded to local conditions and materials, as well as the market place, in a way that written history cannot, reflecting patterns of landownership and the social and economic development of regions. In their myriad forms and methods of construction, they survive as repositories of the crafts and skills associated with local building materials and techniques. They also illustrate graphically the way that farming practices and technologies developed over time to meet changing circumstances, including the effects of war and peace, surpluses and shortages, new markets and changing patterns of consumption.*

Conserved and enhanced heritage assets

The farm visit survey provided evidence, for individual sites (270) and building ranges (494), on the effectiveness of the TFB maintenance options for conserving and enhancing this important heritage

asset. Where listed TFBs were present as part of sites (11%) they were, without exception, covered by the maintenance options. Although the maintenance options were helping to conserve listed agricultural TFBs the majority of sites and building ranges are not designated through listing. A very important role is played by the schemes in helping to conserve the heritage of the unlisted TFB resource.

The CS scheme is contributing to the widespread maintenance of TFBs that – by virtue of retaining their historic layout and the way that buildings and spaces relate to each other – make the strongest contribution to local character and distinctiveness. Comparison of the current layout of sites with their historic form shows that there has been a high degree of survival among the sites surveyed, with over half being largely unaltered from their late-19th century form and a further 35 per cent retaining over half of their 19th century footprint. Less than one in ten sites had experienced major alterations to their historic form.

The building range survey found that the numbers and combinations of different historic functions recorded in the survey closely reflected the national pattern of uptake. The survey also found that half the building ranges (51%) contained special features amongst their internal fixtures and fittings and almost three quarters (72%) had external special features. Therefore, it is concluded that the selection of buildings for funding through the scheme reflects and thus conserves the historic character of TFBs in their landscape context.

Conserved and enhanced landscape character

Traditional farm buildings contribute to local distinctiveness and a sense of place, through their varied forms, use of materials and the way that they relate to the surrounding landscape and settlement. The analysis of option uptake, discussed in 3.3.2, found that the schemes appear to be particularly attractive to livestock farmers in the uplands which are often located within the protected landscapes (National Parks and AONBs) and the Lake District and Hadrian's Wall WHSs.

The building survey showed that traditional wall materials were used in the construction of the vast majority of building ranges. Less than one per cent of the wall materials were classed as non-traditional. Traditional roofing materials were used on 81 per cent of the ranges. The TFBs recorded in the building survey reflect the variety of building materials to be found across England, which in turn reflects the diversity of its geology. In this way the TFBs maintenance options make an important contribution to maintaining and reinforcing local character and distinctiveness.

The building survey found that the vast majority of building ranges had discernible historic functions that due to a combination of their morphology and architecture could be identified as TFBs. From the analysis of historic functions it was concluded that they were broadly representative of the range of building types and local variations across the country and that their inclusion in the schemes reflects and thus conserves the historic character of TFBs in their landscape context. It is concluded from this analysis that the most appropriate buildings have been selected for the scheme, in that they reflect how farmsteads and traditional buildings illustrate the historic development and local diversity of agriculture and the farmed landscape across England.

Enhancing public health and well-being

Enhancing public health and well-being, defined as a positive mental, social and physical state, through improved engagement with the countryside is a major goal of the 25YEP. Being able to have access to and engagement with the maintained TFBs is an important part of being able to realise their communal value and in particular to enhance the health and well-being of the public. The project evaluated the potential for access and engagement in two ways. First, the project used GIS to determine how close the public could approach the maintained buildings from publicly accessible land. Second, a series of measures were used to determine the proximity of the sites to centres of population.

The GIS results showed that the vast majority of TFBs in CS (99%) covered by the maintenance options are highly visible in the landscape and can be approached to with 500m. The farmstead location (HS1) of the vast majority of the sites makes them highly visible in the landscape as most farmhouses are accessed by public roads and/or PROW. Three-quarters of the CS TFB locations (75%) can be approached within 100m, thereby offering the public a close encounter and opportunity to engage more intimately with the character of the buildings in terms of their architecture, form, types of construction material and details of openings, doors and window. From the analysis it can be concluded that the TFB maintenance options are highly visible and accessible within the CS and ES schemes.

Almost two-thirds of the TFB maintenance options (CS 64%, ES 62%) were located within 10km of towns with a population of over 10,000. This would suggest that the majority of the maintained buildings are within striking distance of substantial numbers of people within major centres of population. Furthermore, analysis using the RUC found that over a third of options (CS 36%, ES 38%) were located in population centres (villages) within rural areas indicating a likely higher potential for access via public transport.

Enhancing agreement holder health and well-being

In research on the social dimensions of AES, Mills et al. (2021, pp.14-17) note that engagement with an AES may have positive or negative social outcomes for the agreement holder. For example, health and well-being of agreement holders can be affected by stress levels and how they feel about themselves and their surroundings.

Adverse stress levels can have a negative effect on health and well-being due to increased workload, administration and bureaucracy associated with implementing the prescriptions. The agreement holder interview survey found that the TFB maintenance options were unlikely to be a major cause of stress because it was reported that the prescriptions were generally straightforward and easy to follow, and also the prescriptions did not require the level of supervision and input demanded by some of the other options. Several of the agreement holders specifically mentioned these advantages as reasons for choosing the TFB option to begin with. Increased stress due to a fear of AES inspection by administering authorities was also identified as a potential negative influence by Mills et al. and there was some evidence to suggest from the interview survey that agreement holders had omitted some TFBs from the scheme because of uncertainty surrounding their eligibility and fear of potential penalties if they had been incorrectly entered.

Having a positive self-image can be beneficial to health and well-being of agreement holders and the interview survey found evidence that having well maintained TFBs reflected well on them as farmers and improved their standing in the community and among their peers. Feelings of pride and expressions of a job well done were commonly encountered in discussions with agreement holders. In some cases well maintained buildings were part of their identity as farmers and showed their peers that they were farming well, in other cases there was pride in being able to generate something that the public could appreciate and enjoy. In some instances the very existence of the TFB maintenance options was seen as an affirmation from Defra that TFBs were important and worthy of conservation. There were also many instances where agreement holders viewed the TFB options in an instrumental way and simply as a means as an end. Having said this, Mills et al. also recognise that AES payments can often increase the resilience of farm businesses, in that they allow farms to recover quickly from difficulties, which in turn can lead to an improvement in health and well-being.

Trade-offs between ecosystem services

It was clear from the empirical research that TFBs cannot provide the full range of the ecosystem services discussed above equally and that some trade-offs and prioritisation are taking place. For example, the building survey found that the intensity of building use was inversely related to the

potential of sites and building ranges for wildlife inhabitation. The survey found that farmsteads had the highest proportion of sites (30%) that were assessed as being unsuitable for wildlife, mainly because of traffic, poor flight paths for building access, and high levels of disturbance through daily use. Whereas field barns and outfarms, which occupied more remote and quieter locations, had more opportunities for wildlife.

Similarly, adaptive reuse of TFBs and repurposing to non-agricultural functions is often seen as a form of sustainable development which extends the building's life and continues to embody carbon, thereby contributing to climate change mitigation (Yung and Chang 2012). However, while this regulating service provided may be strong, some forms of adaptive reuse of TFBs can weaken other ecosystem services. For example, in case study 2 the creation of an educational facility with a kitchen and toilets in the main barn required the building to be sealed and wildlife omitted. In addition, where the adaptation requires the alteration or removal of special features the historic character of the building can be diminished.

Is there potential to add value to TFB maintenance options through community/recreation use and to provide new opportunities for the health and well-being of visitors or those walking and cycling nearby?

The agreement holder interview survey found examples where value has been added to the TFB maintenance options through community and recreational use. Case study 9 describes how the TFBs lie at the core of a care farm which provides therapeutic care to those in recovery as well as offering educational tours for schools and other groups. In case study 2 the farmstead group is an integral part of the educational provision on the farm, and the agreement holder has a strong commitment to public engagement and access which have been part of the farming philosophy for over 20 years. The survey found other examples where agreement holders had incorporated their TFBs into various forms of educational and community use.

Notwithstanding the trade-offs which may have to be made in ecoservice provision mentioned above, it is concluded that there is significant potential to add value to the TFB maintenance options through community and recreational use. However, it should be noted that in discussions with agreement holders concerning the future use of their TFBs it was mentioned that most forms of adaptive reuse would make the buildings ineligible for the maintenance options and that advice and guidance would probably be needed to inform their decision making.

The visibility and accessibility analysis showed that the PROW and public road network afforded high levels of opportunity to access and engage with the buildings. Furthermore, the interview survey found a number of examples whereby the agreement holders were proactively promoting access to their land and buildings through farm trails and permissive access.

Does option use appear to offer good value for money for the farmer and in relation to the wider natural and cultural capital benefits delivered?

To assess the agreement holders' perceptions of the value for money of TFB maintenance option use they were asked about the value to both the 'tax payer' and themselves (see 3.4.11). The response provided showed that the agreement holders thought that option use did provide good value for money for society. Over two thirds of CS agreement holders (69%) felt the maintenance options provided positive value for money for the tax payer (very good 21%, good 48%) and only 17 per cent felt that the value for money was poor (Not good value at all 7%, Not very good 10%).

The agreement holder response as to whether option use provided good value for money for themselves was still positive but less strong than for society. Over half of CS agreement holders (54%) felt the maintenance options provided positive value for money for themselves (very good 17%, good 37%) and 22 per cent felt the value for money was poor (Not good value at all 7%, Not

very good 15%). The main reason for this response was that many of the agreement holders thought that the payment rates for the options were not a true reflection of the actual maintenance costs.

Another way of looking at the value for money provided by option use is to consider incidental economic benefits to the local community. Evaluations of the economic impacts of TFB options in previous AES has shown that both the agreement holders and the local economy have benefited (see Courtney et al. 2007, Gaskell et al. 2014, Gaskell & Courtney 2019). Agreement holders benefit from enhanced building use while the local economy benefits through the employment of local builders and craft workers.

The findings of this previous research were corroborated by the findings of the agreement holder interview survey. The presence of the maintenance options had resulted in a higher standard of work being carried out on buildings on two thirds of the sites (65%). Furthermore, where local builders and craft workers were employed the vast majority were local and lived within a 30 mile radius of the farm.

From the evidence it can be concluded that the TFB maintenance options offer good value for money in the following ways:

- The payments are an important source of income to fund the repair of the buildings and can trigger further investment.
- Without the payments two thirds of the buildings would be maintained to a lower standard or not at all.
- The maintenance of the TFB building stock enhances the flow of ecosystem services and benefits provided.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Introduction

This project set out to assess the effectiveness of CS and ES TFB maintenance options, with an emphasis on agreement holder engagement with the CS scheme, the most recent AES. To achieve this aim the project identified 8 objectives:

1) To map and analyse the uptake of CS and ES maintenance options.
2) Consider the potential of the options to deliver health and well-being benefits, including access to cultural and recreational opportunities rooted in community.
3) Determine the accessibility of maintained buildings as part of understanding the wider benefits of the options.
4) Determine if the most appropriate buildings have been selected.
5) Assess the impacts of the wildlife and maintenance protocols on agreement holder actions and behaviour.
6) Investigate farmer attitudes to determine whether better maintenance has enhanced views on and appreciation of the buildings, their position and role in the local landscape, and the craft skills required to repair them.
7) Consider the 'value for money' of the options for the farmer and in relation to the wider natural and cultural capital benefits delivered.
8) Outputs will be used to adapt the options and promote them within an ELM outcome framework to ensure they deliver across the beauty, heritage and engagement (BHE) agenda of the 25YEP.

This section draws on the empirical evidence collected through the project and summarises the key lessons learned and makes recommendations for the future development of TFB maintenance options within the ELM schemes and AES in general. The section draws on the findings from the analysis of the four main sources of data: the CS and ES national datasets of TFB option uptake, the application supporting documents, the agreement holder face-to-face interviews, and the building site and range surveys.

4.2 Lessons learned

Traditional farm buildings are the most numerous type of historic structure in the countryside. The analysis of CS and ES TFB maintenance option uptake over the duration of the schemes showed that the options were extremely popular with agreement holders and that the spatial distribution of the uptake broadly reflected the nature and character of the national stock of TFBs.

The evidence collected from the agreement holder interviews and building surveys showed that the TFB options were making a strong positive contribution to the maintenance and enhancement of the TFB stock and sustaining the flow of supporting, provisioning, regulating and cultural ecosystem services. The surveys also found positive outcomes for the beneficiaries of the services: the public and the agreement holders themselves. The TFB stock was both highly visible and accessible to the public. It was clear that trade-offs were being made in the provision of some of the benefits, for example between the intensity of use and the capacity for wildlife.

The interview survey found that most agreement holders were satisfied with the TFB maintenance options and viewed them positively in terms of value for money. Nine out of 10 CS agreement

holders said they would choose the options again knowing what they know now (CS 88%, ES 86%) and four out of five felt better able to maintain their TFBs as a result of the scheme (CS 81%, ES 69%).

Agreement holders related to and valued their buildings in a multitude of ways. Personal, instrumental and intrinsic reasons were important considerations in influencing agreement holder decisions on whether or not to use the TFB maintenance options and also which buildings to enter into the schemes. When questioned about their decision making, agreement holders were generally aware of most of the supporting, provisioning, regulating and cultural services provided by their TFBs, even though they did not use the language of Natural Capital accounting in articulating their views. While the reasoning behind the Government's policy of providing 'public money' for the 'provision of 'public goods' is increasingly familiar to farmers and land managers, the feedback received during the agreement holder interviews showed that there was still a degree of uncertainty for some about what these public goods actually were. The benefits of TFB maintenance for the historic environment, landscape and wildlife were broadly recognised by agreement holders but the benefits for public and agreement holder health and well-being appeared to be less well appreciated.

The introduction of the BWAF and BMPL as part of the revised CS TFB maintenance options has helped some of the agreement holders to deliver positive outcomes from their building management, but it has not been an unqualified success. From the evidence provided by the BWAF review and the interview survey it was concluded that the wildlife assessment is having most impact as a means of raising general awareness of the benefits of TFBs for wildlife on the holding rather than at the level of the individual building range. It was concluded that although three quarters of the building ranges (72%) are in very good or good condition and 92 per cent show visible evidence of maintenance work, the fact that less than half of the agreement holders were keeping their BMPL up to date means that the introduction of the form has only been a partial success.

The agreement holder interviews and building surveys found that there was, to some extent, a divergence between the agreement holders' understanding and the guidance on what constitutes a maintained, sound and weatherproof building. While the vast majority of agreement holders were maintaining their buildings in a weatherproof condition, essentially by keeping the roof watertight, less attention was being paid to the upkeep of doors, windows and openings in some cases. There were also a significant number of building ranges that had been entered into the schemes that, while weathertight, had long-term structural issues which would eventually lead to failure without substantial repairs and restoration. An associated issue raised by many agreement holders was that the option payment levels were insufficient to meet the maintenance costs and there was also widespread support for the re-introduction of capital options for TFB building restoration projects.

The information on TFBs provided to support CS scheme applications has the potential to provide valuable baseline data on the nature and condition of the asset stock and assist with monitoring change and evaluating outcomes. However, the review of the supporting documentation found that there were some inconsistencies in the organisation and archiving of the information. The RPA managed datasets for both schemes are another valuable resource for monitoring change and evaluating the effectiveness of the options. However, there are inconsistencies between the number of agreement records in the datasets and the number of sites and building ranges on the ground. In addition, the absence of a unique identifying number for each record and varying accuracy in the geospatial coordinates for each building range made it impractical to monitor the transition of TFB ranges from ES to CS.

4.3 Recommendations

There are nine recommendations that derive from the research:

1) In promoting policies for providing 'public money' for the provision of 'public goods', adopting language that related to the lived experiences and everyday farming lives of the agreement holders could help improve understanding. For example, TFBs could be used as case studies to illustrate different supporting, provisioning, regulating and cultural ecosystem service flows in a range of different circumstances and also to show how trade-offs are made between the provision of different services.
2) The magnitude of the benefits provided by TFBs covered by the maintenance options varied. Increased payment rates could be introduced in return for the provision of additional environmental benefits:
    - The retention and maintenance of special features which are especially vulnerable to change and loss.
    - Older buildings that often have complex maintenance needs or require specialist craft skills which may increase the cost of maintenance.
3) In the agreement application guidance:
    - Provide greater emphasis on the public benefits from TFB maintenance.
    - Remind applicants that FLSs are available for all NCAs to help them identify the historic character of traditional farmsteads and their buildings and how they relate to the surrounding landscape.
    - Expand upon the eligibility criteria, especially the definition of what constitutes a 'sound' building and the standard of maintenance required.
    - Remind applicants that buildings that have previously had a restoration grant are also eligible for the maintenance options.
    - Remind applicants that guidance is available on the repair of TFBs.
    - Emphasise the requirement that a BWAF has to be completed for each building range and repeated in each year of the agreement.
    - Agreement maps should identify the footprint of the building range at an appropriate scale. The current FER, FEP and option maps do not accurately identify building ranges within farmstead sites.
4) Consider simplifying the BMPL, including providing a one-page checklist for annual inspections.
5) Consider including an additional category for nesting bird species in the BWAF, such as swallows, martins, starlings, spotted flycatchers and jackdaws.
6) Consider the potential for additional options or blended finance opportunities under the new ELM and rural development schemes to address specific issues identified in this report:
    - Repair of storm damage that requires more work than the maintenance options but not as extensive as a restoration grant.
    - Buildings that are adapted to non-agricultural uses but will continue to enhance the public benefits evidenced in this report. For example, community and educational uses.
    - Buildings delivering significant public benefits that are in immediate danger of structural failure or collapse but have an undecided future. Holding repairs until the building's future can be decided.

7) To improve access to the agreement application supporting documents for monitoring and evaluation purposes:
    - Standardise file naming protocols to assist in the identification of relevant information.
    - Standardise directory and folder naming protocols to assist navigation.
    - Review the protocols for providing agreement holder contact details for monitoring and evaluation purposes to reduce transaction costs.
8) To improve the consistency and utility of the RPA datasets for monitoring change and evaluating the effectiveness of option outcomes:
    - Provide each building range with a unique identifying number which can be used in all future schemes.
    - Geospatial co-ordinates should be accurate within 10m of the building range.
9) The CS options are popular among agreement holders and there has been widespread uptake. Overall the options are effective, relatively straightforward to implement and successful in delivering the desired outcomes. Carrying forward the options, incorporating these recommendations, into the new ELM schemes will continue to enhance the flow of benefits evidenced in this report.

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6 APPENDICES

6.1 Appendix 1: Agricultural Landscape Types and historic farmstead character

6.1.1 Chalk and Limestone Mixed

Introduction

These areas have, since at least the medieval period, served large corn-producing holdings and estates, often over 2,000 hectares in size and combined with the grazing of sheep for their meat and wool. These holdings and estates developed on the free-draining alkaline soils and chalk or limestone geology of the areas plateau landscapes. Two-thirds of the area is taken up by arable farms, which together with those in the Eastern Arable ALT include some of the most specialised and largest in Europe. Large-scale arable farming is likely to expand in the future.

Settlement is usually village-based. Isolated farmsteads relate to shrunken settlements, former medieval estate farms and landscapes that were enclosed from medieval fields or open downs and wolds. The relatively small amounts of woodland are concentrated in the steeper scarp slopes and as an integral part of the landscapes subject to large-scale or planned enclosure from the late-17th century. The large courtyard-plan farmsteads typical of these areas developed from the 15th century, and smaller fields and farmsteads are concentrated on the anciently-enclosed scarp slopes, within or on the edge of villages or in areas of downland enclosed on a piecemeal basis between the 14th and 18th centuries. Small farms and smallholdings are rare and confined to areas of rural industry, such as the cloth-producing areas around Stroud in the Cotswolds, the quarries and lead workings of the Mendips and the woodland industries of the Chilterns.

Historic Development and Landscape Context

Large-scale farming developed at variable rates from the medieval period, specialising in the production of corn, wool, mutton and beef, and was often in the forefront of developing new agricultural techniques. These landscapes retain well-preserved and prominent evidence for the abandonment and contraction of settlements and arable farming, from their peak in the early 14th century. Medieval estates, sometimes retaining the outlines of earlier land units, formed the basis of large landed estates: many are derived from the medieval church and in some cases the Roman and Iron Age periods. There are some notable examples of designed landscapes with planned farmsteads, estate cottages and country houses, such as at Holkham in North Norfolk and Castle Howard and Sledmere in the Howardian Hills and the Yorkshire Wolds. Isolated farmsteads relate to shrunken settlements, former medieval estate farms and landscapes that were enclosed from medieval fields or open downs and wolds. Large regular courtyard plan farmsteads of late-18th and 19th century date are concentrated in those areas subject to regular enclosure with low thorn hedgerows or stone walls. These large farmsteads developed to serve large corn-producing farms, and are typified by large barns, granaries, cart sheds and stables. Earlier buildings are mostly found on the edge of villages or in areas of downland enclosed on a piecemeal basis between the 14th and 18th centuries. Smaller farmsteads, some of an early date, survive on the anciently enclosed scarp slopes and within villages. Small farms and smallholdings are rare and confined to areas of rural industry, such as the cloth-producing areas around Stroud in the Cotswolds, the quarries and lead workings of the Mendips and the woodland industries of the Chilterns.

Area Variations

Yorkshire Wolds (NCA 27), Howardian Hills (NCA 29), Southern Magnesian Limestone (NCA 30), Lincolnshire Wolds (43), Northern Lincolnshire Edge with Coversands (NCA 45), Southern Lincolnshire Edge (NCA 47)

Estates transformed these areas in the late-18th and 19th centuries, building large mechanised farmsteads and outfarms within reorganised farmland and very large areas of newly enclosed pastures and heaths. Earlier barns are concentrated on the Magnesian Limestone ridge that extends from Nottinghamshire into North Yorkshire, where the rebuilding of farmsteads was linked to the enclosure of fields.

Leicestershire and Nottinghamshire Wolds (NCA 74), Kesteven Uplands (NCA 75), Rockingham Forest (92), High Leicestershire (93)

This area has higher numbers of early-18th century and earlier farm buildings (mostly threshing barns and with some rare examples of mud and stud), concentrated in villages and on the home farms of gentry houses and landscapes of earlier enclosure on the clay Wolds.

North West Norfolk and North Norfolk Coast (NCAs 76 and 77), Breckland (NCA 85)

The mixture of complex holdings with open downland and common arable fields, farmed from villages and some isolated high-status farmsteads where the earlier barns and houses are concentrated, was largely overwritten by large-scale enclosure and courtyard plan farmsteads in the late-18th and mid-19th centuries. The estates in North Norfolk (notably Holkham and Raynham) spearheaded improved farming techniques, including the introduction of the Norfolk four-course rotation.

East Anglian Chalk (NCA 87), Chilterns (NCA 110)

Fine timber-framed houses and large barns testify to a first phase of rebuilding sustained by corn production (particularly barley for malt) in the 15th to 17th centuries. The higher levels of woodland in the Chilterns resulted in a different system of agriculture and enclosure to the other chalk areas, with smaller, ancient enclosures and some areas of common-edge as well as dispersed medieval settlement. Small farmsteads are more typical of the north east than the south west, with its easy access to London markets.

Cotswolds (NCA 107), Northamptonshire Uplands (NC 95)

The earliest farm buildings, including large barns with integral granaries and stables, are found next to the fine gentry houses that date from the late medieval period. Most houses and farmsteads relate to successive phases of rebuilding from the late-16th and 17th centuries, linked to the emergence of a rentier class of farmers who remained within existing settlements or moved out to new sites within newly enclosed fields.

Mendip Hills (NCA 141) South Purbeck (NCA 136), Isle of Portland (NCA 137), Weymouth Lowlands (138), Yeovil Scarplands (NCA 140)

Although there are relatively few 18th century or earlier barns – except in the Yeovil Scarplands – compared to the rest of the southern English landscapes of this type, many fine stone-built farmhouses testify to the diverse farming wealth of this area in the 17th and early-18th centuries, based on dairying as well as sheep-corn agriculture. These are concentrated within villages.

Southern Downlands and the Isle of Wight (NCA 127), South Downs (NCA 125), Hampshire Downs (NCA 130), Berkshire and Marlborough Downs (NCA 116), North Downs (NCA 119), Salisbury Plain and West Wiltshire Downs (NCA 132), Dorset Downs and Cranborne Chase (NCA 134)

Houses and barns testify to the development of large capital-based rentier farms based on sheep and corn production, from the 15th century on the estates of Canterbury, Chichester and Winchester Cathedrals. There is a distinct difference in this area between the farmsteads east of the Avon, which retain abundant evidence for rebuilding from the 18th century and those west of the Avon and across the western and central North Downs that have been more affected by 19th century rebuilding. Distinctive building types are 18th to early-19th century staddle barns, cattle housing of the medieval period (recorded in the Berkshire and Marlborough Downs) and rams' pens.

6.1.2 Eastern Arable

Introduction

This is a low-lying area, which has been increasingly geared to corn production and has retained little woodland except on its heavier clay soils: 80 per cent of the land area is now devoted to crops, the principal exception being the horticultural industry of the Fens, and it is expected that this will intensify in the future.

Historic Development and Landscape Context

Settlement predominantly consists of nucleated villages with very few isolated farmsteads or hamlets, other than in the claylands of East Anglia. By the late-19th century high-input, high-output agriculture had developed and reworked the inherited patterns of farmsteads and their landscapes across most of this region. This resulted in the enlargement and reorganisation of fields, extensive drainage, the rebuilding of farmsteads around cattle yards and the widespread mechanisation of threshing and feed preparation. Pre-19th century farm buildings are very rare north of the Fens, where planned villages, extensive areas of regular enclosure from marsh, fen and heath and a concentration of large planned farmsteads also reflect the influences of major landowners from the medieval period: Medieval to 18th century barns, granaries and stables, are concentrated on high-status sites further south. They are most concentrated on the claylands of East Anglia, where high densities of farmstead sites developed within anciently enclosed landscapes from the medieval period, including multi-functional barns and cattle housing.

Area Variations

North Northumberland Coastal Plain (NCA 1) and South East Northumberland Coastal Plain (NCA 13), Tyne and Wear Lowlands (NCA 14), Durham Magnesian Limestone Plateau (NCA 15), Tees Lowlands (NCA 23)

The farmsteads in this area sit within a framework of settlement that dates back to the establishment of planned villages in the 12th to 13th centuries, and large estates drove the comprehensive rebuilding of farmsteads in the 19th century. In the coastal plains north of Newcastle the estates drove the building of very large 19th century mechanised courtyard plan farmsteads set within very large fields, often located with purpose-built workers' (hinds') cottages. These replaced the earlier pattern of village-based settlement with longhouses, these being converted into sole domestic or ancillary use if they survive. This rebuilding was undertaken on a scale comparable to that of the Scottish lowland and later highland landscapes in the 19th century. There is a more varied scale of courtyard farmsteads to the south where the establishment of new farmsteads away from village centres was generally complete by the 18th century, reflecting the greater importance of dairying. Linear farmsteads concentrated in villages, in areas of small-scale enclosure and where

farmsteads had – usually from the late-17th century – been established within enclosed fields prior to the 19th century.

Vales of Mowbray (NCA 24), York (NCA 28) and Pickering (NCA 26), The Humberhead Levels (NCA 39) Holderness (NCA 40) The Humber Estuary (NCA 41) Lincolnshire Coast and Marshes (NCA 42), Central Lincolnshire Vale (NCA 44), Fens (NCA 46)

Houses in this area testify to significant phases of rebuilding, particularly from the late-17th century. Many historic farmsteads remain within planned medieval villages and their surrounding strip fields, some with fine examples of estate architecture. Pre-19th century farm buildings are rare and largely confined to village-based linear farmsteads (including some retaining evidence for former longhouses) and some timber-framed cruck barns and aisled barns on high-status sites – gentry farms, as well as moated sites, shrunken settlements and the grange farms of medieval monastic houses. Higher levels of 19th and 20th century change have worked upon the landscapes south of the Humberhead Levels, where major landowners drove the large-scale drainage of the extensive wetlands that had developed from the Bronze Age, and which provided a rich sourced of grazing land and local employment (sustaining smallholdings) and industries such as fishing, fowling and flax. Arable cultivation often worked in combination with the fattening of pigs and cattle from the late-18th century.

Courtyard plans with working buildings to one or two sides of the yard predominate, with some large regular courtyard layouts concentrated in regular enclosure landscapes, particularly in areas of sandy soils, heathland, riverine and former marshland landscapes. An iconic building is the combination barn for housing farm animals as well as storing and processing the corn crop. Many farmsteads had mechanised the threshing of corn and the preparation of animal feed by the mid-19th century: horse-powered wheel houses are now rare, and from the 1840s many farmsteads were served by a mixing barn where feed was prepared. Some inter-war smallholdings survive, particularly in the Fens, within a national context a significant survival of an important movement in English agricultural and social history.

Trent and Belvoir Vales (NCA 48), Sherwood (NCA 49), Bedfordshire and Cambridgeshire Claylands (NCA 88), Bedfordshire Greensand Ridge (NCA 90)

Pre-19th century farm buildings (mostly timber-framed barns) are concentrated within villages and found scattered across landscapes of earlier enclosure, particularly in the Trent and Belvoir Vales. There are low densities of isolated courtyard plan farmsteads, most rebuilt in the mid-19th century by large landowners such as the Duke of Bedford.

Central North Norfolk (NCA 78), North East Norfolk and Flegg (NCA 79), The Broads (NCAs 80), Mid Norfolk (NCA 84), Suffolk Coasts and Heaths (NCA 82)

There are strong contrasts between those areas where owner-occupiers expressed their growing prosperity through the rebuilding of houses and barns in the 17th and 18th centuries (in landscapes of early dispersed settlement and irregular or piecemeal enclosure), and those dominated by estates and where there is little evidence for pre-19th century buildings other than large barns on high-status sites – the latter concentrated in the heathland areas that mostly remained open until the late-18th century when fields were enclosed and new large-scale farms laid out. There are some very rare examples of basilica-like structures for fattening cattle around central root stores around the Broads. There are some rare survivals of reed thatch and timber frame.

South Norfolk and High Suffolk Claylands (NCA 83), South Suffolk and North Essex Claylands (NCA 86)

This area has one of the strongest concentrations of farmhouses and working buildings of the medieval period and pre-dating 1750 in England, increasing in density to the south, which developed

in landscapes of dispersed settlement with abundant timber in managed lots and hedgerows. Barns and moated sites reflect the wealth of a broad spectrum of middling gentry and yeoman farmers, some prospering from the local cloth industry, and there are many stables (and sometimes granaries) of this date. The mixed farming economy of arable and pasture for cattle is also reflected in the building of cow houses (locally termed neathouses) and of barns with integral stabling and cattle housing: detached kitchens, some originating as dairies, are another notable feature of early date. From the late-18th century improved drainage methods and increasing grain prices led to widespread arable conversion, leading to the enclosure of the large cattle pastures close to high-status houses and the reorganisation of the farming landscape to better enable the rotations of arable, root crops and grazing livestock. The building stock was capable of adaption by the numerous small-scale holdings and owner-occupiers continued into the early-20th century, contributing to its survival. The area has experienced high degrees of boundary loss over the 20th century, often leading to the 'stripping back' of enclosure boundaries to those of the medieval period.

6.1.3 South East Mixed

Introduction

Woodland, pre-1750 farmstead buildings, and distinctive dispersed layouts are concentrated within the anciently-enclosed landscapes of dispersed settlement. Designed landscapes and formally-planned courtyard plans are concentrated on some estates, particularly in improved heathland, where there may survive linear farmsteads and common-edge smallholdings within or on the edges of the small fragments of remaining heathland.

The development of this area is tied to that of London, and the demands that it has placed on its surrounding area for food and living space from the medieval period. The farms combine arable cropping with sheep, beef, dairying and horticulture: hobby farms and other smallholdings comprise 19 per cent of the total of holdings, reflecting both the continuation of small farms in areas of woodland and heath and also the urbanisation of the farming landscape from the mid-19th century. It is predicted that this area will witness the expansion and intensification of arable production, in tandem with the growth of small farms. Historic farmsteads are a still a prominent feature in large parts of south east England, although farmsteads mapping indicates that half or more of farmsteads across many areas have lost half or more of their working buildings in the last hundred years. Historic farmsteads show how this area's mixed farming economy has from the medieval period responded to the demands of the London market, from large threshing barns to industrial-scale hop kilns (oasts) and their associated pickers' huts.

Historic Development and Landscape Context

Small hamlets, isolated farmsteads and farmstead clusters form the predominant element of the settlement pattern in rural areas, and these have developed within fields that mostly result from the ancient enclosure of wood and coastal marsh and the piecemeal enclosure and reorganisation of medieval farmland. Courtyard plan farms, more usually reflecting a long process of piecemeal than formal development, are the dominant farmstead type except in the High Weald where the smallest-scale and dispersed plan farmsteads are concentrated. Large-scale and formally planned courtyard farmsteads are not common, and are concentrated in those areas of heathland where large estates were able to exert their influence. Linear farmsteads and common-edge smallholdings are extremely rare and are concentrated within or on the edges of the small fragments of heathland that remain in the New Forest, south Dorset and the Thames Basin.

Historic farmsteads show how this area's mixed farming economy has from the medieval period responded to the demands of the London market, from large threshing barns to industrial-scale hop kilns (oasts) and their associated hop pickers' huts. This area has one of the highest survivals of pre-

1750 farmstead buildings in England, within the context of a landscape that is more heavily wooded than any part of England (20% against a national average of 8%). Of particular significance is the close association of these early farmsteads (including moated sites) and landscape that largely took its present form in the medieval period, reflecting the ability of farmers in anciently enclosed land to build structures capable of adaptation in later centuries. Aisled barns dating from the medieval period are a distinctive feature, except in the High Weald where – as in the claylands of East Anglia – barns retain evidence for internal partitioning for cattle housing and stables. Market gardening, poultry rearing and dairying increased in importance after the 1870s, only the latter leaving any trace in the building of new cow houses and the conversion of redundant barns into cattle housing. Informal parkland in the form of lightly wooded and wood-fringed pasture dating back to the late-17th and 18th centuries remains characteristic of the area.

Area Variations

Greater Thames Estuary (NCA 81), Romney Marshes (NCA 123), Pevensey Levels (NCA 124)

The earliest houses and buildings are concentrated on shrunken settlements and high status sites, and the great majority of farmsteads on the grazing marshes were built or rebuilt in the 19th century. Estates often extended their holdings from the grazing land on the marshes to the rising arable lands inland.

Northern Thames Basin (NCA 111)

There are relatively few early-18th century and earlier buildings in this area, compared to the wood pasture landscapes to the south of London and to its north. Some are found on the estates and home farms of the merchants and others who established estates here from London from the 16th century. The development of orchards and market gardening in the 19th century finds little visible expression in built form.

North Kent Plain (NCA 113) Thames Basin Lowlands (NCA 114), Thames Valley (NCA 115), Thames Basin Heaths (NCA 129), Wealden Greensand (NCA 120)

Large threshing barns and courtyard-plan farmsteads, often intermixed with high densities of smaller-scale farmsteads, date from the medieval period. Corn production, in particular barley for malting, benefited from proximity to the Thames and coastal navigation. Fruit growing and later hops was also a major element in the agriculture of the North Kent Plain and the Wealden Greensand, extending into the Weald and the North Downs area from the 13th century, increasing in the 17th century and later centuries with the establishment of larger orchards to supply the London market.

Low Weald (NCA 121), High Weald (NCA 122)

Wealden farmsteads and their landscapes reflect the importance of the rearing and fattening of cattle, with corn grown for cattle feed but varying over time and locality in its importance as a cash crop. There are high densities of small-scale farmsteads with high numbers of buildings of medieval to 18th -century date, with lower densities of larger farmsteads concentrated in the enclosed heathlands to the east and the High Weald. As in the claylands of East Anglia, the barns often reveal evidence for having been multi-functional (with partitions and floors for animals and lofts) before they were converted into threshing barns from the late-18th century: this was linked to an increase in arable production, and of new buildings including the oast houses which are an iconic feature of its landscape. The woods were used for the production of food (cob nuts plantations, for example), the supply of fuel for households and for the iron industry and later the supply of poles for the hop yards (when chestnut replaced earlier oak and hornbeam).

South Coast Plain and South Hampshire Lowlands (NCAs 126 and 128, The New Forest (NCA 131), Dorset Heaths (NCA 135)

By the late-19th century large courtyard-plan farmsteads and arable fields combined with market gardening and fatstock farming were characteristic of this area, together with smaller-scale and more ancient patterns of enclosure intermixed with areas of smallholding around heathland. Several large medieval to 18th century barns survive, and there are some very rare surviving examples of earth-built heathland farm buildings in the New Forest.

6.1.4 Upland and Upland Fringe

Introduction

The uplands are more economically disadvantaged for modern farming than other parts of England, and many farmers (in the remoter uplands in particular) are increasingly dependent on diversification and other sources of income. The uplands retain two-thirds of beef cows and sheep on English farms. Grassland for stock rearing is now the dominant land use (60%), particularly in areas with high rainfall and thin soils: arable cropping is more important in some of the more sheltered and low-lying areas, but it still only takes up 13% of the total land area, and dairying (14%), mixed farms (9%) and urban areas (5%, particularly the northern conurbations) the remainder.

These areas retain very high numbers of surviving traditional farmsteads in agricultural use, many within landscapes of high amenity and landscape value which retain earthwork and sub-soil evidence for the development of land use and settlement better than any other landscape type in England. The resources of these areas also provided the focus for a wide range of rural extractive and processing industries which developed alongside or in combination with farming, and often smallholding. Late-18th and 19th century buildings, with no signs of earlier origins, are concentrated in landscapes resulting from the regular enclosure of farmland and moorland, whereas earlier buildings, usually the houses of freehold and wealthier leasehold farmers, are concentrated within those areas subject to the piecemeal enclosure around settlements of medieval strip fields, cow pastures and meadow.

There are strong distinctions between:

- The northern uplands which developed as sheep and cattle country from the medieval period, where linear farmsteads and combination buildings reflect the need to house cattle over long winters.
- The West Midlands and East, where rebuilding in stone and brick from the late-18th century has largely hidden a rich tradition of earlier timber frame and farmsteads dating from the 15th century that reflect the wealth brought by the intensification of trade with Wales.
- The south west peninsula, where farmstead architecture reflects the development of some wealthy gentry estates, the prosperity of Devon and Somerset farmers in the 15th to 16th centuries and adjustments to a warmer climate and longer growing season than many other parts of England.

Historic Development and Landscape Context

The upland moors result from the prehistoric clearance of land for agriculture, and their subsequent reversion to grazing for livestock and the collection of fuel and building materials, usually in common but often in the hands of large estates. The majority of heather moorland is found in these areas, together with lowland heath (West Penwith and the Lizard) and ancient deciduous woodland (mostly oak and ash) in the steeper valleys. Mineral and other deposits, in combination with

abundant water, provided the focus for a wide range of rural extractive and processing industries which developed alongside or in combination with farming. These commonly developed in association with smallholding and small-scale farming, and used intensively managed broadleaved woodland from the steeper valley sides to supply building materials, domestic fuel and, most importantly, charcoal for smelting. They stimulated massive population growth, including the development of towns and rural-industrial settlement from the 18th century.

From the medieval period estates and individual farmers drove the enclosure of these uplands and the valley bottoms and sides where corn and hay was grown, in parallel with the declining role of communal farming, the decline of hunting in the wider landscape and the population increase from the 15th century. The landscape often frames distinct differences in the architecture of farmsteads and dwellings. Late-18th and 19th century buildings, with no signs of earlier origins, are concentrated in landscapes resulting from the regular enclosure of farmland and moors, whereas earlier buildings, usually the houses of freehold and wealthier leasehold farmers, are concentrated within those areas subject to the piecemeal enclosure around settlements of medieval strip fields, cow pastures and meadow.

A common theme in all upland areas, firstly developed on the home farms of gentry estates and more widely adopted from the late-18th century, is the bringing together of key functions – storing and processing corn, housing animals and their fodder – into one single combination barn. These, and the field barns and outfarms for housing corn, cattle and hay, largely swept away earlier generations of smaller single-storey (and often thatched) barns and field houses. A wide variety of cattle housing reflects the importance of dairying, rearing or sometimes fattening young stock. Smallholdings and the smallest-scale farmsteads are concentrated around the fringes of moorland, especially where by-employment in industry was available. Linear-plan farmsteads are particularly distinctive, some of which developed from longhouses where humans and cattle shared the same entrance. Dispersed-plan farmsteads are another distinctive feature, where the buildings developed in a loose fashion within paddocks for holding stock or along routeways for moving cattle between upland and lowland pastures. Large courtyard-plan farmsteads are found in broader vales and in some upland areas where capital-rich estates were active between around 1780 and 1870.

Area variations

The uplands can be subdivided into three broad zones:

- The northern uplands and upland fringe that extend into Scotland.
- West Midlands uplands and upland fringe that extend into the Cambrian Mountains.
- South West peninsula.

The Northern Uplands

The Northumberland Sandstone Hills (NCA 2), the Cheviot Fringe (NCA 3), The Cheviots (NCA 4), Border Moors and Forests (NCA 5), North Pennines (NCA 10), and Tyne Gap and Hadrian's Wall (NCA 11), Mid Northumberland (NCA 12), Durham Coalfield Pennine Fringe (NCA 16), Orton Fells (NCA 17), Howgill Fells (NCA 18), Pennine Dales Fringe (NCA 22), Yorkshire Dales (NCA 22), The North Yorkshire Moors and Cleveland Hills (NCA 25) Forest of Bowland and Bowland Fringe and Pendle Hill (NCAs 33 and 34) Lancashire Valleys (NCA 35), Southern Pennines (NCA 36), Manchester Pennine Fringe (NCA 54), Dark Peak (NCA 51), White Peak (NCA 52), Derbyshire Peak Fringe and Lower Derwent (NCA 50)

The northern uplands developed as sheep and cattle country from the medieval period. From the 15th century the leasing out and subdivision of directly managed estate farms (notably cattle farms or vaccaries) and hunting lodges led to the appearance of new holdings and farmsteads. This drove

the growth of farming hamlets, and isolated farmsteads further developed in association with the enclosure of the valley-side and bottom landscapes between the 15th and 17th centuries and sometimes the regular enclosure of the upper fells in the late-18th to 19th centuries. The development and growing prosperity of independent farmers and gentry estates is reflected in the rebuilding of farmsteads from the late-17th century, except along the Scottish borders and in the north east where estates were dominant and late-17th or early-18th century buildings were substantially extended and remodelled by later generations. There are also distinctive patterns of fields and small-scale farmsteads, particularly in the Southern Pennines, associated with small-scale industrial activity (lead mining as well as textiles). The development of the textile industry around the Southern Pennines was facilitated by abundant water, which was used for washing wool and waterpower for driving the fulling mills. Wealthier farmers and the gentry were able to build substantial farmsteads and farmhouses between the 15th and 17th centuries, the economies of estate centres in the Lancashire Valleys in particular being linked to the surrounding uplands. Some farmsteads and 18th century or earlier houses have distinctive rows of windows marking the pre-existence of home-based loom shops. Farming also developed alongside metal working, coal mining and engineering, and large-scale urban and industrial development was concentrated in the valleys, enabled by improvements to river navigation (particularly the Wharfe, Aire and Calder), canals from the mid-18th century (including the Leeds-Liverpool canal which opened the Atlantic market) and later rail.

Particularly notable features are:

- Substantial provision in hay lofts and sometimes detached barns (especially in and around the Peak District) for storing hay, large quantities of which were needed for feeding cattle which were usually wintered on the farm or in field barns between October and May.
- Bastles and bastle houses along the Scottish borders (2–12), which are defensible farmsteads and their derivatives with the dwelling above the cattle housing.
- Mechanised large-scale courtyard-plan farmsteads are concentrated in the north east (2, 11, 12) and in the North York Moors (25).
- Bank barns, concentrated in the Cumbrian Fells (8 and 9).
- Some very rare cruck-framed buildings of the 17th century and earlier, the latter often with evidence for a walled-off end bay for livestock, which survive in greatest numbers in the Southern Pennines (36).
- 17th -century and earlier barns associated with the yeoman-clothier farmsteads and minor gentry farmsteads in and around Calderdale and the Southern Pennines, which include aisled barns and houses.
- The rarity of steep-pitched roofs with heather thatch, usually only traceable as scars in the gable walls of enlarged buildings.
- Single-storey and part-lofted combination barns, typically with the threshing area flanked by cattle housing and stables and often with additional cattle housing in projecting wings or outshots.
- Minor buildings including calf houses and pigsties, the latter often as lean-tos.
- Peat houses, either incorporated into ranges or as individual structures (e.g. Eskdale).
- Some very rare corn-drying kilns.
- Root houses for potatoes, often sited away from the farmstead.

- Field barns, mostly for housing cattle and their hay, which developed (and were rebuilt in the period 1750 to 1850) as the land was enclosed but holdings remained intermixed. They are particularly abundant in the rural-industrial dales in the north of the Yorkshire Dales, which specialised in the production of cheese for export.
- Hogg houses for yearling sheep, which date from the late-17th century and are found at the heads of valleys and some valley sides (especially in remoter parts of the Lake District and North Pennines). Besides walled enclosures for holding sheep and sheep washes in the wider landscape, northern upland farmsteads and hogg houses often have enclosures around them for holding and/or clipping sheep.

West Midlands uplands and upland fringe

Oswestry Hills (NCA63), Shropshire Hills (NCA 65), Clun and North West Herefordshire Hills (NCA 98), Black Mountains and Golden Valley (NCA 99), Forest of Dean (NCA 105)

The West Midlands uplands and upland fringe extend into the Cambrian Mountains, where rebuilding in stone and brick from the late-18th century has largely hidden a rich tradition of earlier timber frame and (especially in the Clun and Shropshire Hills) farmsteads dating from the 15th century that reflect the wealth brought by the intensification of trade with Wales. Isolated farms and hamlets developed across this area from the medieval period, some hamlets shrinking into individual farmsteads but many hamlets remaining in the Shropshire Hills. Many farmsteads were built or rebuilt for the production of corn and fatstock in the 19th century, typical features being:

- A broad mix of farmstead types across the area, with the vales characterised by large to very large-scale courtyard-plan farmsteads and very high densities of smallholdings and small-scale farmsteads around common land (especially around the Stiperstones and the Clee Hills in the Shropshire Hills (NCA 65), and in parts of the Forest of Dean (NCA 105). Dispersed plans, including farmsteads built around routeways extending from the Cambrian Mountains, are concentrated in the Shropshire Hills.
- Small numbers of timber-framed threshing barns and combination barns. There is much evidence – in the form of blocked openings to the large threshing doors and inserted openings to animal housing and lofts – for barns being converted to cattle housing and other uses.
- Cattle housing, often two-storey with hay lofts, including some very rare surviving examples of 18th century and earlier timber-framed cattle housing and combination barns which are also found in eastern Wales.
- Some stone or brick-built hay barns, especially on the larger lowland fringe farmsteads where larger numbers of fatstock were over-wintered.
- Some farmstead buildings retain evidence for their former domestic use. These either relate to the shrinkage of hamlets into individual farmsteads or the accommodation of labourers.

South West uplands and upland fringe

Exmoor and the Quantock Hills (NCAs 144-5), Blackdown Hills (NCA 147), The Culm (NCA 149), Dartmoor (NCA 150), South Devon (NCA 151), Cornish Killas (NCA 152), Bodmin Moor (NCA 153), Hensbarrow (NCA 154), Carnmenellis (NCA 155), West Penwith (NCA 156), The Lizard (NCA 157)

Of fundamental importance is the fact that this area – together with the Quantocks, the Vale of Taunton and Quantock Fringes and the Devon Redlands (NCAs 144, 146 and 148) – falls within the

south-west peninsula of England where from the 8th or 9th centuries settlement was dispersed rather than village-based. It bears a strong resemblance to south-west Wales and north-west France in the development of individual farms out of farming hamlets and the extent of prehistoric to 19th century stone-faced hedges. Farmstead architecture reflects the development of some wealthy gentry estates, the prosperity of Devon and Somerset farmers in the 15th to 16th centuries and adjustments to a warmer climate and longer growing season than many other parts of England.

The warmer climate favoured a longer growing season than in other areas of this type in England. Farmsteads and farming hamlets were sited in order to exploit arable and meadow land, often subdivided into strips, and large areas of coastal and inland moorland which were periodically cultivated and were increasingly subject to enclosure from the 17th century. Earlier fields relate to the piecemeal enclosure of arable and meadow, usually a process that was complete by the 18th century, and the regular enclosure of rough ground: in Cornwall, for example, this rough ground covered one third of the county's land area but now only covers 6%. The South West uplands and upland fringe bears a strong resemblance to south-west Wales and north-west France in the development of individual farms out of farming hamlets, the frequent siting of high-status manor (in the south west termed 'barton') farms close to the medieval church and the extent of prehistoric to 19th century earth banks and stone-faced hedges to the field boundaries. Villages usually developed as market and service centres, and in some areas as industrial settlements. Smallholdings that benefitted from by-employment in industry (particularly quarrying, tin and copper ore and china clay) are concentrated in West Penwith (156), Hensbarrow (154), Carnmenellis (155) and Dartmoor (150): the survival of working buildings of early-18th -century and earlier date testifies to the prosperity of farmers on the fringes of these same areas.

Arable cultivation expanded considerably in some areas from the late-18th century, although it had long been a feature of some of the coastal areas and the South Hams of Devon, where the remains of 18th and 19th century malthouses on the tidal inlets and elsewhere testify to the export of malted barley. Cattle rearing was the principal form of farming in Cornwall, with arable and beef production historically concentrated in some coastal areas, principally around Padstow and Wadebridge to the north and along the south coast. The improved rail networks from the later 19th century facilitated the development of market gardening and liquid milk production. Better fodder crops and rotations of crops, and the housing of livestock, underpinned a substantial increase in cattle numbers over the 19th century. While 19th century rebuilding largely swept away pre-existing single-storey structures to the west of Dartmoor, there are high densities of 18th century and earlier farm buildings to the east that also relate to an exceptionally high survival of pre-1550 farmhouses that extends into the Mid Somerset Hills (143) on the edge of the Somerset Levels.

The key features are:

- Most farmsteads contain a mowhay for stacking corn, hay, turf and furze, and many in more sheltered parts have orchards.
- Evidence, either in field archaeology or from surviving buildings, for the shrinkage of farming hamlets into individual farmsteads from the medieval period.
- Large courtyard-plan farms in areas of large-scale reorganised or regular enclosure of rough ground and earlier enclosures, in the case of the latter often surrounded by retained patterns of smaller and more irregular enclosures. High-status barton farms (the home-farms of estates), which frequently developed as large courtyard farmsteads in the context of large rectilinear fields which can be of medieval date.
- Evidence from archaeological excavation for medieval longhouses, clustered in farming hamlets which were abandoned or shrank to individual farmsteads, and scattered evidence for large longhouses of 14th to 17th -century date which are concentrated in the east of Dartmoor.

- Dispersed plan farmsteads within medieval farming hamlets and on farms amalgamated in the 19th century.

Key buildings are:

- Bank barns, the earliest of which are of 18th century date and associated with high-status sites.
- Two-storey combination barns very similar to bank barns but accessed by external steps or ramps instead of a ramp. These are concentrated in Cornwall.
- Evidence for mechanisation, matching that of north-eastern England. Wheel houses or evidence of water power (leats, reservoirs, water wheels etc) for horse-powered threshing and fodder-processing machinery; many barns had light engines which have left little trace.
- Open-fronted linhays for housing cattle and their hay, dating from the 17th century.
- Cider houses (concentrated in east Cornwall and towards Somerset), incorporated with stables and other functions into combination ranges.
- Low and small-scale buildings close to farmhouse, commonly pigsties and calf houses.
- Some field barns and 19th century outfarms, often found as ruinous structures built into the lee of field boundaries. 18th and early-19th century examples are concentrated in the South Hams.
- Ash houses.

6.1.5 Western Mixed

Introduction

Farmsteads have developed in a wide range of landscapes, which together with Wales and Northern Ireland retain most of the UK dairy herd. Dairy farms take up 20 per cent of the land area, the lowland grazing of livestock accounts for 17 per cent and arable cropping over one third. Mixed farms will become more specialised, and there is a trend to larger farms which are involved in arable production in combination with sheep and beef, rather than dairying.

Areas of planned farmsteads and planned enclosure are often intermingled with earlier farmsteads sited within the piecemeal and irregular enclosure of medieval strip fields and common land, which in open landscapes and the broad river valleys were most likely to have been subject to later reorganisation and enlargement of fields. There are also areas of linear and other small-scale farmsteads that survived longest around small remaining areas of heathland and moss and in some circumstances were sustained by by-employment in industry. Another distinguishing characteristic, in contrast to the Eastern Arable and partly in response to its wetter climate and the higher density of pre-19th -century dispersed settlement, is the development of early cattle housing and the more extensive survival of early domestic and farm buildings. Landscapes and farmstead architecture (including specialist buildings such as hop kilns and cider houses) also reflect the importance attributed to the fattening of stock and dairying, in combination with arable farming, and specialisation in the supply of foodstuffs to urban markets – for example cheese and dairy products in north Shropshire and Cheshire and the supply of hops and cider in much of Herefordshire and Worcestershire.

Historic Development and Landscape Context

The Western Mixed ALT takes in a wide range of local landscapes, the common characteristic being the diversity and flexibility of agriculture practised within them. Areas of planned farmsteads and planned enclosure are often intermingled with earlier farmsteads sited within the piecemeal and irregular enclosure of medieval strip fields and common land, which in open landscapes and the broad river valleys were most likely to have been subject to later reorganisation and enlargement of fields. There are also areas of linear and other small-scale farmsteads that survived longest around small remaining areas of heathland and moss and in some circumstances were sustained by by-employment in industry. Another distinguishing characteristic, in contrast to the Eastern Arable ALT and partly in response to its wetter climate and the higher density of pre-19th century dispersed settlement, is the development of early cattle housing and the more extensive survival of farm buildings dating from the late-17th century. This farmstead architecture, together with hop kilns and cider houses, particularly cattle housing, also reflects the importance attributed to the fattening of stock and dairying, in combination with arable farming, and specialisation in the supply of foodstuffs to urban markets – for example cheese and dairy products in north Shropshire and Cheshire and the supply of hops and cider in much of Herefordshire and Worcestershire.

Area Subdivisions

Cumbrian and North Lancashire Vales and Lowlands - West Cumbria Coastal Plain (NCA 7), the Solway Plain (NCA 6), the Eden Valley (NCA 9,) Morecambe Bay Limestones (NCA 20), Morecambe Coast and Lune Estuary (NCA 31)

Farms in this area benefitted from the use of the adjacent uplands for seasonal grazing, and the fattening of stock from these uplands and Scotland. There are comparatively high numbers of early 18th -century and earlier farmhouses and barns in the Eden Valley and across parts of the Solway Basin, the latter including some medieval to 18th century earth-built structures. Key features of this area are the mixture of linear-plan and courtyard-plan farmsteads, which in their style and use of combination barns (including bank barns) reflect the architecture of the Lakeland fells. Some notable large planned farmsteads reflect the activities of estates, medieval tower houses being also associated with some high-status farmsteads and sites.

Shropshire, Lancashire and Cheshire Plain - Lancashire and Amounderness Plain (NCA 32), Lancashire Coal Measures (NCA 56), Manchester Conurbation (NCA 55), Sefton Coast (NCA 57), Merseyside Conurbation (NCA 58), The Wirral (NCA 59, Mersey Valley (NCA 60), Shropshire, Cheshire and Staffordshire Plain (NCA 61), Cheshire Sandstone Ridge (62)

For the most part this area has high densities of dispersed settlement, characterised by successive modifications to the enclosure of medieval open fields, heath, mossland and medieval irregular fields. These reflect adaptation to the very large urban markets that developed in this area. The result is a complex intermingling of farmsteads of different scales and types. Most working buildings are 19th century. Farmhouses date from the late-17th century, when large farms developed, and rarely before. There are scatters of early isolated cottages, predominantly relating to areas of historic common-edge settlement. Small farms continued to develop close to urban centres and across Lancashire in particular: remaining examples are very rare. The largest and earliest corn-producing (barley and wheat) courtyard-plan farmsteads, including threshing barns and combination barns, are concentrated north of Liverpool, around Shrewsbury, the estatelands of east Shropshire and Staffordshire and on the home farms of estates and gentry houses: the latter include aisled barns and large cruck barns. Commercial dairy farming developed from the late-16th century and was concentrated south of Manchester, giving rise to distinctive L-shaped farmsteads: some of these, especially on the Tollemache and Westminster estates in Cheshire, are very large. Two-storey cow houses (including documented oxhouses) are scattered across the area, and are concentrated in

areas of surviving early enclosure in north Shropshire. Hay lofts and hay barns reflect that ample space was required for hay, which together with oat straw was also exported to feed horses for industry and transport throughout this area.

Midland Vales - Mid Severn Sandstone Plateau (NCA 66), Cannock Chase and Cank Wood (NCA 67), Needwood and South Derbyshire Claylands (NCA 68), Trent Valley Washlands (NCA 69), Melbourne Parklands (NCA 70), Leicestershire and South Derbyshire Coalfield (NCA 71), Mease/Sence Lowlands (NCA 72), Charnwood (NCA 73), Northamptonshire Vales (NCA 89), Leicestershire Vales (NCA 94), Dunsmore and Feldon (96)

The distinctive feature of this area is the extent of late-18th to 19th century rebuilding, in association with the resiting of new farmsteads away from villages in newly enclosed of medieval open fields and the reorganisation of earlier piecemeal and irregular enclosure of open fields, woodland and heath. Medium-large scale courtyard-plan farmsteads are predominant, which in the north were built or adapted to house dairy cattle: some include earlier timber-framed barns.

Linear plan and other small-scale farmsteads are concentrated in areas where common-edge settlement combined with rural industries survived into the 19th century, notably around Wyre Forest to the south west, in the centre of Cannock Chase and to a more limited extent around the coalfields to the north.

Arden (NCA 97), Teme Valley (NCA 102), Severn and Avon Vales (NCA 107), Malverns (NCA 11)

This has long been a mixed farming area, where orchards for fruit and cider developed from the 17th century and market gardening (notably in the Vale of Evesham) for the Birmingham market in the 19th century. There are high densities of dispersed settlement and of medieval to 18th century houses and farmstead buildings, and there can be very strong local variation in farmstead and landscape types. Larger farmsteads developed within or on the edge of villages, which are concentrated east of the Severn in the Severn and Avon Vale, as they contracted and changed in the 15th to 17th centuries, and more rarely in areas of early enclosure from open fields and common land. There are some very intact early groups with timber-framed barns and animal housing. Large-scale farmsteads are frequently intermingled with small-scale farmsteads on the fringes of common and heath, where some of the small timber-framed houses of craftsmen and landless labourers survive, and also wayside houses of 18th -century and earlier date. Many farmsteads include cider houses and hop kilns are a feature to the west around the Malverns and the Teme Valley.

Herefordshire Lowlands (NCA 100), Herefordshire Plateau (NCA 101), South Herefordshire and Over Severn (NCA 104)

Most of the large isolated courtyard-plan farmsteads across this area – especially in the broad river valleys and the lowlands – reflect profound landscape change between the 14th and 17th centuries, as small villages shrank or were abandoned and very large farms were built in relationship to both shrunken settlements and newly enclosed fields. There are some very rare surviving examples of 18th -century and earlier multi-functional barns and cattle housing, comprising single-storey and storeyed timber-framed and stone structures. These closely resemble those found across the border in Wales and in the western part of the West Midlands.

Upper Thames Clay Vales (NCA 108), Midvale Ridge (NCA 109), Avon Vales (NCA 117), Bristol, Avon Valleys and Ridges (NCA 118), Blackmoor Vale and Vale of Wardour (NCA 133), Marshwood and Powerstock Vales (NCA 139), Somerset Levels and Moors (NCA 142), Mid Somerset Hills (NCA 143)

The distinctive feature of this area, despite its variation of landscapes, is the low survival of pre-1750 farm buildings despite the high numbers of farmhouses, gentry houses and other historic dwellings that survive generally on high status sites, within villages or in landscapes enclosed before the 18th

century – examples of the latter being in the historic dairying districts of the Marshwood and Powerstock Vales and the Avon Vales.

Vale of Taunton and Quantock Fringes (NCA 146), Devon Redlands (NCA 148)

The Devon Redlands has one of the highest concentrations of pre-1550 and 1750 farmstead buildings in England, reflecting the prosperity of its numerous farmers within landscapes of dispersed settlement and medieval enclosure. Small manor houses, gentry houses and large barns testify to the agricultural prosperity of the Vale of Taunton, which as well as a strong arable base was noted for its meadow land and fruit growing. Characteristic building types are threshing barns (sometimes very small-scale in the Redlands), bank barns, cider houses and including combination buildings with cattle at one end), farmhouses and some early examples of open-fronted cattle sheds with hay lofts (termed linhays). Building in earth (cob) survives from the medieval period, and reed thatch survives in some areas. This area has one of the major concentrations of both forms of material in the country.

6.2 Appendix 2: Countryside Stewardship agreement holder contact information

6.2.1 Contact letter

[SALUTATION] [FIRST NAME] [LAST NAME]

[ADDRESS 1]

[ADDRESS 2]

[ADDRESS 3]

[POSTCODE]

[SBI NUMBER]

Date

Dear [SALUTATION] [LAST NAME],

Invitation to participate in a survey assessing the effectiveness of Countryside Stewardship options for traditional farm building maintenance

As a Countryside Stewardship scheme agreement holder I am writing to request your help with a scheme evaluation that we are undertaking. Defra is very keen to understand how effective the scheme is for the maintenance of traditional farm buildings with the aim of informing future scheme development.

The Countryside and Community Research Institute (CCRI) has been commissioned by Defra to carry out this research and will be contacting a sample of agreement holders who have HS1 or HS8 options for a face-to-face interview lasting about 45 minutes. This would be followed by a field survey of the traditional farm building(s) by the interviewer lasting approximately an hour.

Your participation in the survey is voluntary and the information you provide is covered by current data protection legislation. The project report will not identify anyone taking part in the research. When reporting on the research findings, we will not reveal your name, your businesses name, nor will any information be provided which might lead to you being identified.

An interviewer from the research team will contact you over the next few days to see if you would be willing to take part in the research. If you are contacted by the research team, I hope you are able to help by providing the benefit of your experience. Your participation in this research will be greatly appreciated as it is important to get a range of views and experiences.

Yours sincerely,

Dr Peter Gaskell

CCRI Project Manager

01242 714136

pgaskell@glos.ac.uk

6.2.2 Information sheet

Participant Information Sheet

Assessing the effectiveness of Countryside Stewardship options for traditional farm building maintenance

You are being invited to take part in an evaluation of Countryside Stewardship options for traditional farm building maintenance that is being conducted by the Countryside and Community Research Institute at the University of Gloucestershire. Before you decide, it is important you understand why the research is being done and what it will involve. Please take time to read the following information carefully and then decide whether you want to take part. You will be able to give your consent on the accompanying 'informed consent form'.

What is the purpose of the research?

The central aim of the interviews is to assess the effectiveness of the traditional farm building maintenance options (HS1 and HS8) in the Countryside Stewardship scheme. The outputs of the research are intended to inform future scheme development. By participating you are helping inform this development.

Why am I being asked to participate?

You are being asked to participate because you have chosen a traditional farm building maintenance option as part of your Countryside Stewardship agreement. By involving you in our research, we hope to gain a better understanding of what works well and not so well with the traditional farm building maintenance options.

Do I have to take part?

No. It is entirely up to you whether you decide to participate. If you do decide to participate, you will be given this information sheet to keep. If you later decide to withdraw, you can do so, without giving us a reason. Although please note, you only have 30 days from the day of your interview, to withdraw from the study.

What is the procedure if I do decide to take part?

Taking part in an interview will involve answering a number of semi-structured questions. This means that some questions will be short/closed – 'yes/no' questions, whereas others will be open for more lengthy responses. At no time will you be obliged to discuss anything you are uncomfortable discussing nor to disclose anything that you don't wish to. As such, any information you give us is completely under your control. The interview will last around 45 minutes but will vary from person-to-person.

What will be done with my interview data?

If you agree, the interviewer will record the answers on a questionnaire. All data will be kept on University computers and identifying data will be removed. Your questionnaire data will be analysed

quantitively and qualitatively to identify patterns and themes across all interviews. This will enable researchers to identify the range of perspectives and experiences of different participants. Your name will not be attached to your interview data.

What are the possible benefits of participation?

The information you provide will contribute to valuable evidence that will inform Defra's new Environmental Land Management Scheme and participating is your opportunity to feed into this.

What might go wrong?

No undue effects are anticipated. As researchers we are bound by anonymity and confidentiality rules – see below.

Will my taking part in this study be kept confidential?

All information we collect will be kept strictly confidential. Any information that identifies you e.g. name, will be removed so that you cannot be recognised from it. It is important to note that members of the University of Gloucestershire team will also have access to the data. Any data used in research outputs e.g. academic papers or project reports will anonymise data and individuals will not be identifiable. You will simply be 'Participant 1' or 'Participant 2'.

What will happen to the results of this study?

The results of this research will be used to write an assessment of the effectiveness of the traditional farm building maintenance options in Countryside Stewardship and to inform the development of Defra's new Environmental Land Management Scheme.

In addition, findings from the research will be used to inform scientific papers which will be published in relevant academic journals.

Who is funding the research?

Defra is funding the research.

Who has reviewed this study for ethical clearance?

This study has been reviewed and granted clearance by the University of Gloucestershire's Research Ethics Committee.

What if I want to contact the researcher to ask about this study or my participation in it?

We are happy to discuss any concerns or answer any questions. In the first instance, please contact Peter Gaskell (pgaskell@glos.ac.uk) on 01242 714136.

6.2.3 Consent form

Informed Consent Form

Assessing the effectiveness of traditional farm building maintenance options

Title of project: Assessing the effectiveness of CS and ES traditional farm building maintenance options

Project lead: Dr Peter Gaskell (pgaskell@glos.ac.uk)

		Please select boxes to indicate consent
1.	I confirm that I have read and understand the subject information sheet dated 11 November 2021 for the above study and have had the opportunity to ask questions which have been answered fully.	☐
2.	I have received enough information about this study.	☐
3.	I understand that my participation in the interview is voluntary and I am free to withdraw at any time (until such date as this will no longer be possible, which I have been told), without giving any reason.	☐
4.	I give permission for an audio recording of my spoken responses during the interview asked as part of the study.	☐
5.	I agree to a CCRI researcher accessing my land to assess the effectiveness of the options in my agri-environment agreement.	☐
6.	I understand my responses will be anonymised in any final write up relating to the study (e.g. reports or academic papers).	☐
7.	I agree to take part in the above study.	☐

Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Name	Date	Signature
_____	_____	_____
Name of researcher taking consent:	Date	Signature

6.3 Appendix 3: Agreement holder interview schedules

6.3.1 Countryside Stewardship interview schedule

Countryside Stewardship Traditional Farm Building Maintenance: Agreement Holder Interview

Contact details: *(Complete prior to the interview from Contact database)*

CCRI identification number	
Agreement Holder Name	
Farm Address	
Telephone Number	
Date and Time of Interview	
Interviewer initials	

PRE-CODED INFORMATION ABOUT THE AGREEMENT

Traditional building option types: (fill in from Agreement database)

Option code	Option Description	Number of sites
HS1	Maintenance of traditional farm buildings	
HS8	Maintenance of traditional farm buildings in remote area	

Target sample ☐ Reserve sample ☐

1 Background about the buildings

1.1 INTERVIEWEE DETAILS

1.1.1 *Position:*

Landlord	
Owner-occupier	
Tenant	
Manager	
Agent	
Other	

Free text

1.2 LOCATION OF YOUR TRADITIONAL FARM BUILDINGS

1.2.1 *Could we first check the location of your traditional farm buildings on the plan?* (Mark in red)

- Confirm HS1/HS8 weatherproof buildings included in the agreement
- Confirm if the buildings contain wildlife boxes

Details	Site 1	Site 2	Site 3	Site 4	Site 5
HS1 (Yes/No/DK)					
HS8 (Yes/No/DK)					
Barn Owl boxes (Yes/No/DK)					
Kestrel boxes (Yes/No/DK)					
Bat boxes (Yes/No/DK)					

- **Additional** comments (free text)

If the location has more than one building

1.2.2 *Are the any weatherproof traditional buildings in the group that are not in the agreement?* (Mark on plan in green)

1.2.3 *Are there any non-weatherproof traditional buildings in the group?* (Mark on plan in blue)

1.2.4 *Are there any converted traditional buildings in the group?* (Mark on map in yellow)

Details	Site 1	Site 2	Site 3	Site 4	Site 5
Weatherproof traditional buildings (Yes/No/DK)					
non-weatherproof traditional buildings (Yes/No/DK)					
Converted farm buildings (House/Office) (Yes/No/DK)					

2 Previous experience of agri-environment schemes

2.1.1 *Did you use any of the traditional farm building maintenance options that were part of the part of the Environmental Stewardship scheme that began in 2005 and closed to new entrants in 2015? Yes/No/DK*

If No: Go to Section 3

If Yes: Were the traditional farm buildings in previous ES scheme

All the same as in CS now	
Some the same as in CS now	
Different buildings altogether	

- Additional comments (free text)

3 Choosing the buildings to put into the scheme

3.1 CHOOSING THE BUILDINGS

3.1.1 *Why did you decide to include the farm building maintenance option in your CS agreement?*

(Do not prompt: Tick all that apply)

Important to maintain for the environment	Landscape	
	Historic environment	
	Wildlife (e.g. Owls, Bats)	
Suggested by advisor		
Straightforward management prescription		
Used the TFB maintenance option in Env S		
Other (specify)		

- Additional comments (free text)

3.1.2 *What were the reasons for you selecting these particular buildings to be included in the scheme? (Do not prompt: Tick all that apply)*

Reasons	Site 1	Site 2	Site 3	Site 4	Site 5
Landscape					
Historic environment					
Wildlife					
Personal or family connection					
Community (local and visitors)					
Included under ES TFB maintenance option					
Other (specify)					

- Additional comments (free text)

3.1.3 *Before choosing the building maintenance option did you seek any information or advice? Yes/No/DK*

3.1.4 *Were you able to get all the buildings you wanted to into the maintenance option? Yes/No/DK*

- If No: *what was the problem*? (free text)

3.1.5 *Are there any areas where the application process for the traditional farm building maintenance options (HS1, HS8) could be improved?* (Specify, free text)

4 Use of the buildings covered by the maintenance option

4.1.1 *What was the use of the building(s) prior to inclusion in the scheme?*

(Tick all that apply)

Use	Site 1	Site 2	Site 3	Site 4	Site 5
Used agriculture					
Used other (specify)					
Not used					

4.1.2 *What would have happened to the condition of the building(s) if the maintenance option had not been selected?* (Tick the one that most closely applies)

Condition	Site 1	Site 2	Site 3	Site 4	Site 5
Maintained to a higher standard					
Maintained to the same standard					
Maintained to a lower standard					
Not Maintained (leading to on-going deterioration)					

- Additional comments (free text)

4.1.3 *Has inclusion of the building(s) in the scheme changed building use in any way? Yes/No/DK*

- If Yes: In what way? (free text)

4.1.4 *Are there any plans for the building(s) after the end of the current agreement period? Yes/No/DK*

If YES, then…

(Don't prompt, Tick all that apply)

Future plans	Site 1	Site 2	Site 3	Site 4	Site 5
Include in a future maintenance scheme					
Agricultural use					
Other use					
No change					

5.1 MAINTENANCE OF BUILDINGS COVERED BY OPTIONS

5.1.1 *Have you undertaken any maintenance work on the buildings? (Major, Minor, None)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Major					
Minor					
None					

5.1.2 *What works have been undertaken to date? (Tick all that applies)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Roof areas					
Rainwater disposal					
External walls					
Doors, windows and openings					
Internal fixtures and fittings					

5.1.3 *Who carried out the works? (Tick all that apply)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Self					
Farming neighbours (i.e. unpaid)					
Farm staff					
Local contractor (Under 30 mins. drive time)					
Non-local contractor (over 30 mins. Drive time)					
Other (specify)					

5.1.4 *Have you experienced any difficulties in maintaining your traditional farm buildings? Yes/No/DK*

- If Yes: What difficulties have you experienced? (Don't prompt, Tick all that apply)

Type of difficulty	Site 1	Site 2	Site 3	Site 4	Site 5
Lack of advice on how to carry out maintenance and repairs					
Maintenance responsibility issues (e.g. Landlord/tenant)					
Shortage of contractors					
Lack of traditional skills					
Shortage of materials					
Weather					
Time					
Other (specify)					

- Additional comments (free text)

5.1.5 *Has any information or advice on the extent or method of repair been sought? Yes/No/DK*

5.1.6 *Do you use your building maintenance plan and log to monitor the condition of your buildings? Yes/No/DK (if no go to 5.1.8)*

5.1.7 ***IF YES*** *- Has the building maintenance plan and log been kept up to date? Yes/No/DK*

- If no – what were the problems?

5.1.8 *How helpful is your building maintenance plan and log for organising the maintenance work? (Where 1 is Not helpful at all and 5 is very helpful)*

	1	2	3	4	5	N/A
How helpful						

- Additional comments (free text)

5.1.9 *Can the building maintenance plan and log be improved in any way? Yes/No/DK*

- If Yes: In what way? (free text)

5.1.10 *Overall, does the option HS1 and/or HS8 offer good value for money?*

(Where 1 is not good value at all and 5 is very good value)

Value for money	1	2	3	4	5	N/A
For you						
For the taxpayer						

- Additional comments (free text)

6 Management of weatherproof traditional farm buildings not included in the scheme

6.1.1 *What weatherproof traditional buildings were not included in the scheme? (Note any buildings and crossref to plan)*

6.1.2 *What were the reasons for not including these buildings in the scheme? (Tick all that apply)*

Reason	Site 1	Site 2	Site 3	Site 4	Site 5
Building was not eligible					
Not Important to maintain for the environment					
Would be difficult to follow management prescriptions					
Other (specify)					

- Additional comments (free text)

6.1.3 *What is your maintenance policy for these buildings compared to the buildings in the scheme?* (Tick the one that most closely applies)

Maintenance policy	Site 1	Site 2	Site 3	Site 4	Site 5
Maintained to a higher standard					
Maintained to the same standard					
Maintained to a lower standard					
Not Maintained (leading to on-going deterioration)					

6.1.4 *Would you consider entering these buildings into a future maintenance scheme?*

Yes/No/DK or 'NA' if there were no buildings not included

7 Public benefits from buildings covered by the scheme

7.1 Wildlife

7.1.1 *Does any wildlife use the buildings?*

Wildlife use	Site 1	Site 2	Site 3	Site 4	Site 5
Before you joined the scheme					
Barn Owls (Yes/No/DK)					
Kestrels (Yes/No/DK)					
Bats (Yes/No/DK)					
Other wildlife (Yes/No/DK)					
At present					
Barn Owls (Yes/No/DK)					
Kestrels (Yes/No/DK)					
Bats (Yes/No/DK)					
Other wildlife (Yes/No/DK)					

7.1.2 *If yes [at present]: what evidence led you to believe that you have wildlife in your farm buildings? (free text)*

7.1.3 *Was the building wildlife assessment helpful in deciding whether to install boxes or not? Yes/No/DK*

7.1.4 *Can the building wildlife assessment be improved in any way? Yes/No/DK*

- If Yes: In what way? (free text)

7.2 Access and engagement

7.2.1 *Are any of the buildings accessible to the Public? (tick all that apply)*

Accessibility	Site 1	Site 2	Site 3	Site 4	Site 5
Special provision (e.g. educational access, community events)					
Able to go inside any of the buildings					
See the buildings at close quarters (within 100m)					

7.2.2 *Can the buildings be seen from publicly accessible areas in the landscape?*

View point (Yes/No/DK/NA)	Site 1	Site 2	Site 3	Site 4	Site 5
Public Rights of Way (e.g. footpaths, bridleways)					
CROW land (open access land)					
Roads or Railways					
Residential housing					

7.3 Agreement holder

7.3.1 *Do you think you have learned anything from implementing the option on your farm buildings?*

- Yes/No/Don't know

(If YES…tick all that apply)

Skills (e.g. using traditional construction methods and materials)	
How the buildings contribute to the history of the area	
How the buildings contribute to the local landscape	
How the buildings create a place for wildlife	
Contribution to community wellbeing (locals and visitors)	
Nothing learned	

- Additional comments (free text)

7.3.2 *Do you feel better able to maintain your traditional farm buildings as a result of being part of the scheme? Yes/No/DK*

7.3.3 *Next I would like to ask you five questions on how taking part in the option has influenced your feelings about your traditional farm buildings. There are no right or wrong answers. For each question I'd like you to give an answer on a scale of 1 to 5, where 1 is made no difference and 5 is very positive.*

Feelings	1	2	3	4	5	N/A
Contributing to the heritage and history of the farm						
Contributing to the local landscape						
Providing a place for wildlife						
Contributing to your wellbeing (as a place to live and work, sense of pride)						
Contributing to the community's wellbeing (experienced by locals and visitors)						

Comments: (Explanation of scoring, free text)

7.3.4 *Could you describe what the value of the traditional farm buildings mean to you personally, there are no right or wrong answers. (free text)*

7.3.5 *Knowing what you know now, would you select the building maintenance option again?Yes/No/DK*

- Additional comments (free text)

7.3.6 *The final question is to ask if there is anything you would like say about the maintenance of traditional farm building options that is important and has not been covered? Yes/No/DK*

- If Yes: Could you tell me more about this? (free text)

Closing comment:
Thank you very much for taking part in this interview. Your help with the research is greatly appreciated as it is important to get a range of different views and experiences. As mentioned before, the interview will be treated in strictest confidence.

6.3.2 Environmental Stewardship interview schedule

Environmental Stewardship Traditional Farm Building Maintenance: Agreement Holder Interview

Contact details: *(Complete prior to the interview from Contact database)*

CCRI identification number	
Agreement Holder Name	
Farm Address	
Telephone Number	
Date and Time of Interview	
Name of Interviewer	

PRE-CODED INFORMATION ABOUT THE AGREEMENT

Traditional building option types: (fill in from database) (tick all that apply)

Option code	Option Description	Number of records
D1	Maintenance of weatherproof traditional farm buildings	
D12	Maintenance of weatherproof traditional farm buildings in remote locations	

Target sample ☐ Reserve sample ☐

1 Background about the buildings

1.1 INTERVIEWEE DETAILS

1.1.1 *Position:*

Owner-occupier	
Landlord	
Tenant	
Manager	
Agent	
Other	

1.2 LOCATION OF YOUR TRADITIONAL FARM BUILDINGS

1.2.1 *Could we first check the location of your traditional farm buildings on the map?* (Mark on map in red)

- Confirm D1/D12 weatherproof buildings included in the agreement
- Confirm if the buildings contain wildlife boxes

Details	Site 1	Site 2	Site 3	Site 4	Site 5
D1 (Yes/No/DK)					
D12 (Yes/No/DK)					
Barn Owl boxes (Yes/No/DK)					
Kestrel boxes (Yes/No/DK)					
Bat boxes (Yes/No/DK)					

- Additional comments (free text)

If the location has more than one building

1.2.2 *Are there any weatherproof traditional buildings in the group that are not in the agreement? (Mark on plan in green)*

1.2.3 *Are there any non-weatherproof traditional buildings in the group?* (Mark on plan in blue)

1.2.4 *Are there any converted traditional buildings in the group?* (Mark on map in yellow)

Details	Site 1	Site 2	Site 3	Site 4	Site 5
Weatherproof traditional buildings (Yes/No/DK)					
Non-weatherproof traditional buildings (Yes/No/DK)					
Converted farm buildings (House/Office) (Yes/No/DK)					

2 Experience of Countryside Stewardship

2.1.1 *Do you have any buildings covered by the traditional farm building maintenance options in Countryside Stewardship (HS1, HS8)? Yes/No/DK*

- Additional comments (free text)

3 Choosing the buildings to put into the scheme

3.1 CHOOSING THE BUILDINGS

3.1.1 *Why did you decide to include the farm building maintenance option in your ES agreement?*

(Do not prompt: Tick all that apply)

Important to maintain for the environment	Landscape	
	Historic environment	
	Wildlife (e.g. Owls, Bats)	
Suggested by advisor		
Straightforward management prescription		
Other (specify)		

- Additional comments (free text)

3.1.2 *What were the reasons for you selecting these particular buildings to be included in the scheme? (Do not prompt: Tick all that apply)*

Reasons	Site 1	Site 2	Site 3	Site 4	Site 5
Landscape					
Historic environment					
Wildlife					
Personal or family connection					
Community (local and visitors)					
Other (specify)					

- Additional comments (free text)

3.1.3 *Before choosing the building maintenance option did you seek any information or advice? Yes/No/DK*

- Additional comments (free text)

3.1.4 *Were you able to get all the buildings you wanted to into the maintenance option? Yes/No/DK*

- If No: *what was the problem*? (free text)

4 Use of the buildings covered by the maintenance option

4.1.1 *What was the use of the building(s) prior to inclusion in the scheme?*

(Tick all that apply)

Use	Site 1	Site 2	Site 3	Site 4	Site 5
Used agriculture					
Used other (specify)					
Not used					

4.1.2 *What would have happened to the condition of the building(s) if the maintenance option had not been selected?* (Tick the one that most closely applies)

Condition	Site 1	Site 2	Site 3	Site 4	Site 5
Maintained to a higher standard					
Maintained to the same standard					
Maintained to a lower standard					
Not Maintained (leading to on-going deterioration)					

- Additional comments (free text)

4.1.3 *Has inclusion of the building(s) in the scheme Changed building use in any way? Yes/No/DK*

- If Yes: In what way? (free text)

4.1.4 *Are there any plans for the building(s) after the end of the current agreement period? Yes/No/DK*

(Don't prompt, Tick all that apply)

Future plans	Site 1	Site 2	Site 3	Site 4	Site 5
Include in a future maintenance scheme					
Agricultural use					
Other use					
No change					

5 Maintenance of traditional farm buildings

5.1 MAINTENANCE OF BUILDINGS COVERED BY OPTIONS

5.1.1 *Have you undertaken any maintenance work on the buildings? (Major, Minor, None)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Major					
Minor					
None					

- Additional comments (free text)

5.1.2 *What works have been undertaken to date? (Tick all that applies)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Roof areas					
Rainwater disposal					
External walls					
Doors, windows and openings					
Internal fixtures and fittings					

- Additional comments (free text)

5.1.3 *Who carried out the works? (Tick all that apply)*

Sites	Site 1	Site 2	Site 3	Site 4	Site 5
Self					
Farming neighbours (i.e. unpaid)					
Farm staff					
Local contractor (Under 30 mins. drive time)					
Non-local contractor (over 30 mins. Drive time)					
Other (specify)					

- Additional comments (free text)

5.1.4 *Have you experienced any difficulties in maintaining your traditional farm buildings? Yes/No/DK*

- If Yes: What difficulties have you experienced? (Don't prompt, Tick all that apply)

Type of difficulty	Site 1	Site 2	Site 3	Site 4	Site 5
Lack of advice on how to carry out maintenance and repairs					
Maintenance responsibility issues (e.g. Landlord/tenant)					
Shortage of contractors					
Lack of traditional skills					
Shortage of materials					
Weather					
Time					
Other (specify)					

- Additional comments (free text)

5.1.5 *Has any information or advice on the extent or method of repair been sought? Yes/No/DK*

5.1.6 *Do you use a building maintenance plan and log to monitor the condition of your buildings? Yes/No/DK*

If Yes ask 5.1.7 & 5.1.8:
If No/Don't know go to 5.1.9

5.1.7 *Has the building maintenance plan and log been kept up to date? Yes/No/DK*

- If No: What were the problems? (free text)

5.1.8 *How helpful is your building maintenance plan and log for organising the maintenance work? (Where 1 is Not helpful at all and 5 is very helpful)*

	1	2	3	4	5	N/A
How helpful						

- Additional comments (free text)

5.1.9 *Overall, does the option offer good value for money?*

(Where 1 is not good value at all and 5 is very good value)

Value for money	1	2	3	4	5	N/A
For you						
For the taxpayer						

- Additional comments (free text)

6 Management of weatherproof traditional farm building not included in the scheme

6.1.1 *What weatherproof traditional buildings were not included in the scheme? (Note any buildings and crossref to plan)*

6.1.2 *What were the reasons for not including these buildings in the scheme? (Tick all that apply)*

Type of difficulty	Site 1	Site 2	Site 3	Site 4	Site 5
Building not eligible					
Not Important to maintain for the environment					
Would be difficult to follow management prescriptions					
Other (specify)					

- Additional comments (free text)

6.1.3 *What is your maintenance policy for these buildings compared to the buildings in the scheme?* (Tick the one that most closely applies)

Maintenance policy	Site 1	Site 2	Site 3	Site 4	Site 5
Maintained to a higher standard					
Maintained to the same standard					
Maintained to a lower standard					
Not maintained (leading to on-going deterioration)					

6.1.4 *Would you consider entering these buildings into a future maintenance scheme? Yes/No/DK or NA there were no buildings not included.*

7 Public benefits from buildings covered by the scheme

7.1 Wildlife

7.1.1 *Does any wildlife use the buildings?*

Wildlife use	Site 1	Site 2	Site 3	Site 4	Site 5
Before you joined the scheme					
Barn Owls (Yes/No/DK)					
Kestrels (Yes/No/DK)					
Bats (Yes/No/DK)					
Other wildlife (Yes/No/DK)					
At present					
Barn Owls (Yes/No/DK)					
Kestrels (Yes/No/DK)					
Bats (Yes/No/DK)					
Other wildlife (Yes/No/DK)					

7.1.2 *If yes [at present]: what evidence led you to believe that you have wildlife in your farm buildings? (free text)*

7.2 Access and engagement

7.2.1 *Are any of the buildings accessible to the Public? (tick all that apply)*

Accessibility	Site 1	Site 2	Site 3	Site 4	Site 5
Special provision (e.g. educational access, community events)					
Able to go inside any of the buildings					
See the buildings at close quarters (within 100m)					

7.2.2 *Can the buildings be seen from publicly accessible areas in the landscape?*

View point (Yes/No/DK/NA)	Site 1	Site 2	Site 3	Site 4	Site 5
Public Rights of Way (e.g. footpaths, bridleways)					
CROW land (open access land)					
Roads or Railways					
Residential housing					

7.3 Agreement holder

7.3.1 *Have you learned anything from implementing the option on your farm buildings?*

- Yes/No/Don't know

(If YES…tick all that apply)

Skills (e.g. using traditional construction methods and materials)	
How the buildings contribute to the history of the area	
How the buildings contribute to the local landscape	
How the buildings create a place for wildlife	
Contribution to community wellbeing (locals and visitors)	
Nothing learned	

- Additional comments (free text)

7.3.2 *Do you feel better able to maintain your traditional farm buildings as a result of being part of the scheme? Yes/No/DK*

7.3.3 *Next I would like to ask you five questions on how taking part in the option has influenced your feelings about your traditional farm buildings. There are no right or wrong answers. For each question I'd like you to give an answer on a scale of 1 to 5, where 1 is made no difference and 5 is very positive.*

Feelings	1	2	3	4	5	N/A
Contributing to the heritage and history of the farm						
Contributing to the local landscape						
Providing a place for wildlife						
Contributing to your wellbeing (as a place to live and work, sense of pride)						
Contributing to the community's wellbeing (experienced by locals and visitors)						

Comments: (Explanation of scoring, free text)

7.3.4 *Could you describe what the value of the traditional farm buildings mean to you personally, there are no right or wrong answers. (free text)*

7.3.5 *Knowing what you know now, would you select the building maintenance option again? Yes/No/DK*

- Additional comments (free text)

7.3.6 *The final question is to ask if there is anything you would like say about the maintenance of traditional farm building options that is important and has not been covered? Yes/No/DK*

- If Yes: Could you tell me more about this? (free text)

Closing comment:
Thank you very much for taking part in this interview. Your help with the research is greatly appreciated as it is important to get a range of different views and experiences. As mentioned before, the interview will be treated in strictest confidence.

6.4 Appendix 4: Farmstead site and building range record forms

6.4.1 Site recording form

Traditional Farm Building Maintenance: Farmstead Site and Building Range Record

CCRI identification number	
Name of Interviewer *(Initials)*	

PRE-CODED INFORMATION ABOUT THE AGREEMENT:

Traditional building option types: (fill in from Agreement database)

Option code	Option Description	Number of sites
CS HS1	Maintenance of weatherproof traditional farm buildings	
CS HS8	Maintenance of weatherproof traditional farm buildings in remote areas	
ES*D1	Maintenance of weatherproof traditional farm buildings	
ES*D12	Maintenance of weatherproof traditional farm buildings in remote areas	

Use the annotated site plan(s) from the Agreement Holder interview showing building ranges that are:

- *Weatherproof buildings included in the agreement **(Red)***
- *Weatherproof traditional buildings at the site that are not in the agreement **(Green)***
- *Non-weatherproof traditional buildings at the site **(Blue)***
- *Traditional farm buildings that have been converted into non-agricultural uses (Houses, offices) **(Yellow)***

Often traditional farmstead sites comprise two or more ranges of buildings. If this is the case, mark on the site plan and separately number building ranges (e.g. 1, 2, 3 etc). The site plan is the key for numbering the building recording forms (see guidance notes)

1. Site Recording Form: (*Complete a separate form for each site*)

CCRI identification No.		Site location No.	
Photographs taken	Y/N	Site surveyed	Y/N

Does the site contain:

Weatherproof TFBs not in the scheme?	Y/N	Non-weatherproof TFBs?	Y/N	Converted TFBs?	Y/N	Modern FBs?	Y/N

How visible is the site from publicly accessible areas?	high	med	Low
Additional notes			

Benefit for nature conservation?	high	med	Low
Additional notes			

Have there been missed opportunities?	yes	No	uncertain
Additional notes			

6.4.2 Building range recording form

2. Building Range Recording Form (Complete a separate form for each range)

CCRI No.				Site No.		Range No.					
In scheme?		OR...Weatherproof **not** in scheme?		Photographs?		Internal inspection?					
Condition:			Very Good	good		fair	poor	Not scored			
Plan form (list)		height (list)				Openings (list)					
Special features: *Yes/No/Uncertain*	Doors & windows		Interior fixtures & fittings								
Historic function(s): (list)											
Roof material: (list)	Dominant		Minor								
Wall material: (list)	Dominant		Minor								

Maintenance

Evidence of maintenance work?		Yes	No	uncertain
Traditional materials used?	Yes	No	Both	Uncertain
Is further maintenance work required?		Yes	No	Uncertain
Additional notes				

Wildlife Assessment

Potential for owl inhabitation	high	Medium	Low
Potential for kestrel inhabitation	high	Medium	Low
Potential for bat inhabitation	high	Medium	Low

Signs of owl inhabitation: ***Yes / No / Uncertain*** ***(Details if necessary)***	
Signs of kestrel inhabitation: ***Yes / No / Uncertain*** ***(Details if necessary)***	
Signs of bat inhabitation: ***Yes / No / Uncertain*** ***(Details if necessary)***	

6.5 Appendix 5: Section 2.3 data tables

Table 6.5-1 Distribution of CS TFB maintenance options by ALT

Agricultural Landscape Type	Surveyed (%)	Live agreements (%)
Chalk & Limestone Mixed	13.7	8.9
Eastern Arable	15.4	16.1
South East Mixed	3.4	1.3
Upland & Upland Fringe	41.9	44.5
Western Mixed	25.6	29.2
Total	100	100

Table 6.5-2 Distribution of ES TFB maintenance options by ALT

Agricultural Landscape Type	Surveyed (%)	Live agreements (%)
Chalk & Limestone Mixed	5.3	12.0
Eastern Arable	15.8	16.2
South East Mixed	10.5	3.0
Upland & Upland Fringe	47.4	48.6
Western Mixed	21.1	20.2
Total	100	100

Table 6.5-3 Number of CS TFB maintenance option records per agreement

Records per agreement (No.)	Surveyed (%)	Live records (%)
1	50	77
2	28	16
3	12	4
4+	10	3
Total	100	100

Table 6.5-4 Number of ES TFB maintenance option records per agreement

Records per agreement (No.)	Surveyed (%)	Live records (%)
1	88.9	93.4
2	5.6	6.5
3+	5.6	0.1
Total	100	100

Table 6.5-5 Uptake of CS TFB maintenance options (HS1 & HS8)

CS option code	Surveyed (%)	Live records (%)
HS1	83.8	95.2
HS8	16.2	4.8
Total	100	100

Table 6.5-6 Uptake of ES TFB maintenance options (D1 & D12)

ES option code	Surveyed (%)	Live records (%)
D1	90.5	93.5
D12	9.5	6.5
Total	100	100

6.6 Appendix 6: Section 2.5 data tables

Table 6.6-1 Distribution of CS and ES TFB building survey agreements, sites and ranges

Scheme	Agreements	Sites	Ranges
Countryside Stewardship	114	230	435
Environmental Stewardship	17	40	59
Total	131	270	494

Table 6.6-2 Number of sites per agreement with TFB maintenance options

Sites per agreement	Agreements	Per cent
1	79	60.3
2	22	16.8
3	15	11.5
4	4	3.1
5	1	0.8
6	4	3.1
7	1	0.8
8	2	1.5
9	1	0.8
10	0	0
11	0	0
12	1	0.8
13	1	0.8
Total	131	100

Table 6.6-3 Distribution of building survey sites and ranges by type of site

Site location	Sites (%)	Ranges (%)
Farmstead	61.7	77.9
Outfarm	6.4	4.6
Isolated single building	31.9	17.5
Total	100	100

6.7 Appendix 7: Section 3.3 data tables

Table 6.7-1 Uptake of CS and ES agreements

Scheme	Agreements	%
Countryside Stewardship	3,274	20.3
Environmental Stewardship	12,872	79.7
Total	16,146	100.0

Table 6.7-2 Uptake of ES and CS TFB maintenance options

Year	Agreement (%)
2006	1.7
2007	5.0
2008	4.0
2009	3.9
2010	19.6
2011	17.9
2012	11.9
2013	8.9
2014	2.3
2016	2.0
2017	3.1
2018	4.1
2019	4.7
2020	4.1
2021	6.8

Table 6.7-3 Uptake of ES and CS TFB maintenance option types

Scheme (%)	Accessible	Remote	Total
Countryside Stewardship	95.2	4.8	100
Environmental Stewardship	97.5	2.5	100
Total	97.0	3.0	100

Table 6.7-4 Uptake of ES TFB maintenance option types by scheme element

Option code	Options	%
ED1	12,120	90.1
HD1	609	4.5
OD1	373	2.8
OHD1	25	0.2
UD12	330	2.5
Total	13,457	100

Table 6.7-5 Comparison of CS and ES option size by floor area

Area (M^2)	ES (%)	CS (%)
<100	10.4	6.4
100-200	17.9	21.4
200-300	17.3	17.6
300-400	14.2	15.9
400-500	11.1	11.3
500-600	7.8	7.7
600-700	5.5	5.9
700-800	3.8	4.3
800-900	2.8	2.5
900-1000	2	2.3
1000-1500	4.6	3.8
1500-2000	1.4	0.7
2000-3000	0.7	0.4
3000-5000	0.3	0.1
5000-10000	<0.1	0

Table 6.7-6 Comparison of CS and ES TFB maintenance option uptake by ALT

Agricultural Landscape Type	ES (%)	CS (%)
Chalk & Limestone Mixed	11.6	8.9
Eastern Arable	17.7	16.1
South East Mixed	2.5	1.3
Upland & Upland Fringe	41.4	44.5
Western Mixed	26.8	29.2
Total	100	100

Table 6.7-7 Mean area of ES TFB maintenance options by ALT

Agricultural Landscape Type	Mean ($M^{2)}$
Chalk & Limestone Mixed	559
Eastern Arable	531
South East Mixed	473
Upland & Upland Fringe	349
Western Mixed	433
Total	423

Table 6.7-8 Comparison of CS and ES TFB maintenance option uptake by Protected Landscape

Protected landscape	ES (%)	CS (%)
Outside protected landscape	71.3	73.9
National Park	15.2	13.8
AONB	13.5	12.3
Total	100	100

Table 6.7-9 Uptake of CS TFB maintenance options in Protected Landscapes by ALT

Protected Landscape (%)	Chalk & Limestone Mixed	Eastern Arable	South East Mixed	Upland & Upland Fringe	Western Mixed	Total
Outside PL	8.3	20.8	1.2	32.7	36.9	100.0
National Park	0.8	1.0	0.5	96.3	1.5	100.0
AONB	21.2	4.9	2.4	57.4	14.1	100.0
Total	8.9	16.1	1.3	44.5	29.2	100.0

Table 6.7-10 Comparison of CS and ES TFB maintenance option uptake by WHS

World Heritage Site	ES (%)	CS (%)
Outside WHS	96.2	96.4
Inside WHS	3.8	3.6
Total	100.0	100

Table 6.7-11 Comparison of CS and ES TFB maintenance option uptake by WHS location

World Heritage Site	ES (%)	CS (%)
English Lake District	73.1	63.8
Hadrian's Wall	20.8	30.0
Cornwall & West Devon Mining Landscape	3.5	5.0
Studley Royal Park	1.0	1.3
Derwent Valley Mills	0.7	0.0
Stonehenge	0.5	0.0
Dorset & East Devon Coast	0.3	0.0
Total	100	100

Table 6.7-12 Comparison of CS and ES TFB maintenance option uptake by Rural-Urban location

Rural-Urban Class	ES (%)	CS (%)
Rural hamlets & isolated dwellings	45.0	43.9
Rural hamlets & isolated dwellings (sparse setting)	17.1	20.4
Rural town & fringe	4.1	2.8
Rural town & fringe (sparse setting)	0.4	0.4
Rural village	23.0	21.5
Rural village (sparse setting)	6.3	7.7
Urban city & town	3.6	2.7
Urban city & town (sparse setting)	0.0	0.0
Urban major conurbation	0.4	0.4
Urban minor conurbation	0.1	0.2
Total	100	100

Table 6.7-13 Comparison of CS and ES TFB maintenance option uptake by Green Belt

Green Belt	ES (%)	CS (%)
Non Green Belt	91.5	92.6
Green Belt	8.5	7.4
Total	100	100

Table 6.7-14 Comparison of CS and ES TFB maintenance option uptake by Green Belt location

Green Belt	ES (%)	CS (%)
Bath & Bristol	5.0	4.5
Birmingham	13.1	11.2
Blackpool	0.5	0.0
Bournemouth, Christchurch & Poole	0.9	0.3
Cambridge	0.8	0.0
Carnforth, Lancaster & Morecambe	0.6	0.0
Cheltenham & Gloucester	0.2	0.6
Derby & Nottingham	4.0	1.2
London	9.3	10.9
Merseyside & Greater Manchester	29.4	29.4
Oxford	1.2	1.2
South & West Yorkshire	20.6	18.5
Stoke-on-Trent	7.6	9.1
Tyne & Wear	4.3	11.5
York	2.4	1.5
Total	100	100

Table 6.7-15 Comparison of CS and ES TFB maintenance option uptake by proximity to urban centres

URBAN_10k	ES (%)	CS (%)
Close	66.1	63.4
Remote	33.9	36.6
Total	100	100

Table 6.7-16 Proximity of CS TFB maintenance option uptake to urban centres by ALT

Agricultural Landscape Type (%)	Close	Remote	Total
Chalk & Limestone Mixed	81.8	18.2	100
Eastern Arable	80.0	20.0	100
South East Mixed	91.2	8.8	100
Upland & Upland Fringe	42.5	57.5	100
Western Mixed	79.2	20.8	100
Total	63.4	36.6	100

Table 6.7-17 Proximity of ES TFB maintenance option uptake to urban centres by ALT

Agricultural Landscape Type (%)	Close	Remote	Total
Chalk & Limestone Mixed	82.4	17.6	100
Eastern Arable	80.6	19.4	100
South East Mixed	92.5	7.5	100
Upland Fringe	44.5	55.5	100
Western Mixed	80.6	19.4	100
Total	66.1	33.8	100

Table 6.7-18 Visibility of CS maintenance options by ALT

Agricultural Landscape Type (%)	Within 500m	Over 500m	Total
Chalk & Limestone Mixed	99.5	0.5	100
Eastern Arable	98.7	1.3	100
South East Mixed	100.0	0.0	100
Upland & Upland Fringe	99.6	0.4	100
Western Mixed	99.3	0.7	100
Total	99.4	0.6	100

Table 6.7-19 Accessibility of CS maintenance options by ALT

Agricultural Landscape Type (%)	Within 100m	Over 100m	Total
Chalk & Limestone Mixed	67.8	32.2	100
Eastern Arable	73.1	26.9	100
South East Mixed	75.4	24.6	100
Upland & Upland Fringe	76.6	23.4	100
Western Mixed	75.8	24.2	100
Total	75.0	25.0	100

Table 6.7-20 HEFMP site distribution in Staffordshire by site type

Site type	Frequency	(%)
Farmstead	5,525	72.8
Outfarm & isolated building	2,069	27.2
Total	7,594	100

Table 6.7-21 HEFMP site survival in Staffordshire by type of site

Site type (%)	Survived	Lost	Total
Farmstead	81.1	18.9	100
Outfarm & isolated building	27.1	72.9	100
Total	66.4	33.6	100

Table 6.7-22 Distribution of HEFMP sites by plan type

Plan type	Frequency	(%)
Regular courtyard	1925	38.2
Loose courtyard	1449	28.7
Linear	844	16.7
Dispersed	481	9.5
Single building	308	6.1
Other	34	0.7
Total	5041	100

Table 6.7-23 Degree of HEFMP survival by site type

Site type (%)	Complete	More than 50%	Less than 50%	Total
Farmstead	42.6	46.2	11.2	100
Outfarm & isolated building	80.2	15.5	4.3	100
Total	46.7	42.8	10.4	100

Table 6.7-24 Number of sites with CS TFB maintenance options per agreement

Records per agreement	Frequency	(%)	Records
1	84	86.6	84
2	9	9.3	18
3	3	3.1	9
4	1	1.0	4
Total	97	100	115

Table 6.7-25 Comparison of CS and HEFMP sites according to ALT location

Agricultural Landscape Type	CS (%)	HEFMP (%)
Upland & Upland Fringe	49.6	47.0
Western Mixed	50.4	53.0
Total	100	100.0

Table 6.7-26 Comparison of CS and HEFMP sites according to NCA location

National Character Area	CS (%)	HEFMP (%)
Arden	0.0	0.0
Cannock Chase & Cank Wood	7.0	8.7
Mease/Sence Lowlands	0.0	1.1
Melbourne Parklands	0.0	0.0
Mid Severn Sandstone Plateau	3.5	3.8
Needwood & South Derbyshire Claylands	20.0	18.5
Potteries & Churnet Valley	20.9	25.8
Shropshire, Cheshire & Staffordshire Plain	20.0	19.0
South West Peak	16.5	14.8
Trent Valley Washlands	0.0	1.8
White Peak	12.2	6.4
Total	100.0	100

Table 6.7-27 Comparison of CS and HEFMP sites by site type

Site type	CS (%)	HEFMP (%)
Farmstead	81.7	72.8
Outfarm & isolated building	18.3	27.2
Total	100	100.0

Table 6.7-28 Comparison of CS and HEFMP sites by plan type

Plan type	CS (%)	HEFMP (%)
Regular courtyard	46.1	38.2
Loose courtyard	32.2	28.7
Linear	8.7	16.7
Dispersed	4.3	9.5
Single building	8.7	6.1
Other	0	0.7
Total	100	100

Table 6.7-29 Comparison of CS and HEFMP sites by degree of survival

Survival	CS (%)	HEFMP (%)
Complete	53.0	46.7
More than 50%	34.8	42.8
Less than 50%	10.4	10.4
Total	100	100

6.8 Appendix 8 Section 3.4 data tables

Table 6.8-1 CS agreement holder status

Interviewee position	Frequency	Per cent
Owner-occupier	73	74.5
Tenant	19	19.4
Manager	3	3.1
Landlord	2	2.0
Other	1	1.0
Total	98	100

Table 6.8-2 ES agreement holder status

Interviewee position	Frequency	Per cent
Owner-occupier	10	71.4
Tenant	3	21.4
Manager	1	7.1
Landlord	0	0.0
Other	0	0.0
Total	14	100

Table 6.8-3 Number of TFB maintenance option sites per CS agreement

Total sites (HS1 & HS8)	Frequency	Per cent
1	52	53.1
2	21	21.4
3	14	14.3
4	4	4.1
5	0	0.0
6	2	2.0
7	1	1.0
8	2	2.0
9	0	0.0
10	0	0.0
11	0	0.0
12	1	1.0
13	1	1.0
Total	98	100

Table 6.8-4 CS TFB maintenance option types

Options	Frequency	Per cent
HS1 ONLY	77	78.6
HS8 ONLY	6	6.1
HS1 & HS8	15	15.3
Total	98	100

Table 6.8-5 ES TFB maintenance option types

Options	Frequency	Per cent
HS1 ONLY	10	71.4
HS8 ONLY	3	21.4
HS1 & HS8	1	7.1
Total	14	100

Table 6.8-6 Reasons for including TFB maintenance options in CS agreements

Reason given	Frequency	Per cent
Public benefit	66	67.3
Suggested by an advisor	48	49.0
Financial	40	40.8
Management prescription	32	32.7
Used ES option	12	12.2
Other	5	5.1

Table 6.8-7 Reasons for including TFB maintenance options in ES agreements

Reason given	Frequency	Per cent
Public benefit	9	64.3
Management prescription	5	35.7
Suggested by an advisor	5	35.7
Other	4	28.6
Financial	2	14.3

Table 6.8-8 Number of benefits identified by agreement holders per site

Benefits per site	Frequency	Per cent
None	41	19.3
1	44	20.8
2	38	17.9
3	45	21.2
4	33	15.6
5	11	5.2
Total	212	100

Table 6.8-9 Benefits identified by agreement holders for the sites entered into the CS scheme

Benefits	Frequency	Per cent
Historic environment	138	65.1
Landscape	123	58.0
Personal connection	71	33.5
Community	56	26.4
Wildlife	56	26.4

6.9 Appendix 9 Section 3.5 data tables

Table 6.9-1 Distribution of CS building survey sites and RPA records by ALT

Agricultural Landscape Type (%)	Sites (%)	Records (%)
Chalk & Limestone Mixed	10	9
Eastern Arable	13	16
South East Mixed	2	1
Upland & Upland Fringe	58	45
Western Mixed	18	29
Total	100	100

Table 6.9-2 Distribution of CS site types by ALT

Agricultural Landscape Type (%)	Farmstead	Outfarm	Isolated single building	Total
Chalk & Limestone Mixed	76.2	14.3	9.5	100
Eastern Arable	96.7	3.3	0.0	100
Upland & Upland Fringe	41.4	6.0	52.6	100
Western Mixed	85.4	7.3	7.3	100
Total	60.7	6.6	32.8	100

Table 6.9-3 CS building survey site position and presence of listed TFBs

Site position (%)	No listed TFB on site	Listed TFB on site	Total
Farmstead	83.5	16.5	100
Outfarm	100.0	0.0	100
Isolated single building	97.3	2.7	100
Total	89.1	10.9	100

Table 6.9-4 Protected Landscape status and presence of listed TFBs

Protected Landscape (%)	No listed TFB on site	Listed TFB on site	Total
Outside protected landscape	89.6	10.4	100
National Park	91.4	8.6	100
AONB	80.0	20.0	100
Total	89.1	10.9	100

Table 6.9-5 Survival of CS building survey sites

Survival	Farmstead (%)	Outfarm (%)	Isolated single building (%)	Total (%)
Complete	34.5	53.3	93.3	55.0
> 50% survival	51.1	33.3	6.7	35.4
< 50% survival	13.7	13.3	0.0	9.2
New (post 1900s)	0.7	0.0	0.0	0.4
Total	100	100	100	100

Table 6.9-6 CS building survey site position and survival

Site position (%)	Complete	> 50% survival	< 50% survival	New (post 1900s)	Total
Farmstead	34.5	51.1	13.7	0.7	100
Outfarm	53.3	33.3	13.3	0.0	100
Isolated single building	93.3	6.7	0.0	0.0	100
Total	55.0	35.4	9.2	0.4	100

Table 6.9-7 CS building survey site survival by ALT

Agricultural Landscape Type (%)	Complete	> 50% survival	< 50% survival	New (post 1900s)	Total
Chalk & Limestone Mixed	38.1	52.4	9.5	0.0	100
Eastern Arable	26.7	46.7	23.3	3.3	100
Upland & Upland Fringe	71.4	22.6	6.0	0.0	100
Western Mixed	34.1	56.1	9.8	0.0	100
Total	55.0	35.4	9.2	0.4	100

Table 6.9-8 CS building survey site and presence of modern farm buildings

Site position (%)	Yes	No	Total
Farmstead	87.1	12.9	100
Outfarm	40.0	60.0	100
Isolated single building	8.0	92.0	100
Total	58.1	41.9	100

Table 6.9-9 ALTs and presence of modern farm buildings

Agricultural Landscape Type (%)	Yes	No	Total
Chalk & Limestone Mixed	71.4	28.6	100
Eastern Arable	86.7	13.3	100
Upland & Upland Fringe	45.1	54.9	100
Western Mixed	68.3	31.7	100
Total	58.1	41.9	100

Table 6.9-10 CS building survey site and presence of converted TFBs

Site position (%)	Yes	No	Total
Farmstead	23.7	76.3	100
Outfarm	0.0	100.0	100
Isolated single building	0.0	100.0	100
Total	14.4	85.6	100

Table 6.9-11 ALTs and presence of converted TFBs

Agricultural Landscape Type (%)	Yes	No	Total
Chalk & Limestone Mixed	23.8	76.2	100
Eastern Arable	26.7	73.3	100
Upland & Upland Fringe	7.5	92.5	100
Western Mixed	17.1	82.9	100
Total	14.4	85.6	100

Table 6.9-12 CS building survey site and potential for wildlife conservation

Site position (%)	High	Med	Low	Total
Farmstead	23.0	47.5	29.5	100
Outfarm	33.3	60.0	6.7	100
Isolated single building	23.0	63.5	13.5	100
Total	23.7	53.5	22.8	100

Table 6.9-13 ALT and potential for wildlife conservation

Agricultural Landscape Type (%)	High	Med	Low	Total
Chalk & Limestone Mixed	33.3	38.1	28.6	100
Eastern Arable	33.3	46.7	20.0	100
Upland & Upland Fringe	21.1	57.9	21.1	100
Western Mixed	20.0	55.0	25.0	100
Total	23.7	53.5	22.8	100

Table 6.9-14 CS building survey site and potential for barn owl inhabitation

Site position (%)	High	Med	Low	Total
Farmstead	11.6	39.2	49.1	100
Outfarm	35.0	40.0	25.0	100
Isolated single building	26.3	56.6	17.1	100
Total	15.7	42.7	41.6	100

Table 6.9-15 CS building survey site and potential for kestrel inhabitation

Site position (%)	High	Med	Low	Total
Farmstead	8.9	40.3	50.9	100
Outfarm	25.0	50.0	25.0	100
Isolated single building	22.4	60.5	17.1	100
Total	12.3	44.7	42.9	100

Table 6.9-16 CS building survey site and potential for bat inhabitation

Site position (%)	High	Med	Low	Total
Farmstead	20.1	45.4	34.5	100
Outfarm	20.0	65.0	15.0	100
Isolated single building	18.4	67.1	14.5	100
Total	19.8	50.6	29.6	100

Table 6.9-17 CS building survey site and visibility in the landscape

Site position (%)	High	Med	Low	Total
Farmstead	61.2	25.2	13.7	100
Outfarm	60.0	13.3	26.7	100
Isolated single building	91.9	6.8	1.4	100
Total	71.1	18.4	10.5	100

Table 6.9-18 ALT and visibility in the landscape

Agricultural Landscape Type (%)	High	Med	Low	Total
Chalk & Limestone Mixed	52.4	23.8	23.8	100
Eastern Arable	80.0	16.7	3.3	100
Upland & Upland Fringe	77.3	15.2	7.6	100
Western Mixed	53.7	29.3	17.1	100
Total	70.7	18.3	10.9	100

Table 6.9-19 CS building survey range location and dominant wall materials

Site position (%)	Brick	Stone	Weather boarding	Timber frame	Earth	Corr. iron	Non-trad.	Other	Total
Farmstead	29.4	58.0	7.2	0.7	2.7	0.3	0.3	1.4	100
Outfarm	0.0	75.0	15.0	0.0	5.0	0.0	5.0	0.0	100
Isolated single building	2.7	95.9	0.0	0.0	1.4	0.0	0.0	0.0	100
Total	22.7	66.1	6.2	0.5	2.6	0.3	0.5	1.0	100

Table 6.9-20 CS building survey range location and dominant roof materials

Site position (%)	Corrugated iron	Modern sheeting	Tile	Slate	Stone slate	Thatch	Other	Total
Farmstead	4.4	8.9	39.2	32.1	11.3	0.3	3.8	100
Outfarm	45.0	5.0	15.0	10.0	25.0	0.0	0.0	100
Isolated single building	8.0	10.7	1.3	5.3	74.7	0.0	0.0	100
Total	7.2	9.0	30.7	25.8	24.2	0.3	2.8	100

Table 6.9-21 ALT range location and dominant wall materials

ALT (%)	Brick	Stone	Weather boarding	Timber frame	Earth	Corr. iron	Non-trad.	Other	Total
Chalk & Limestone Mixed	27.3	61.4	0.0	0.0	6.8	0.0	2.3	2.3	100
Eastern Arable	47.8	33.3	17.4	0.0	1.4	0.0	0.0	0.0	100
Upland & Upland Fringe	3.0	90.5	3.5	1.0	1.5	0.5	0.0	0.0	100
Western Mixed	49.2	38.5	4.6	0.0	4.6	0.0	1.5	1.5	100
Total	22.7	66.1	6.2	0.5	2.6	0.3	0.5	1.0	100

Table 6.9-22 ALT range location and dominant roof materials

ALT (%)	Corr. iron	Modern sheeting	Tile	Slate	Stone slate	Thatch	Other	Total
Chalk & Limestone Mixed	4.5	11.4	54.5	22.7	2.3	0.0	4.5	100
Eastern Arable	1.4	15.9	56.5	18.8	0.0	1.4	5.8	100
Upland & Upland Fringe	9.0	7.5	13.5	23.5	46.0	0.0	0.5	100
Western Mixed	10.8	4.6	35.4	41.5	1.5	0.0	6.2	100
Total	7.2	9.0	30.7	25.8	24.2	0.3	2.8	100

Table 6.9-23 CS building survey range location and presence of internal special features

Site position (%)	Yes	No	Total
Farmstead	55.2	44.8	100
Outfarm	0.0	100.0	100
Isolated single building	36.4	63.6	100
Total	51.1	48.9	100

Table 6.9-24 CS building survey range location and presence of external special features

Site position (%)	Yes	No	Total
Farmstead	70.8	29.2	100
Outfarm	52.6	47.4	100
Isolated single building	83.1	16.9	100
Total	71.9	28.1	100

Table 6.9-25 CS building survey range location and structural condition

Site position (%)	Very good	Good	Fair	Poor	Total
Farmstead	22.2	50.0	22.2	5.6	100
Outfarm	5.6	61.1	33.3	0.0	100
Isolated single building	15.6	59.4	21.9	3.1	100
Total	20.2	52.2	22.7	4.9	100

Table 6.9-26 ALT range location and structural condition

ALT (%)	Very good	Good	Fair	Poor	Total
Chalk & Limestone Mixed	17.1	65.9	14.6	2.4	100
Eastern Arable	24.2	51.5	13.6	10.6	100
Upland & Upland Fringe	19.5	52.4	24.9	3.2	100
Western Mixed	18.5	47.7	29.2	4.6	100
Total	20.2	52.2	22.7	4.9	100

Table 6.9-27 CS scheme status and dominant roof materials

Scheme status (%)	Corr. iron	Modern sheeting	Tile	Slate	Stone slate	Thatch	Other	Total
In scheme	9.1	7.0	30.6	25.9	24.4	0.3	2.8	100
Not in scheme	17.4	8.7	43.5	23.9	6.5	0.0	0.0	100
Total	10.0	7.2	31.9	25.7	22.5	0.2	2.5	100

Table 6.9-28 CS scheme status and size of building ranges

Scheme status	Single storey	Storeyed	Single storey & storeyed	Total
In scheme	40.8	28.4	30.8	100
Not in scheme	80.0	8.9	11.1	100
Total	44.9	26.4	28.7	100

Table 6.9-29 CS scheme status and presence of external special features

Scheme status (%)	Yes	No	Total
In scheme	71.8	28.2	100
Not in scheme	39.5	60.5	100
Total	68.3	31.7	100

Table 6.9-30 CS scheme status and presence of internal special features

Scheme status (%)	Yes	No	Total
In scheme	49.5	50.5	100
Not in scheme	16.0	84.0	100
Total	45.6	54.4	100

Table 6.9-31 CS scheme status and structural condition

Scheme status (%)	Very good	Good	Fair	Poor	Total
In scheme	20.3	51.9	22.8	4.9	100
Not in scheme	41.3	41.3	15.2	2.2	100
Total	22.7	50.7	22.0	4.6	100

Table 6.9-32 CS building survey range location and evidence of maintenance work

Site location (%)	Yes	No	Total
Farmstead	92.3	7.7	100
Outfarm	87.5	12.5	100
Isolated single building	90.2	9.8	100
Total	91.7	8.3	100

Table 6.9-33 CS building survey range location and evidence of traditional material use in maintenance

Site location (%)	Yes	No	Total
Farmstead	91.6	8.4	100
Outfarm	86.7	13.3	100
Isolated single building	86.0	14.0	100
Total	90.3	9.7	100

Table 6.9-34 CS building survey range location and further maintenance work required

Site location (%)	Yes	No	Total
Farmstead	57.1	42.9	100
Outfarm	50.0	50.0	100
Isolated single building	62.3	37.7	100
Total	57.7	42.3	100

Table 6.9-35 Opportunities to enhance public benefits from CS sites

Opportunities	Frequency	(%)
Yes	66	28.8
No	124	54.1
Don't know	39	17.0
Total	229	100

Table 6.9-36 Type of public benefit enhancement on CS sites

Opportunities	Frequency	(%)
Restoration	29	43.9
Wildlife	27	40.9
Eligible buildings	8	12.1
Non-traditional maintenance	2	3
Total	66	100

6.10 Appendix 10 Section 3.6 data tables

Table 6.10-1 Relationship between BMPL use and condition of the building range

Condition of building	BMPL up to date (%)	BMPL not up to date (%)	BMPL not used (%)	Total (%)
Very good	27.1	20.0	22.9	24.2
Good	50.8	65.7	53.6	53.9
Fair	14.4	8.6	22.1	17.4
Poor	7.6	5.7	1.4	4.4
Total	100	100	100	100

Table 6.10-2 Relationship between BMPL use and evidence of maintenace work being undertaken

Evidence of maintenance work?	BMPL up to date (%)	BMPL not up to date (%)	BMPL not used (%)	Total (%)
Yes	95.5	91.4	82.2	88.7
No	4.5	8.6	17.8	11.3
Total	100	100	100	100