

# Final project report

## Cambridgeshire HER

Project No: ETAP4.6-HE-E2

Forestry Commission pilot project E: Insights from local historic environment services creating SHINE records

Version 3.0



## Control grid

Title:	Forestry Commission pilot project E: Insights from local historic environment services creating SHINE records: Final Project Report
FC Reference:	ETAP4.6-HE-E2
Authors:	Sally Croft, Ruth Beckley, Kerry Hopper
Date of last revision:	04/04/2023
Version:	3.0
Summary of changes:	Revisions and minor edits

## Glossary

APGB	Aerial Photography for Great Britain
CHER	Cambridgeshire Historic Environment Record
CS	Countryside Stewardship
CHET	Cambridgeshire Historic Environment Team
Defra	Department for Environment Food and Rural Affairs
E.L.M	Environmental Land Management
EWCO	English Woodland Creation Offer
FC	Forestry Commission
GIS	Geographic Information System
HE	Historic England
HER	Historic Environment Record
HEFER	Historic Environment Farm Environment Record
HMAA	Heritage Management Advice Areas
LIDAR	Light Detection and Ranging
LHES	Local Historic Environment Services
NE	Natural England
SHINE	Selected Heritage Inventory for Natural England
RPA	Rural Payments Agency
ALGAO	Association of Local Government Archaeological Officers
HE	Historic England
HBSMR	Historic Buildings, Sites and Monuments Record

## Contents

Control grid.....	1
Glossary .....	1
List of figures and tables .....	3
Introduction .....	4
Timescale and products of project .....	4
(Stage 1) Methodology for selection of pilot study areas.....	5
(Stage 2) Review and enhancement of SHINE .....	8
Outcomes of SHINE enhancement .....	15
SHINE methodology and woodland creation.....	18
(Stage 3) Outcomes of critical review of SHINE methodology .....	22
Current SHINE Methodology instructions and guides .....	22
Recommendations for instructions and guides .....	22
The current SHINE Workflow procedure:.....	23
Recommendations on the current Workflow procedure.....	23
Current summary of a EWCO Consultation .....	25
EWCO Consultations.....	25
Recommendations on the Topology Standards.....	26
Recommendations for the Selection Criteria .....	27
SHINE Record format .....	28
Recommendations for the SHINE Record format .....	29
Upload Process.....	30
Heritage Management Advice Areas (HMAAs).....	31
Recommendations for HMAAs .....	32
Assessment of HEFER package.....	32
Lost Woodland Mapping.....	33
Outcomes of review of Low Risk Areas for Woodland Creation .....	39
Recommendations.....	44
Outcomes of Suitability for SHINE data for woodland creation .....	45
Woodland Creation advice and SHINE .....	45
Woodland Creation advice as a precursor to CS: EWCO application .....	46
Critical review of project for opportunities and successes .....	47
Appendix 1 .....	49

Appendix 2 .....	51
------------------	----

## List of figures and tables

Table 1: Estimated time to assess a monument record and associated resources for suitability for SHINE, based on figures compiled by CHET 2011-12 .....	5
Figure 1: Huntingdonshire pilot study area. Aerial imagery as of 2013. ....	6
Figure 2: South Cambridgeshire pilot study area. Aerial imagery as of 2013.....	7
Table 2: Resources consulted for CS consultations .....	9
Figure 3: SHINE candidate status tool .....	10
Table 3: SHINE candidate status .....	10
Figure 4: Huntingdonshire SHINE before project E .....	11
Figure 5: Huntingdonshire SHINE after project E .....	12
Figure 6: South Cambridgeshire SHINE before project E .....	13
Figure 7: South Cambridgeshire SHINE after project E .....	14
Table 4: SHINE totals at each project stage.....	15
Figure 8: Huntingdonshire Ridge and furrow survival.....	16
Figure 9: South Cambridgeshire Ridge and Furrow survival .....	17
Figure 10: Huntingdonshire SHINE areas suitable for woodland creation.....	20
Figure 11: South Cambridgeshire SHINE areas suitable for woodland creation .....	21
Figure 12: Contents of a HEFER Package sent to the applicant.....	24
Figure 13: HBSMR SHINE record from the Designations Module.....	29
Table 5: Export data for SHINE.....	30
Figure 14: Creation of HMAA entries in the HEFER spreadsheet .....	31
Table 6: Area in hectares of recorded woodland .....	33
Figure 15: Huntingdonshire historic woodland origin.....	34
Figure 16: Huntingdonshire historic woodland survival .....	35
Figure 17: South Cambridgeshire historic woodland origin .....	37
Figure 18: South Cambridgeshire historic woodland survival.....	38
Figure 19: Huntingdonshire Low Risk Areas for Woodland Creation .....	40
Figure 20: Huntingdonshire Low Risk Areas with known archaeological excavation	41
Figure 21: South Cambridgeshire Low Risk Areas for Woodland Creation .....	42
Figure 22: South Cambridgeshire Low Risk Areas with Local Plan Priority zones ...	43
Figure 23: South Cambridgeshire Low Risk Areas with known archaeological excavation.....	44

## Introduction

The Forestry Commission currently have a three-year project underway seeking to develop a national historic environment dataset for woodland creation in order to:

- Increase confidence and certainty for woodland creation proposers
- Support faster assessment of woodland creation proposals
- Reduce the number of unsuitable woodland creation proposals
- Improve Forestry Commission customer service
- Support delivery against government targets
- Address an identified barrier to woodland creation

The current preferred method to deliver this is to adopt an approach similar to the SHINE methodology and standards currently in use for Countryside Stewardship (CS) schemes. The FC's stated aim was to make a national historic environment dataset available to woodland proposers at an earlier stage.

In discussions with the Association of Local Government Archaeological Officers (ALGAO), Natural England (NE) and Historic England (HE) it was proposed that amending SHINE may be a workable solution to these concerns and a number of projects were initiated by the Forestry Commission to investigate this proposal. Cambridgeshire County Council Historic Environment Team (CHET) successfully bid alongside four other local historic environment services (LHES) to produce pilot projects as part of Project E: Insights from local historic environment services creating SHINE records. This and Project F (looking at the experience of SHINE by both users and creators) have been undertaken to inform the Forestry Commission as to whether SHINE is an appropriate avenue to address these sector-wide concerns.

CHET opted to create a total of 4 outputs: an updated SHINE dataset for the pilot study areas (uploaded to the national SHINE portal) with an enhanced Low Risk Areas for Woodland Creation GIS layer alongside the project report and presentations. An assessment of the Low Risk Areas for Woodland Creation GIS layer was considered an aspect of added value in the project design.

In order to achieve this, a stage and task list was established and pilot study areas chosen. The Gantt chart and full list of products can be found in appendix 1.

## Timescale and products of project

The project was undertaken over 30 days between November 2022 and March 2023.

During that time, three review meetings were held with Tom Sunley/FC and three highlight reports submitted.

## (Stage 1) Methodology for selection of pilot study areas

The pilot study areas were chosen based on a number of factors.

Utilising the datasets listed in Appendix 2, two pilot study areas were selected; one in the relatively quiet area of Huntingdonshire where upstanding earthworks are a dominant heritage asset and one in South Cambridgeshire where cropmark-evidenced heritage assets are more prolific.

Both include a mixture of different landscape types and heritage assets. Both pilot study areas overlap with the FC Low Risk Areas for Woodland Creation mapping layer but importantly allow for the assessment of land not currently covered to ensure parity. The potential to inform how this layer could be enhanced through the use of heritage data was also noted.

The benefit of reviewing complete blocks of land meant that true consistency in the methodology could be maintained and would allow a much more accurate assessment of time required to review the entire county.

Two 10km square areas were selected. The size was determined by the time available to the project staff (for project completion by March 2023 and the available capacity within the Cambridgeshire Historic Environment Team). The rate at which monument records could be reviewed and enhanced was based on the NE funded, time-restricted SHINE creation projects undertaken by the CHER between 2011 and 2012. During that phase of mass SHINE creation, statistics were recorded for the amount of time taken to assess and create a SHINE record based on the candidate status assigned via the HBSMR application's 'candidate status tool'. CHER calculations from that time suggested a set amount of time per record was required to assess each monument record, depending upon the candidate status it had been assigned.

Candidate status	Time to assess available datasets and create SHINE
Unlikely	1 minute
Possible	3 minutes
Probable	8 minutes

*Table 1: Estimated time to assess a monument record and associated resources for suitability for SHINE, based on figures compiled by CHET 2011-12*

Whilst these figures were found to be broadly accurate during this project, assessing them for accuracy wasn't part of the original project design, so no detailed record was made during the project. These figures did also not account for the creation of new SHINE records from newly found sources (not already assigned a monument record in the CHER), for which we had no previous data to compare with.



Scale (at A4) 1:53534

14-02-2023

© Crown Copyright and database rights 2022 OS100023205

*Figure 1: Huntingdonshire pilot study area. Aerial imagery as of 2013.*

Pilot Study Area 1 (Figure 1) is located northwest of Huntingdon, it primarily consists of a mixture of grassland and woodland and is characterised as more upland than the majority of Cambridgeshire. There are generally lower development pressures in Huntingdonshire district, however, there have been major infrastructure projects implemented along the A14 near Brampton as well as major development at Alconbury Weald.



Scale (at A4) 1:53534

14-02-2023

© Crown Copyright and database rights 2022 OS100023205

*Figure 2: South Cambridgeshire pilot study area. Aerial imagery as of 2013.*

Pilot Study Area 2 (Figure 2) is located northwest of Cambridge, it primarily consists of arable land and woodland is less frequent. This landscape is close to the fen edge and is generally flat. There is significant development pressure from a number of sources including residential at Longstanton and Bar Hill, extraction north of Fenstanton and Swavesey and infrastructure along the A14 and A428.



## (Stage 2) Review and enhancement of SHINE

During this project stage, existing SHINE records were reviewed and enhanced. The current workflow guidelines for SHINE methodology states that the ALGAO Advisor should ‘*check for both newly discovered historic environment features which meet the SHINE selection criteria, and existing HER records*’. It does not define the evidence base for identifying new features in order to allow flexibility across local authorities and for the acquisition of new resources. CHET have access to a suite of resources available ‘in house’ as well as publicly accessible information (Table 2).

Source	Description	Consultation status
HBSMR	HBSMR is a software package produced by IDOX and used by approximately 90% of English HERs to hold the core of the HER. The evidence base for each record is detailed and varied.	Always consulted on CS Consultations
Aerial Imagery 1999-2013	Cambridgeshire County Council own vertical aerial imagery taken in 1999, 2003, c.2007 and 2013. They are available directly within GIS and represent complete coverage across the county.	Always consulted on CS Consultations
Aerial Imagery c.2022 WMS	Vertical aerial imagery available under APGB licence. However, it should be noted that while there is complete coverage, it is a composite layer of information taken from approximately 20 years of flights.	Always consulted on CS Consultations
LiDAR data	Available as open source downloadable data from the Environment Agency. CHET has almost complete coverage for LiDAR with the exception of a small area in the north of the county. However, it should be noted that while there is complete coverage, it is a composite layer of information taken from approximately 20 years of flights.	Always consulted on CS Consultations
Google Earth Pro App	Free to download application that contains a history of vertical aerial imagery from 1945 to present day. Some layers are composite and the 1945 layer is partial only. Access to this application can vary according to individual local authority IT policies.	Always consulted on CS Consultations
Historic England aerial photograph website <sup>1</sup>	Publicly accessible website providing access to Historic England’s archive of vertical and oblique aerial imagery. While an excellent resource it is not complete coverage.	Consulted where relevant
Historic maps	Cambridgeshire County Council own digital versions of the Ordnance Survey First, Second and Third edition maps. Coverage is not complete.	Consulted where relevant

<sup>1</sup> <https://historicengland.org.uk/images-books/archive/collections/aerial-photos/>

National Library of Scotland website <sup>2</sup>	Publicly accessible website providing access to historic maps. A useful addition where CHET does not have coverage, however, it should be noted that the OS 25in layer is a composite of the First-Third edition maps.	Consulted where relevant
Britain from Above website <sup>3</sup>	Publicly accessible website providing access to the Aerofilms collection of oblique aerial imagers. While an excellent resource it is not complete coverage.	Consulted where relevant
Cambridge Air Photos website <sup>4</sup>	Publicly accessible website providing access to the Cambridge University Collection of Aerial Photography (CUCAP). While a useful resource only a fraction of the collection is available online.	Consulted where relevant
Cropmark Transcription data	Area based projects usually funded by Historic England to examine and map in detail heritage assets visible on aerial imagery. In Cambridgeshire we have partial coverage from three Historic England funded projects and two Cambridgeshire datasets. The information associated with each 'site' identified during the project has been accessioned into the HER.	Consulted where relevant

Table 2: Resources consulted for CS consultations

The HBSMR application contains a process to automate assigning a SHINE candidate status to all monument records. This tool has a series of steps that assigns a status to each Monument record based on the information held in each record.

<sup>2</sup> <https://maps.nls.uk/>

<sup>3</sup> <https://britainfromabove.org.uk/en>

<sup>4</sup> <https://www.cambridgeairphotos.com/>

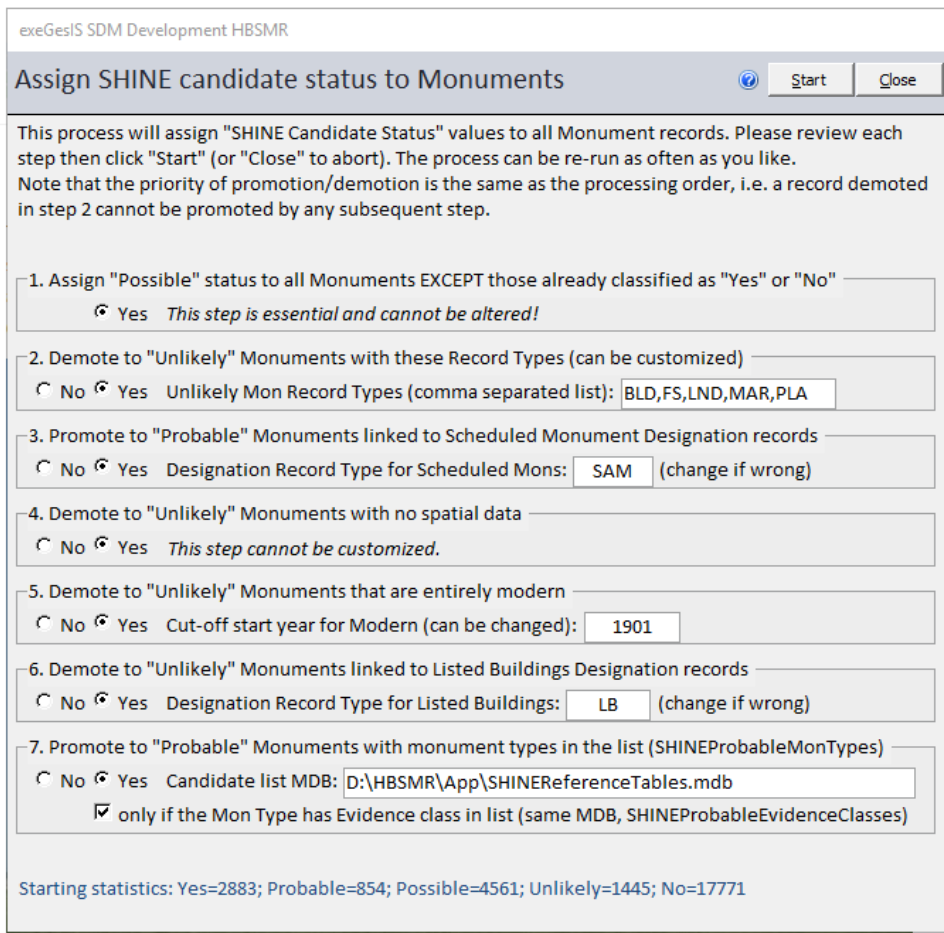


Figure 3: SHINE candidate status tool

Candidate Status	Description
Yes	SHINE record created
Probable	There is a high potential for this record to meet the criteria for inclusion in the SHINE dataset based on monument type, evidence base
Possible	There is a moderate potential for this record to meet the criteria for inclusion in the SHINE dataset based on monument type, evidence base. This record may meet some, but not all criteria.
Unlikely	There is some potential for this record to meet the criteria for inclusion in the SHINE dataset. Revision of the evidence is essential
No	This record is not suitable for inclusion in the SHINE dataset. This is based on record type, monument type, period and evidence base.

Table 3: SHINE candidate status

Monument records that had already been assigned as not suitable (Monument record SHINE status = No) were also reviewed as part of the project in order to identify any monument records that could be enhanced with new information. Monument records that do not fit the criteria were passed quickly, however, those that referred to cropmarks or earthworks from historic aerial imagery were reviewed.

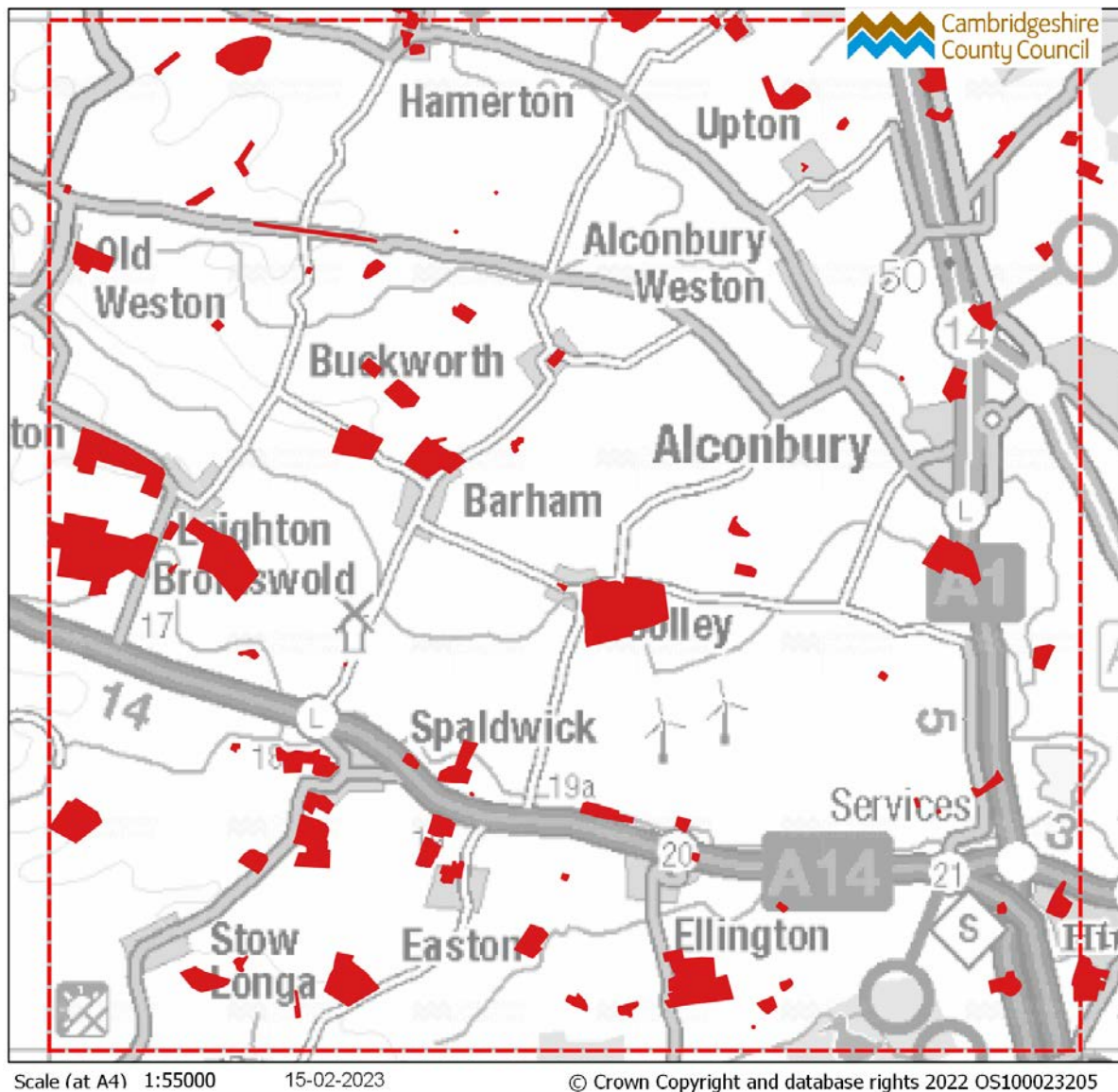


Figure 4: Huntingdonshire SHINE before project E

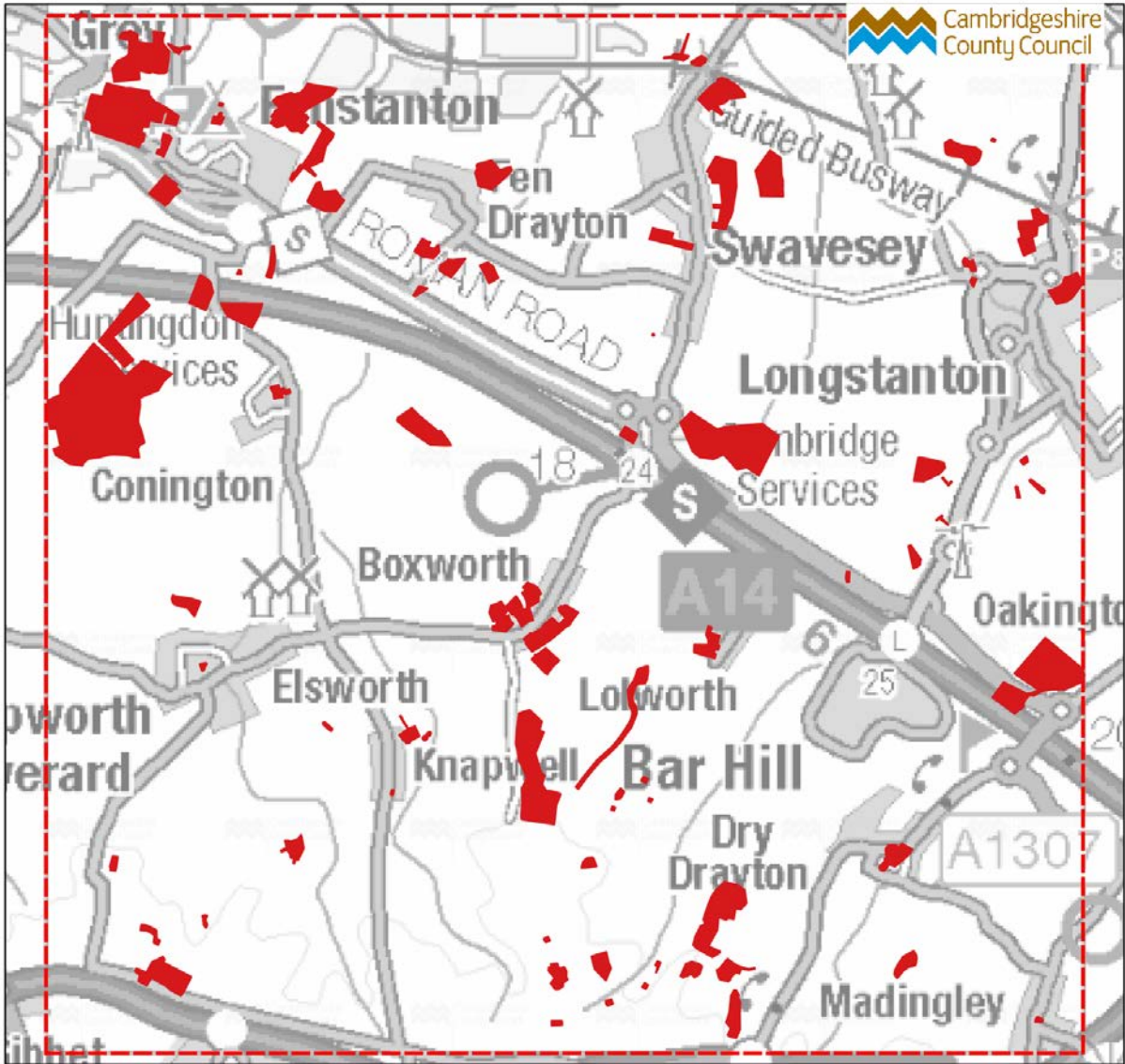
The Huntingdonshire pilot study area initially contained 381 monument records and a total of 86 SHINE records (Figure 4). A review of these records added a further 57 SHINE records (Figure 5). This significant increase was in part due to the relative lack of development in this area as well as the significant number of cropmark and earthwork-based records added (91 monument records) as a result of the NRHE to HER project. Of these 91 records, 52 led to the creation of a SHINE record.



Scale (at A4) 1:55000 15-02-2023 © Crown Copyright and database rights 2022 OS100023205

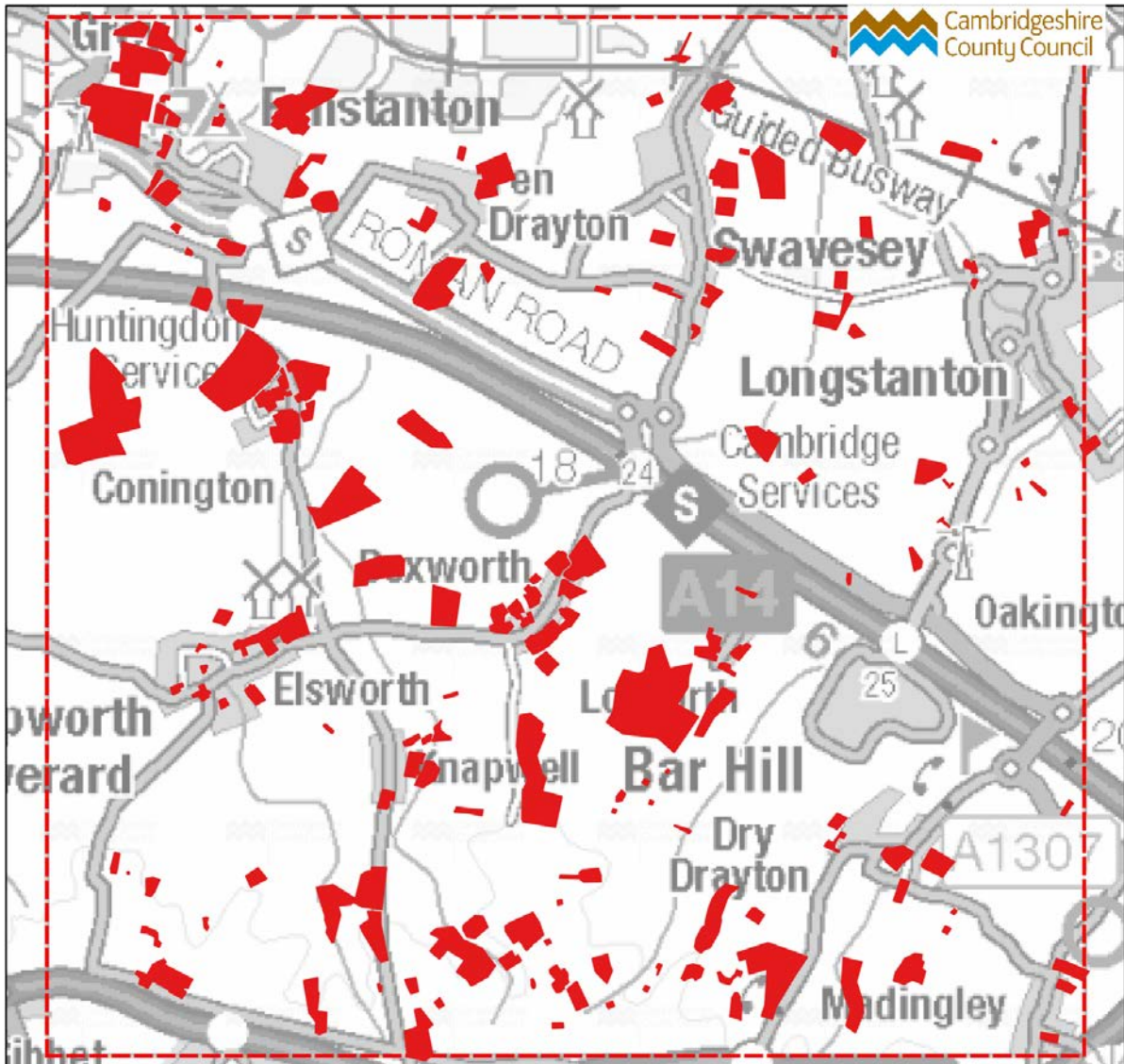
Figure 5: Huntingdonshire SHINE after project E

The South Cambridgeshire pilot study area contained 609 monument records and a total of 84 SHINE records (Figure 6) at the start of the project. A review of these records added a further 26 SHINE records (Figure 7). The NRHE to HER project (mostly completed by 2021) added 38 monument records to the HER in this area. From these records, only two were eligible under the current SHINE guidelines, the remainder included levelled post medieval features, extractive pits and field boundaries.



Scale (at A4) 1:55000      15-02-2023      © Crown Copyright and database rights 2022 OS100023205

Figure 6: South Cambridgeshire SHINE before project E



Scale (at A4) 1:55000 15-02-2023 © Crown Copyright and database rights 2022 OS100023205

Figure 7: South Cambridgeshire SHINE after project E

Reasons for a monument record to not be considered suitable to create a SHINE record for included:

- No longer visible on aerial imagery from 2000-2022
- Site fully excavated/developed
- Documentary only
- Structural only
- Findspot
- Nationally Designated site
- Non-agricultural land/within settlement envelope

- Poorly located/antiquarian HER record.
- Post medieval extractive pits
- Levelled earthworks
- Post medieval furlong boundaries/field boundaries

## Outcomes of SHINE enhancement

Project Area	SHINE at Start	SHINE after Stage 2.1	SHINE added during Stage 2.2	TOTAL
South Cambridgeshire	84	70	95	165
Huntingdonshire	86	77	129	206

*Table 4: SHINE totals at each project stage*

A significant factor in new record creation was the availability of an extensive layer of ridge and furrow across the county. A recent review of known ridge and furrow in the county conducted by CHER staff resulted in the creation of a polygon-based review of all ridge and furrow resulting in the creation of up to three HER records per parish of former (no longer visible), cropmark and earthwork remains of ridge and furrow. This enabled the pilot project to rapidly enhance the SHINE dataset for upstanding earthwork remains and substantive blocks of cropmark remains of ridge and furrow. Access to a single layer of the current status of ridge and furrow in Cambridgeshire has a number of benefits including the ability to provide current advice on woodland creation proposals in a timely fashion.

- Ridge and furrow is a high priority for preservation in Cambridgeshire due to its declining presence. Ridge and furrow accounted for 67 new SHINE records in each pilot study area.
- All existing SHINE records were edited in some form, either to meet polygonization requirements or to include new heritage assets.

A total of 24 records were revoked across the two pilot study areas, reasons for this included:

- Not currently visible on aerial imagery or LiDAR between 2000-2022 (19 records)
- Feature excavated prior to development (5 records)

The Huntingdonshire pilot study area (Figure 8) identified more extensive earthwork remains with some cropmark remains of ridge and furrow. For South Cambridgeshire



(Figure 9) there was a far greater amount of former ridge and furrow, considered no longer extant, with a diminished earthwork survival.

Overall, this stage confirmed that the estimated time per monument record (see table 1) was still broadly accurate despite there being more reference material to assess

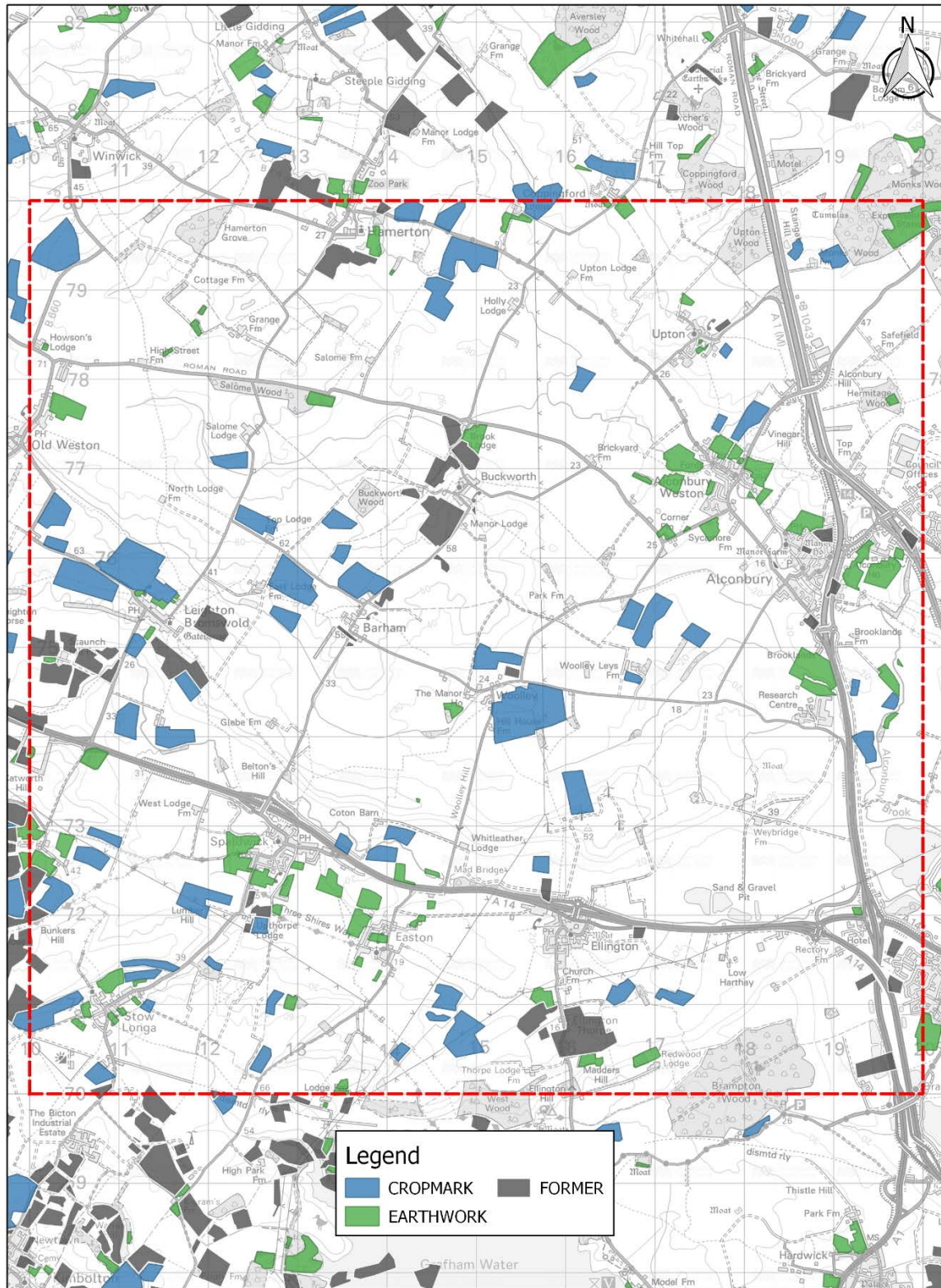


Figure 8: Huntingdonshire Ridge and furrow survival

(see Appendix 2) and the added stage of reviewing records already assigned as not suitable for SHINE.

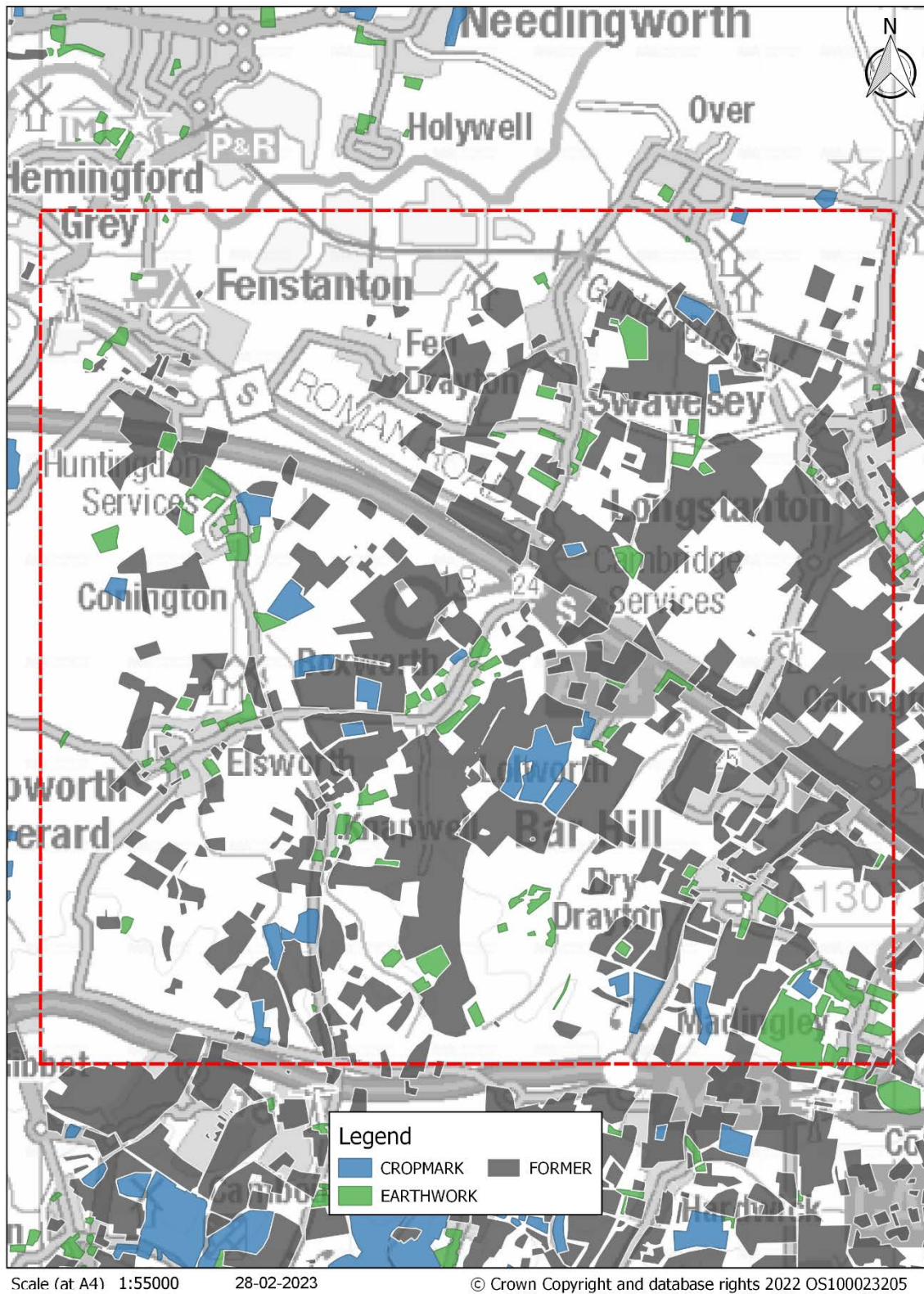


Figure 9: South Cambridgeshire Ridge and Furrow survival

## SHINE methodology and woodland creation

The final stage of Task 2.2 involved a review and enhancement of SHINE from additional data sources, (Table 2). In part due to the presence of current AIM data and in part due to the intensity of development across both areas, just four new monument records were added, one in the South Cambridgeshire and three in Huntingdonshire.

Task 2.3 involved the review of all SHINE records in pilot study area. The primary aim of this review was to see whether any existing SHINE records would be suitable for woodland creation schemes. Each record was reviewed in terms of its form, character, setting and significance. At present this information is recorded in an unused field in the HBSMR application SHINE record.

Form: Earthwork remains are considered *more* significant as they represent, features that are better preserved. However, there is also a significant variation in survival and extent of cropmark features.

Character:

Significance: Each SHINE record is assigned a significance under the current criteria.

- High significance represents rare, unusual, well preserved heritage assets that can be considered a priority for preservation at a local, regional or national level.
- Medium significance represents intact, extensive remains of heritage assets that should be considered a priority for preservation at a local, regional or national level.
- Low significance represents fragmentary, or uncertain remains of heritage assets, they can include more recent features of a post medieval date. They should be considered a priority for preservation at a local or regional level.

Of the 371 SHINE records in the two pilot study areas, 49 would be considered acceptable for woodland creation schemes. In the Huntingdonshire pilot study area ([Figure 10](#)) there are 34 SHINE records that could be considered acceptable for woodland creation and in the South Cambridgeshire area ([Figure 11](#)) there are 15 SHINE records. These records meet the criteria for SHINE creation, however, an option for woodland creation could be incorporated into the SHINE Portal 'Heritage Management Advice Areas' (HMAA) recommendations.

Records that fall under this category consist of

- Cropmark remains of ridge and furrow

In Cambridgeshire, ridge and furrow is considered a high priority for preservation. Based on the known extent of ridge and furrow in the county, approximately 64% has been lost since the 1940s and therefore usually scores high on significance. However,

small, poorly preserved or post medieval areas of earthwork remains, or cropmark remains of ridge and furrow would be considered acceptable for woodland planting.

- Post medieval field boundaries and/or enclosures

A small number of the SHINE records consisted of post medieval field boundaries and levelled enclosures. Due to their poor preservation, age and isolation they would be considered acceptable for woodland planting.

Following this phase; it was the conclusion that it is challenging to define a single method that works for agri environment and woodland creation options. Every record still needed to be reviewed by a LHES officer in order to determine whether it was appropriate, generic judgements could be drawn, but regional and local variation still applies.

The current recommendations are based on the SHINE methodology and option availability under Countryside Stewardship as the precise details of Environmental Land Management (E.L.M) currently remains unknown, however, it is understood that future EWCO applications will be progressed as an option under E.L.M Countryside Stewardship/Countryside Stewardship Plus from 2025. All recommendations are subject to changes dependant on the outcomes of E.L.M.



Figure 10: Huntingdonshire SHINE areas suitable for woodland creation



Figure 3: South Cambridgeshire SHINE areas suitable for woodland creation

## (Stage 3) Outcomes of critical review of SHINE methodology

### Current SHINE Methodology instructions and guides

There are three principal documents available to HERs to assist them in SHINE creation, all are available to download on the [SHINE Portal](#). Although produced at different times, their content is largely still applicable under the current SHINE process.

- SHINE HER Workflow Guidelines (Revised for Countryside Stewardship)<sup>5</sup>

The last significant amendments to this document were undertaken in 2018. It describes how an ALGAO officer should work through the process of responding to a Historic Environment Farm Environment Record (HEFER) consultation request.

- Completing a HEFER consultation request for HERs<sup>6</sup>

A presentation created in 2016 by Exegesis SDM (now part of IDOX group). This provides a visual step-by-step guide to the workflow process.

- SHINE GIS polygon Standards<sup>7</sup>

A technical guidance produced in 2009, This gave visual examples of the topological rules under SHINE.

### Recommendations for instructions and guides

A thorough review of all three documents and publication of updated versions (with clear revision dates) would ensure the principles outlined are still applicable and anyone new to creating or managing SHINE data would be able to confidently do so.

---

<sup>5</sup>

[https://www.algao.org.uk/sites/default/files/documents/SHINE\\_HER\\_Workflow\\_Guidelines\\_2018\\_v1.4.pdf](https://www.algao.org.uk/sites/default/files/documents/SHINE_HER_Workflow_Guidelines_2018_v1.4.pdf)

<sup>6</sup>

[https://www.algao.org.uk/sites/default/files/documents/Completing\\_a\\_HEFER\\_consultation\\_request\\_for\\_HERs%2B2016%2Bv.1.1.pdf](https://www.algao.org.uk/sites/default/files/documents/Completing_a_HEFER_consultation_request_for_HERs%2B2016%2Bv.1.1.pdf)

<sup>7</sup>

<https://www.algao.org.uk/sites/default/files/documents/SHINE%2BGIS%2BPolygon%2BStandards%2BHES%2Bv1.1%2B2009.pdf>

## The current SHINE Workflow procedure:

A brief summary of the current workflow procedure is as follows.

1. Consultation triggered by HEFER consultation email from SHINE Portal for Mid Tier with designated heritage assets and High Tier applications.
2. Existing HER and SHINE records are compared to the current SHINE selection criteria. To qualify, the heritage asset must be *substantive, verifiable* and of known character to the extent that it is *closely mappable*.
  - If Yes. Then SHINE record and polygon created according to polygon standards and Best Practice Guide.
  - If No. No SHINE record created
3. Review of new and backlog HER information for potential new HER records with SHINE potential.
  - If Yes. Then HER and SHINE record and polygon created according to polygon standards and Best Practice Guide.
  - If No. No SHINE record created
4. Export SHINE dataset in csv format in HBSMR
5. Upload to SHINE Portal
6. For High Tier applications HMAA polygons are created on the portal. This step comprises removal of the existing polygons and creating new ones.
7. Advice text and CHER reference number added to Portal consultation page and record completed.
8. HEFER package created and sent to applicant.

## Recommendations on the current Workflow procedure.

SHINE creation is largely dependent on the consultation by an applicant, with only the areas put forward for stewardship being subject to review. Mid Tier applications with no designated heritage assets do not trigger a consultation as a result of a revision to the consultation procedure by the Rural Payments Agency (RPA) in 2018. This means that the dataset gets distorted significantly, as exhibited with our two pilot study areas where SHINE records more than doubled in both cases. The reactive nature of the SHINE dataset remains a fundamental challenge.

Creation of HMAA polygons via the SHINE portal can be challenging. It can be a very slow process to create each record as a result of slow load times and digitisation can often be complicated. A thorough review of the current method for HMAA creation is recommended, with potential solutions including the inclusion of advice within the SHINE record or by creating HMAAs at the HER level, with subsequent uploading to the portal, in a similar way to the current SHINE dataset.



Ultimately the SHINE dataset would become obsolete without sufficient time and financial resource. The value of the SHINE dataset is intrinsically linked to the considerable time and financial resource already invested into the scheme by LHES officers, Historic England and Defra. While the current process is dependent on agri environment schemes, alternative models of reviewing and enhancing the data could improve confidence in it.

Area specific enhancement could be derived from new AIM projects; however, this would be partial enhancement only.

At this time of this project, CHET had already completed the NRHE to HER project, however, it was clear that this was of great benefit, and furthermore an example of the future potential opportunities for combining or interlinking enhancement of SHINE with NRHE to HER projects in other HERs as they embark upon them.

HEFER Consultations begin with a farm holding that is assessed in its entirety. SHINE is created on the basis of what heritage assets can be protected by any available CS options; these assets are then added to the SHINE dataset. Consultations are essentially speculative as the applicant won't choose which options to consider until after their consultations are returned. The HEFER package provides a series of SHINE extents that highlight both opportunities and constraints for the applicant. Advice is a second step only provided on High Tier applications where there are specific heritage options available.

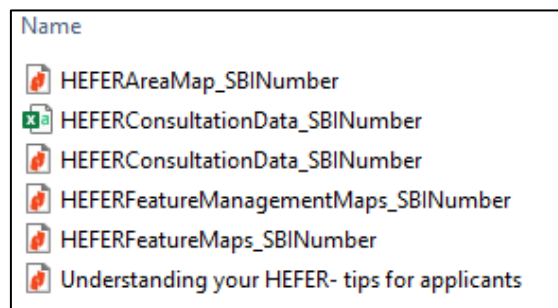


Figure 4: Contents of a HEFER Package sent to the applicant

## Current summary of a EWCO Consultation

1. Consultation received by LHES via direct email from applicant or agent. Applicant supplies specific area for woodland creation.
2. Area reviewed by LHES. To be acceptable for woodland creation the area must be:
  - a. EITHER absent of **known** heritage assets OR contain heritage assets of low significance such as findspots, modern features, documentary, or poorly located features. Essentially the opposite of under SHINE.
  - b. Previous archaeological evaluation in and around the area would also be considered. This is also not part of the SHINE process and is something achievable on a small scale but not at a larger scale.
  - c. Most LHES will also consider a predefined area around the woodland scheme in order to consider setting, for example a 200m buffer. Heritage assets in this area would not prohibit woodland creation but would result in an advisement to the applicant.
3. LHES supplies a written response in the form of an email along with HER records and pdf plans illustrating the heritage assets present and any recommendations. The LHES may include in the written response a short summary of the heritage assets and their significance and a recommendation to:
  - a. Refuse the scheme
  - b. Revise the scheme with either exclusion zones or move to a similar location
  - c. Allow the scheme
4. Forestry Commission notifies the LHES of the proposal to check advice remains current.

## EWCO Consultations

Woodland consultations begin with the applicant submitting a specific area with only one purpose under consideration. They are looking for areas suitable for woodland creation or enhancement/restoration. The applicant is provided with HER data as well as advice in a single step.

An effective heritage consultation on woodland schemes is currently only in response to a direct enquiry or application including in the first instance, direct communication with the applicant an essential part of the process in determining what that advice should include. In many cases the advice is as important or integral to the HER data supplied. An evolved SHINE dataset could be part of future responses but only in tandem with advice given by LHES, under similar models of current communication.

EWCO applications submitted via the SHINE Portal would ideally replace the final notification stage by the Forestry Commission. These would need to be flagged as specifically for woodland creation so the LHES are aware of the purpose of the enquiry. This would in turn allow them to review the advice provided directly to the applicant.

A woodland specific package could supply selected SHINE records identified by the LHES that would be suitable for woodland creation and areas from the Low Risk Areas for Woodland Creation layer.

A potential alternative consultation would be to commission IDOX to create an 'in house' woodland package export similar to the HEFER package that can be produced in the HBSMR application. This could provide a selected dataset of HER records that would be relevant for woodland creation proposals using a similar process to the SHINE candidate status. A suite of information produced could include a report of the HER records and a map of their location.

### Recommendations on the Topology Standards

Some of the current standards are digitisation concepts that were relatively basic at the time of writing (c.2005), it is not possible to finish a record with an 'open' polygon, for example. The three most contentious standards, however, are the minimum size, minimum internal dimension and minimum gap between SHINE polygons. While it is best practice to record topology standards, it should be caveated with the need for creators of SHINE records to revisit the original credentials and core aims of what SHINE delivers, critically, the requirement for the SHINE record to benefit from management under agri environment schemes. SHINE is not intended to replicate the HER and the first question to be considered when reviewing a HER record is whether the asset *can* benefit from agri environment options. If, for example, the heritage asset in question meets all the other requirements but lies within a farmyard, commercial development or other area of land use where no CS options apply, it should **not** be considered for SHINE.

Although not a topology standard, the SHINE Best Practice Guide recommends that sites must be '*closely mappable – i.e., it must be possible to draw a polygon that closely defines the visible extents*'. It should be reiterated here this is best practice guidance and not a topology standard. It is intended to highlight the need to prioritise heritage features that can be polygonised (i.e., those with a physical presence either as structural remains, cropmarks or earthworks) and not those that have no known extent (i.e., documentary or poorly located heritage features).

Whilst the 'minimum size' and 'minimum internal dimension' rules are not a mandatory requirement of digitisation within the HER, the practical basis for these within SHINE – the ability for the applicant to apply viable, cost-effective CS options – is a reasonable one. SHINE should not be relied upon to provide an accurate and full understanding of a heritage asset; that information is stored in the relevant HER. Improving understanding of the functionality to link from the SHINE record metadata to its

relevant HER records available online, via the Heritage Gateway or the HER's own online platform would be welcomed. SHINE's primary intention is to provide the applicant with viable areas of heritage asset that can be protected under agri environment schemes.

#### Minimum Size

There are many heritage assets that are small, ranging from isolated ring ditches to ruined structures that might legitimately benefit from management under agri environment schemes. An element of practical consideration needs to be applied to these standards. If a polygon around a ring ditch does not meet the minimum size standard, a buffer is acceptable and should be encouraged irrespective of best practice advice on closely mappable features. It should be remembered that:

- SHINE records under 400m<sup>sq</sup> are not practical for the applicant in terms of agri environment management
- A buffered polygon also allows for the management of the immediate environments of the heritage asset so should be encouraged
- Simplifying the SHINE polygon can also go a long way towards resolving the minimum size issue

#### Minimum Width

Heritage assets come in all shapes and sizes and linear features are no exception. In considering a linear feature the space around should also be a factor in determining the size of a SHINE feature. While a road may be quite narrow, for example, the potential for associated heritage assets in the immediate area should also be considered. For Roman roads this would include berms and roadside ditches, for medieval holloways there are also the banks to consider. Field boundaries on their own should not be considered eligible for SHINE unless the field themselves are included.

#### Minimum gap between features

It is suggested that the minimum gap standard is either removed entirely or reduced to 5m as a maximum.

#### Recommendations for the Selection Criteria

The SHINE criteria as they stand cannot be considered contentious and features that may benefit from available options are primarily earthwork and cropmark features. Changes under E.L.M may affect what can and cannot not be considered.

Upstanding buildings should be removed or de-prioritised as they are no longer covered by existing options.

It is essential to review national training to ensure practice remains consistent across LHES.

## EWCO Consultations

Woodland schemes have an intrinsically different approach to agri environment schemes as LHES officers need to assess all the land parcels within the application with a specific target in mind – woodland creation – whereas under CS a variety of options must be considered and therefore generalisations must be made.

In assessing the appropriateness of existing SHINE data for woodland creation, there are data fields that would have direct relevance to the function of the dataset for woodland creation. For example, SHINE features with an above ground element could be translated directly into areas where woodland creation would not be appropriate. Within Cambridgeshire this would currently equate to 716 SHINE records not suitable for woodland creation. Equally, records with a high significance would also but not suitable for woodland creation, within Cambridgeshire this would currently be 147 records in the current dataset.

Conversely, 51 of the current records could be considered acceptable for woodland. These meet the criteria for SHINE, in that they represent substantive blocks of heritage assets that *may* benefit from options under CS but are considered of a lower significance. They almost exclusively relate to cropmark remains of ridge and furrow or post medieval field boundaries.

## SHINE Record format

The current SHINE record structure is intentionally basic with effectively three fields requiring completion (see below).

They are:

- **Name:** following the preferred naming style by NE, this should state ‘what period it is’ (Roman), ‘what it is’ (settlement activity) and ‘where it is’ (south of Matcham’s Bridge, Alconbury). This naming format is essential to describe to non heritage professionals the significance and location of the SHINE feature
- **Significance:** A dropdown list with three options that identify the significance of the heritage asset
- **Form:** A dropdown list with a number of options based on the predominant evidence type.

Figure 5: HBSMR SHINE record from the Designations Module

Within the HBSMR application, there is a module for Designations that can incorporate a number of different datasets including Historic England National Designation data, Local Designation data and SHINE. These are differentiated by the Record Type Field. The basic record type is very similar for each dataset but there are a number of fields that are configured depending on the Designation Record Type. The Designation Record for SHINE is currently limited to three fields but there is scope to activate further fields.

#### Recommendations for the SHINE Record format

New fields within the designation record could include:

**Advice.** Potential to include basic advice that could replace HMAAs. Options for this could include the addition of an Options tab that mirrors the tick box style of HMAAs. This would be reliant on being able to either create multiple polygons per record or adjacent SHINE records with no buffer between them to allow for different management types across an area. A default option of 'no detrimental harm' would be useful for all SHINE records that can then be altered where records are fall within Higher Tier or woodland specific consultations.

**Landuse.** Simple options of arable, woodland, grassland, water. This could be a simple dropdown field but should be optional.

**Reviewed:** While a date created is automatically populated, adding an ‘Reviewed by’ date could be useful for tracking when a record was last reviewed, it is important to differentiate between ‘last amended’ which would imply the record was altered, and a ‘reviewed by date’ which would denote a record that was checked but no alteration was required. The LHES officer may then be reassured they would not need to check that record again for some time.

## Upload Process

The upload process involves three basic steps

- Export the SHINE csv from HBSMR
- Upload the county dataset to the Portal
- Merge the county dataset to the Portal

The steps themselves are not time consuming or particularly problematic, the issues commonly seen with this process is rejections where data does not meet the polygon standards. It is possible to carry out topology checks in QGIS (and Esri, MapInfo) which could minimise the need to repeat this step, however, this will likely take longer. We have no recommendations for this part of the process.

The current csv export has the following fields. They are the only information transmitted into the HEFER package.

Unique ID	Name	Evidence	Significance	HG web page	Polygon data	Date of last edit
CB7849	Medieval village earthworks comprising house platforms and ditches, with medieval moated site to NE at Goodwin Manor Farm.	Above-ground feature(s)	Medium		GI data	06/09/2009 09:43

*Table 5: Export data for SHINE*

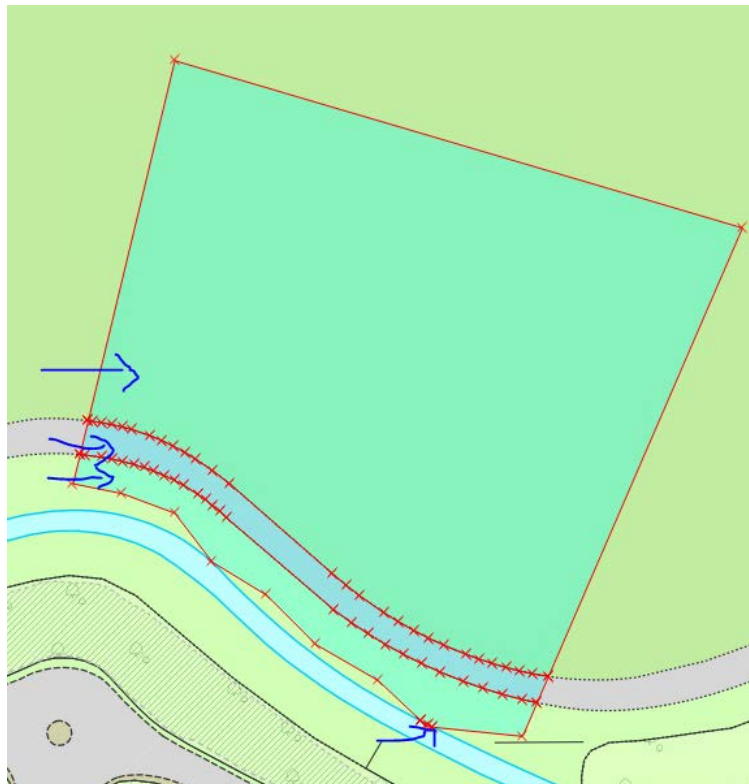
The Heritage Gateway webpage field should be autopopulated but this has been found to be intermittent. It may therefore be out of date or just not included. Creating an additional field to provide contact details for the relevant LHES would be useful.

## Heritage Management Advice Areas (HMAAs)

HMAAs are currently created for High Tier applications by the LHES officer within the SHINE portal. There are several known issues with this function. Firstly, it is a time-consuming process and the website can sometimes be slow to function. Secondly the layer itself can be complicated and liable to break. When it does break the only resolution is to request IDOX (who maintain the online portal) resolve the issue for the creator.

Another known issue is that the HMAA/SHINE polygons are divided according to their land parcels and MasterMap in order to create the advice spreadsheet for the HEFER package. It is recommended, that SHINE creators do not use trace tools in GIS packages to map to MasterMap. Every polygon in MasterMap will create a new entry in the consultation spreadsheets.

For example: This single SHINE polygon would create four HMAAs based on how it overlaps with MasterMap. This applies for even the smallest of mapping 'slivers'. In this case, the section of SHINE polygon covering the road and to the south of it could be deleted as the surviving cropmark it relates to is not visible south of the road.



*Figure 6: Creation of HMAA entries in the HEFER spreadsheet*

The current 'best fix solution is to delete any and all existing HMAA polygons in High Tier applications and produce again.



## Options under Mid Tier

In the current system there are a set of options with heritage benefit that are available to High Tier applications, which can be applied at the HMAA creation stage.

However, there are also a series of options under Mid Tier that **conflict** with SHINE features. This has resulted in an increase in post HEFER application enquiries direct from the applicant to the LHES on options we would not normally advise on. These enquiries are often time consuming and outside our current remit of advice under Countryside Stewardship.

## Recommendations for HMAAs

Primary recommendation is to replace the current HMAA process. Two options to deliver the same product would be:

HMAAs are created in the LHES HER system/GIS mapping and uploaded along with the SHINE dataset.

Option advice is included within the SHINE record; this could then allow LHES officers to include an option specifically for woodland creation.

## Options under Mid Tier

Post HEFER enquiries occur most often on those Mid Tier applications that did not involve direct consultation with the LHES (termed 'auto-completed HEFER responses'). In many cases, the SHINE asset may no longer be relevant as a result of development or refinement of the polygon, however, as the application has been completed without input from the LHES this cannot be altered. A proactive review of all existing SHINE features, effectively 'refreshing' the dataset would be a good first step to improving the baseline data.

## Assessment of HEFER package

Feedback from users of HEFER packages suggest that they are not easy to read, Some recommended improvements to the existing package within the current CS process have already been put forward<sup>8</sup> with some recommendations currently underway.

A new package specifically for woodland creation could be designed that is similar to the HEFER package, this would need to focus on SHINE records that might meet the criteria for woodland creation options (classified as low significance, are below ground remains, etc). It could also include additional information such as lost woodland mapping. The spreadsheet attachment that accompanies a HEFER package would

---

<sup>8</sup> Robertson, D. 2020. HEFERs and SHINE Data: Outcomes for the historic environment. [https://www.algao.org.uk/sites/default/files/documents/HEFERSHINE\\_report\\_v5.pdf](https://www.algao.org.uk/sites/default/files/documents/HEFERSHINE_report_v5.pdf)

not necessarily be relevant as applicants would only be considering woodland creation options.

## Lost Woodland Mapping

Stage 3.2 involved a review of the pilot study areas for additional areas of suitability for woodland creation. In this instance the project primarily focussed on lost woodland identified on historic maps as a method of identifying potential zones for woodland creation. The original methodology was to review the First Edition map from c.1885 for areas of woodland and compare to modern Ordnance Survey MasterMap data to see where woodland had been lost. This was altered slightly to accommodate the fact that there are patches within both pilot study areas where no First Edition map was currently available. The purpose of this exercise was to see whether it was viable to use historic maps to identify areas of former woodland that could be prioritised for replacement woodland creation. While it proved a useful exercise to highlight the limited loss of woodland in the two pilot study areas it would not be practical to extend to a county level.

Woodland recorded on the First (c.1885), Second (c.1901) and Third (c.1927) editions was mapped along with new woodland identified on MasterMap. This produced some interesting results.

Pilot study area	1 <sup>st</sup> Ed. OS	2 <sup>nd</sup> Ed. OS	3 <sup>rd</sup> Ed. OS	MasterMap
Huntingdonshire	321.6ha	40.2ha	17.ha	130.1ha
South Cambridgeshire	209.3ha	54ha	239.3ha	98.5ha

*Table 6: Area in hectares of recorded woodland*

In the Huntingdonshire pilot study area, woodland on the First Edition map primarily consisted of either large blocks of ancient semi natural woodland (Brampton Wood, Monks Wood, Calpher Wood) or small linear blocks of 19th century plantation (Figure 15). Woodland in existence before the 19th century consisted of c321.6ha of land. The Second Edition map added approximately 40.2ha of woodland as small blocks of mixed woodland or moorland and the Third Edition added just 17ha of woodland further small blocks of woodland, often as extensions to existing woodland. Between Third Edition and MasterMap, in contrast, numerous new woodland areas were created accounting for approximately 130.1ha of woodland usually as small linear blocks often sound barriers bordering the A1 and A14. A total of 509.9ha of woodland are recorded in this pilot study area of which c.66ha has been lost (Figure 16).

# Cambridgeshire Historic Environment Record



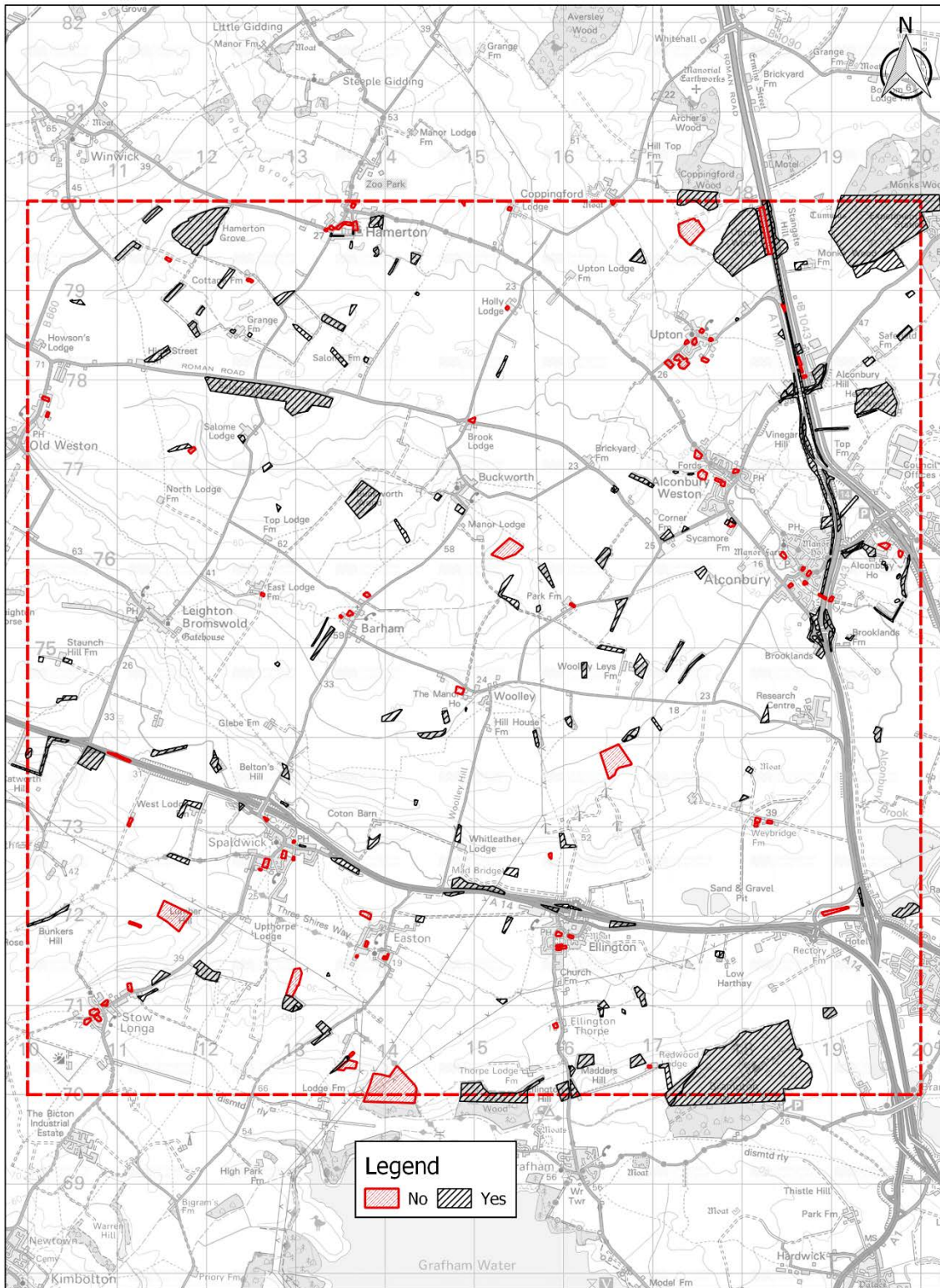
Scale (at A4) 1:53534

28-02-2023

© Crown Copyright and database rights 2022 OS100023205

Figure 7: Huntingdonshire historic woodland origin

# Cambridgeshire Historic Environment Record



Scale (at A4) 1:53534

28-02-2023

© Crown Copyright and database rights 2022 OS100023205

Figure 8: Huntingdonshire historic woodland survival

In the South Cambridgeshire pilot study area, woodland on the First Edition map is primarily associated with parkland at Madingley and Childerley and smaller areas at Knapwell, Caxton and Fenstanton (Figure 17). Woodland in existence before the 19th century consisted of 209.3ha. The Second Edition map added approximately 54ha of woodland as small blocks of plantation or small linear blocks. The Third Edition added 239.3ha of woodland primarily in the Longstanton area. Woodland added on the Third Edition primarily consisted of orchard and were largely planted as a commercial enterprise. Between the Third Edition and MasterMap, new woodland again appeared to form numerous small linear blocks often as sound barriers bordering the A14 and development at Bar Hill and accounted for 98.5ha of woodland. Of the total woodland recorded in South Cambridgeshire (598ha), approximately 238ha have been lost (Figure 18). While this is at face value a high proportion of loss, 188ha of that is associated with orchard crops.

# Cambridgeshire Historic Environment Record

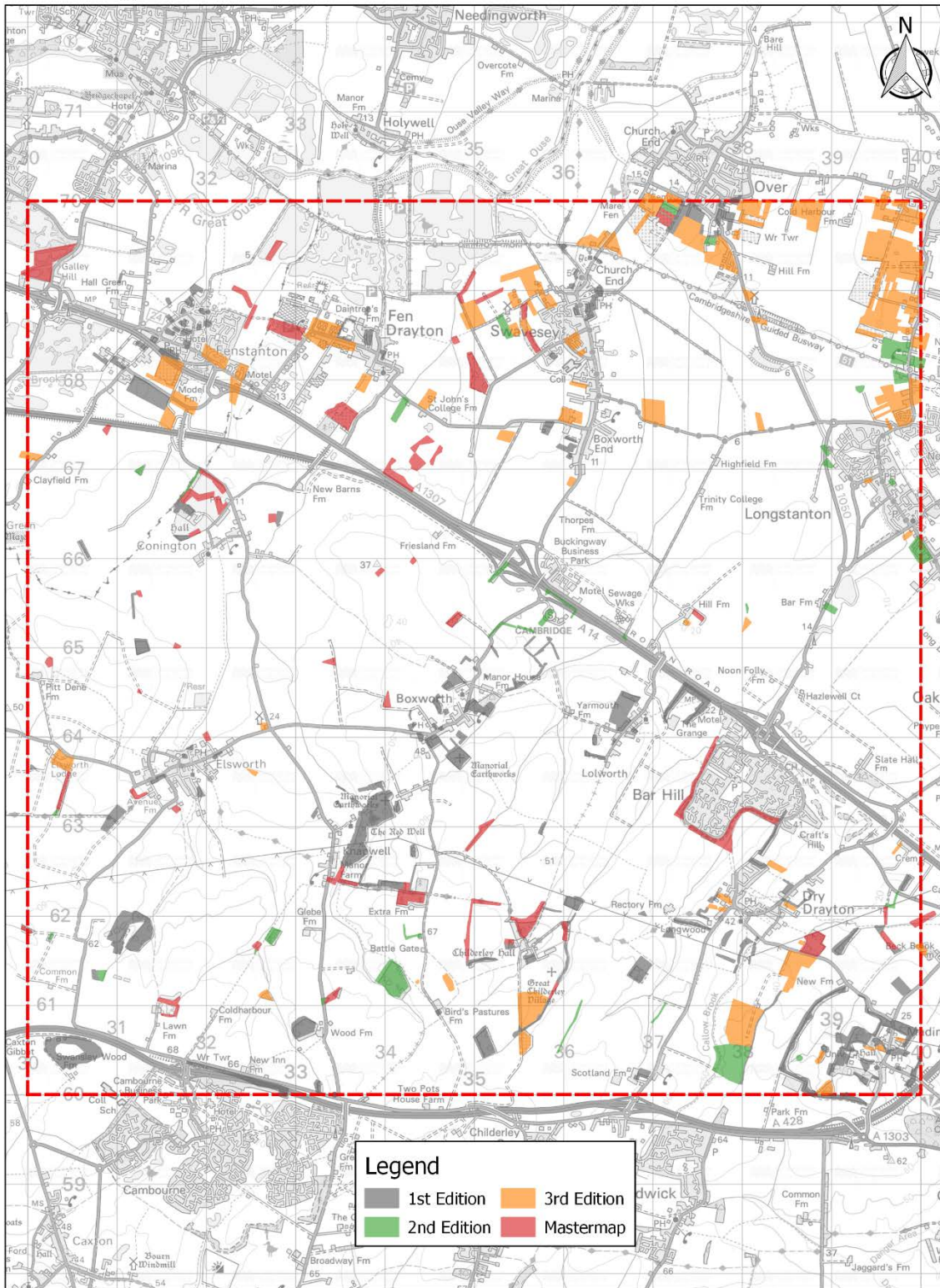


Figure 9: South Cambridgeshire historic woodland origin

# Cambridgeshire Historic Environment Record



Figure 10: South Cambridgeshire historic woodland survival

## Outcomes of review of Low Risk Areas for Woodland Creation

The Low Risk Areas for Woodland Creation forms part of the FC Sensitivity mapping available on their website (<https://www.forestergis.com/Apps/MapBrowser/>).

Effectively forming the lowest sensitivity level, the Low Risk Areas for Woodland Creation layer considers a number of natural environment factors including soil and land use type, natural environment designations and designated heritage assets. What it currently does not take into account is undesignated heritage assets nor other areas already allocated for conventional development.

As part of stage 3, CHET looked at how to refine the Low Risk Areas for Woodland Creation layer which in turn would affect the Sensitivity layer. This was considered an 'added value' element of the original project design.

Huntingdonshire District:

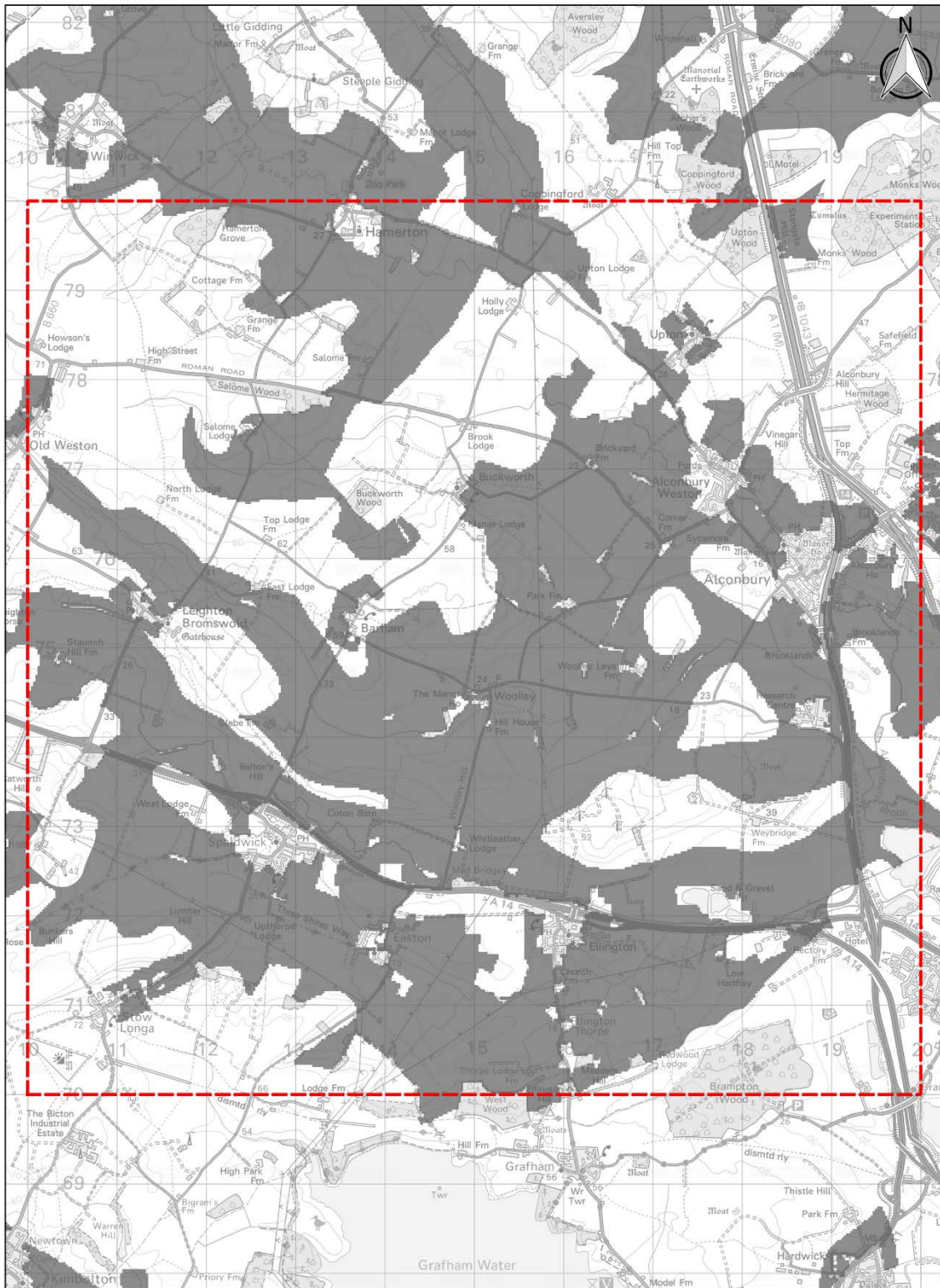
The pilot study area contains large areas identified within the Low Risk Areas for Woodland Creation layer (Figure 19). Current Local Plan priority areas are limited, with zones identified at Alconbury and Alconbury Weald only<sup>9</sup>, however these areas are already well underway for development purposes. Huntingdonshire District Council have recently announced that they will be creating a new Local Plan that may include new priority areas. Previous archaeological investigation is also very limited in this pilot study area (Figure 20), the majority are small areas within and around current settlement. The exception being around the A1/A14 interchange where a programme of investigation has identified significant archaeological remains that should be priority for protection.

---

<sup>9</sup> <https://www.huntingdonshire.gov.uk/media/3872/190516-final-adopted-local-plan-to-2036.pdf>



# Cambridgeshire Historic Environment Record



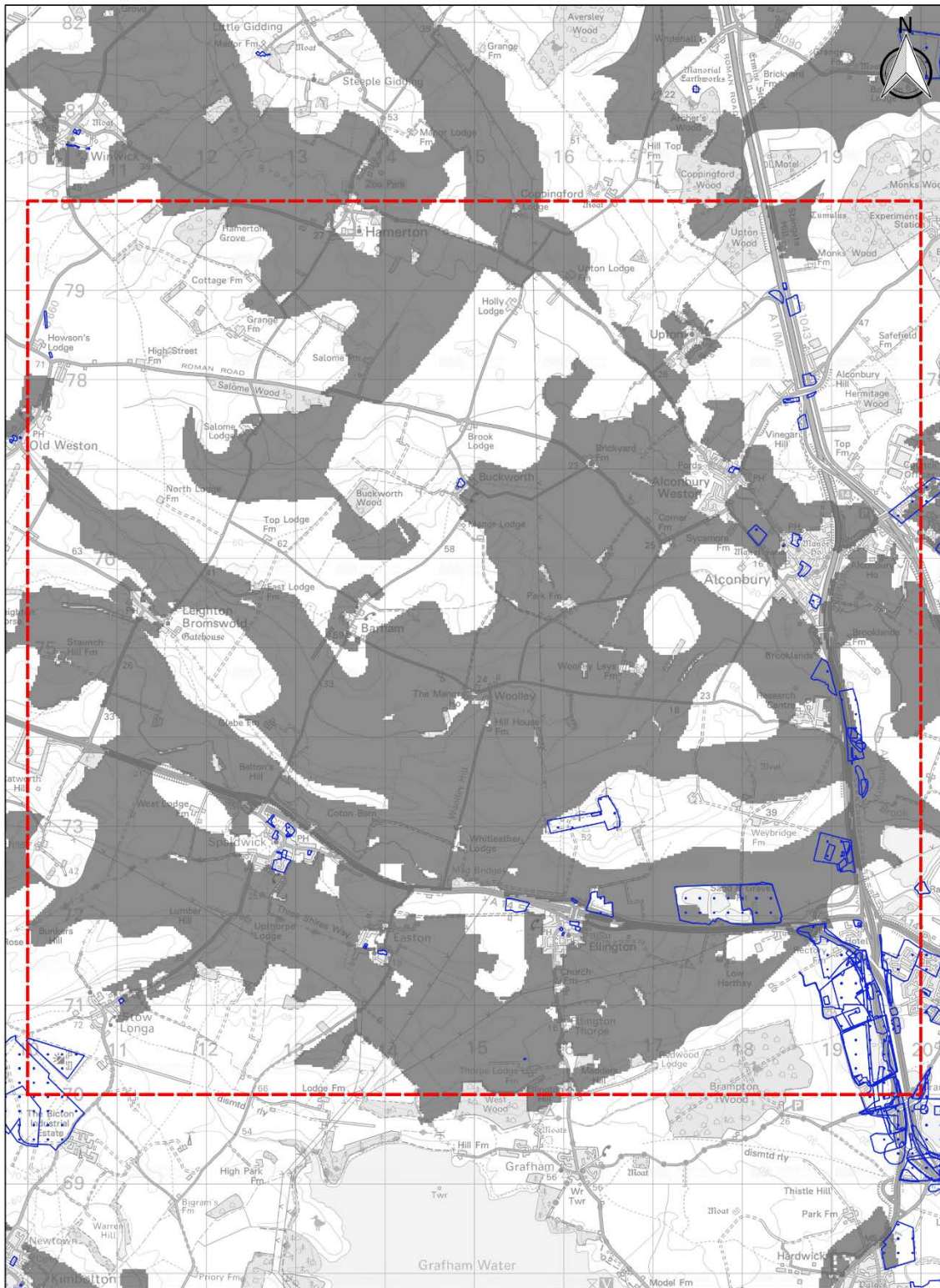
Scale (at A4) 1:53534

28-02-2023

© Crown Copyright and database rights 2022 OS100023205

Figure 11: Huntingdonshire Low Risk Areas for Woodland Creation

# Cambridgeshire Historic Environment Record



Scale (at A4) 1:53534

28-02-2023

© Crown Copyright and database rights 2022 OS100023205

Figure 12: Huntingdonshire Low Risk Areas with known archaeological excavation

## South Cambridgeshire District:

This pilot study area contains a broad area of the Low Risk Areas for Woodland Creation layer from Longstanton to Conington around the A14 (Figure 21). The South Cambridgeshire Local Plan published in 2018 contains a number of confirmed development sites such as the Northstowe major development programme and smaller allocation areas around existing settlement, the majority of which have already been taken forward to the planning stage. Comparing this layer to Local Plan<sup>10</sup> priority areas there are a number of zones where development pressure would likely take priority over woodland creation (Figure 22) and in these instances, any woodland areas would likely be part of specific masterplans. Finally, in considering undesignated heritage assets, the Low Risk Areas for Woodland Creation layer may be refined by considering areas of archaeological excavation. This will identify areas that may currently be underway for development and would likely not be appropriate for woodland creation (Figure 23).

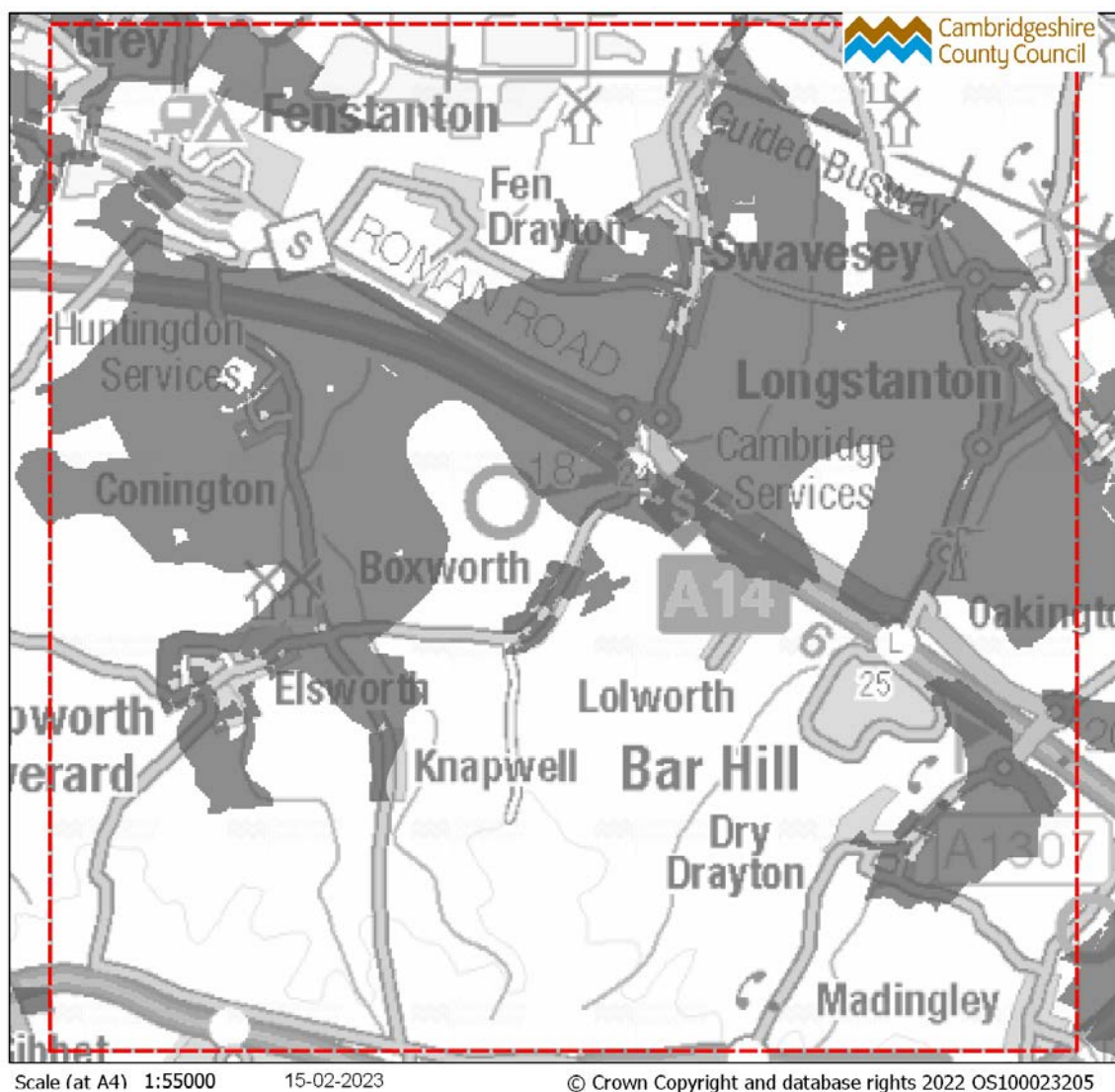
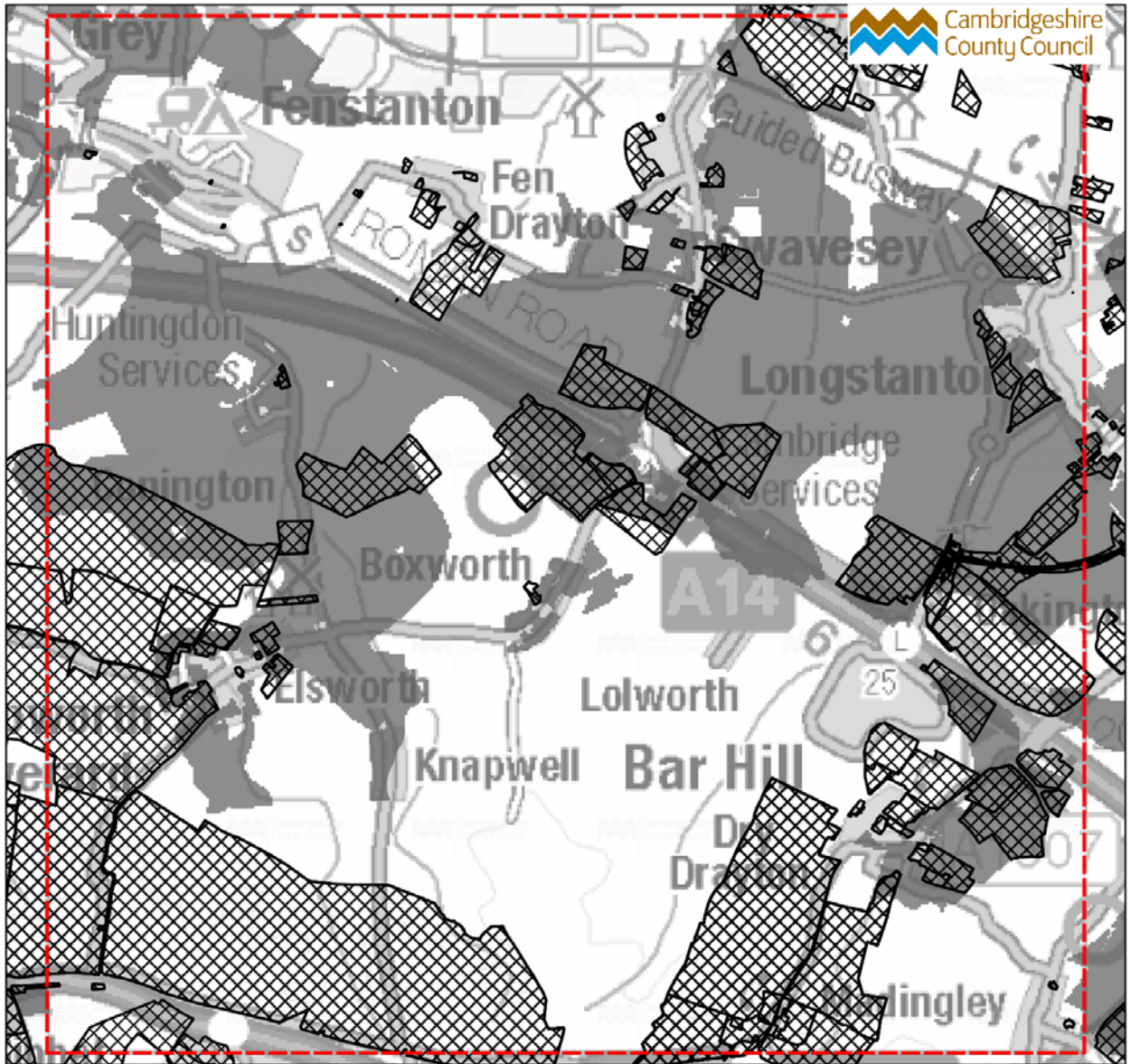


Figure 13: South Cambridgeshire Low Risk Areas for Woodland Creation

<sup>10</sup> <https://www.scambs.gov.uk/media/17793/south-cambridgeshire-adopted-local-plan-2018.pdf>



Scale (at A4) 1:55000

15-02-2023

© Crown Copyright and database rights 2022 OS100023205

Figure 14: South Cambridgeshire Low Risk Areas with Local Plan Priority zones



would not be a priority except as part of a larger development scheme such as infrastructure projects or major residential development. This process could be undertaken relatively quickly using a standard GIS and the data available on major developments.

In South Cambridgeshire District there are several known development areas around the A14 and immediately northwest of Cambridge, that includes Northstowe residential development and recent works to the A14 itself. Local Plan data can be requested from the relevant authorities (in this case South Cambridgeshire District Council) and used to remove areas of unsuitable land from both the Low Risk Areas for Woodland Creation layer and the Sensitivity mapping layers. The majority of the areas originally defined in the Local Plan in 2018 have been progressed to planning and/or construction stages.

## Outcomes of Suitability for SHINE data for woodland creation

### Woodland Creation advice and SHINE

In specific circumstances existing SHINE features could be acceptable for woodland planting, where the heritage asset is visible and could be damaged through deep ploughing and other agricultural practices, woodland planting with minimally invasive trees however could be acceptable. Such circumstances could include:

- Below ground remains of ridge and furrow or late post medieval ridge and furrow.
- SHINE assets with the category of low significance could also be considered for woodland schemes.
- SHINE assets with significant heritage assets can still be used for woodland schemes as an indicator of where not to plant.

In the original invitation to quote, the stated aim was to make a national historic environment dataset available to woodland proposers at an earlier stage. The drive behind this was to meet a number of concerns felt across the whole process of heritage advice:

- from applicants (to provide them with consistent and faster advice),
- from LHES (who have struggled with uncertainty over what response is required as well as the resource to deliver it once defined),
- from the Forestry Commission (to improve their customer service and address an identified barrier to woodland creation, reducing the number of inappropriate woodland proposals).

In discussions with ALGAO, NE and HE it was proposed that SHINE may be a workable solution to these concerns and a number of projects were initiated by the Forestry Commission to investigate this proposal. Five projects examining different

aspects of historic environment advice were commissioned along with a 6<sup>th</sup> project looking at the experience of SHINE by both users and creators. This project has identified known issues with SHINE as well new suggestions for alternative approaches that should be considered in more detail.

The central issue that cannot be overlooked is that SHINE's current purpose – to identify areas of archaeological interest where agri environment schemes could contribute to their preservation through certain options; is different to what the Forestry Commission require:

- SHINE identifies undesignated historic environment features that could benefit from management through agri-environment scheme delivery in England,
- The Forestry Commission want to know where non-designated heritage assets are, their importance/sensitivity and whether they have any capacity (or not) to be planted

While SHINE will be able to partially address advice on woodland creation there is a significant risk that it will not be able to fully address it.

### Woodland Creation advice as a precursor to CS: EWCO application

Creating a woodland specific historic environment dataset that is entirely separate from SHINE would require a significant outlay of resource, both in terms of officer time and financial resource, however, there is clearly a need to change the way we do things.

An alternative recommendation is to consider land holdings in a more similar method to how archaeological advice is given for Local Plans. This approach would mean the LHES officer could provide a single high level advice note on a number of areas. A suggested procedure would be as follows:

1. Applicant identifies areas where they would consider woodland creation within their landholdings.
2. Applicant submits a request for advice to the LHES. This should include a map of all land parcels they are considering for woodland creation. This would be a similar approach to submitting an application via NE for a HEFER consultation but importantly, it would be direct to the LHES.
3. The LHES considers the areas submitted and provides advice following the traffic light system:
  - a. Green land parcels would be considered NO OBJECTION. With the appropriate caveats on the advice, EWCO applications on green land parcels could progress directly to the FC who would then notify the LHES that the application has been received. The LHES would then have the opportunity to ensure the application falls in line with the original consultation but applications covering green areas could potentially be passed with no further comment.

- b. Orange land parcels would be considered CAUTION advised. The LHES would provide suitable evidence to support this decision based on known heritage assets as well as recommendations such as geophysical survey that might allow the application to go ahead. This could then allow the applicant time to consider whether they want to proceed With further investigation that may result in the areas moving to green or red.
- c. Red land parcels would be considered NOT APPROPRIATE. The LHES would provide suitable evidence to support this decision based on known heritage assets and the potential for significant archaeological features and they would not expect to be progressed to a formal application

A minimum response to the applicant by the HER would consist of

- a labelled and colour-based plan
- a covering letter identifying the key advice points
- caveats on the terms in which this advice is relevant for
- Evidence base from the HER that could include SHINE features

## Critical review of project for opportunities and successes

Despite the short timeframe of this project, we feel that the products and recommendations are a useful addition to the overall intentions of the wider initiatives being explored by the FC.

Revisiting some of these aspects would be of considerable merit; in particular to allow for more detailed technical discussions on how monument data could be assessed, how metadata could be revised and the SHINE data structure evolved. Equally, producing more accurate statistics for forecasting how large a task it would entail to implement any revisions or amendments to the current SHINE methodology and dataset would be welcome.

Further extensions of our project methodology could include:

- A further expansion of our two pilot study areas, encompassing greater variation in landscape, geology and archaeological nature would also be advantageous to ensure no areas were left unassessed.
- The same area could be assessed in the future with a draft, revised SHINE methodology to give a comparative review of both the SHINE data produced and the processes being undertaken.

A review of the advice given by LHES for forestry applications is outside the remit of this project as it is not the intention to replace this advice with a dataset such as SHINE alone. However, as this is a necessary and important component of addressing how SHINE could evolve, a future review of how this advice could develop alongside the SHINE methodology would be welcomed.



Whilst there is clearly merit to exploring the evolution of the SHINE methodology going forward, we believe any such changes would need to be in unison with a review of how communication between SHINE creators, advisors, applicants and the FC currently functions. SHINE data has the potential to form part of a strong baseline of constraint or opportunity mapping, sitting alongside sensitivity mapping developed from other datasets. It is clear that SHINE data in its current format could not do both (opportunity and sensitivity simultaneously) but it could play a vital role in conveying opportunities and constraints to a wider audience and for wider application should further development be undertaken.

Successfully implementing a revised SHINE dataset to support woodland creation requires functional and cultural change across the sector, itself in turn supported by training and education across all stakeholder groups.

Other options cannot yet be discounted, such as a facilitated HER output that could supplement the evolution of SHINE (raised at a SHINE creators' workshop and reported on in Project F). The potential revision of SHINE in this way was the strongest option of those presented by the previous phase of projects exploring this initiative, but the overall results of projects E and F must be considered in any further work to successfully embed protection of the historic environment in the effective delivery of government targets on tree planting.

## Appendix 1

### Product list

<b>Product number 1</b>	
<b>Product title: SHINE Cambridgeshire</b>	
<b>Description</b>	Enhancement of the SHINE dataset in Cambridgeshire over two 10km square areas in Huntingdonshire and South Cambridgeshire.
<b>Format</b>	GIS Shapefile
<b>Allocated to</b>	Ruth Beckley
<b>Person/group responsible for quality assurance</b>	Sally Croft
<b>Date of Final Dataset</b>	2023
<b>Product number 2</b>	
<b>Product title: Low Risk Areas for Woodland Creation – Cambridgeshire Enhancements</b>	
<b>Description</b>	Enhancement of the Low Risk Areas for Woodland Creation in Cambridgeshire over two 10km square areas in Huntingdonshire and South Cambridgeshire.
<b>Format</b>	GIS Shapefile
<b>Allocated to</b>	Ruth Beckley
<b>Person/group responsible for quality assurance</b>	Sally Croft
<b>Date of Final Dataset</b>	2023
<b>Product number 3</b>	
<b>Product title: Final project report</b>	
<b>Description</b>	Final project report detailing outcomes and recommendations based on the methodology used.
<b>Format</b>	PDF
<b>Allocated to</b>	Sally Croft
<b>Person/group responsible for quality assurance</b>	Ruth Beckley
<b>Date of Final Dataset</b>	2023
<b>Product number 4</b>	
<b>Product title: Presentation</b>	
<b>Description</b>	PowerPoint presentation summarising the project's outcomes and recommendations based on the methodology used.
<b>Format</b>	Office PowerPoint file (ppt)
<b>Allocated to</b>	Ruth Beckley
<b>Person/group responsible for quality assurance</b>	Sally Croft
<b>Date of Final Dataset</b>	2023

		Allocation	Day rate	Total	Oct	Nov	Dec	Jan	Feb	Mar
<b>TASK</b>	<b>Description</b>									
Stage 1: Project Management										
1.1	Methodology review	1	295	295	1					
1.2	Study area selection	0.5	295	147.5	0.5					
1.3	Regular update meetings	0.5	295	147.5		0.1	0.1	0.1	0.1	0.1
Stage 2: SHINE										
2.1	Rapid review of existing SHINE dataset in study area	1	295	295		1				
2.2	Enhancement to existing SHINE dataset in study area	8	295	2360			4	4		
2.3	Review of SHINE records in study area	1	295	295				1		
Stage 3: SHINE and Woodland Creation										
3.1	Critical review of current SHINE methodology	5	295	1475				2	3	
3.2	Review of pilot area for additional areas of suitability for woodland creation	5	295	1475				2	3	
3.3	Review of 'Low Risk Areas for Woodland Creation' layer	3	295	885					3	
Stage 4: End of project review										
4.1	Production of final report	4	295	1180					2	2
4.2	Presentation prep and presentation time	1	295	295					0.5	0.5
	<b>TOTAL</b>	<b>30</b>		<b>8850</b>						
	MILESTONE: Interview with Project F							13/01/2023		
	MILESTONE: Draft report and invoice deadline								28/02/2023	
	MILESTONE: Expected contract completion									31/03/2023

## Appendix 2

List of datasets used when reviewing and enhancing SHINE dataset

Dataset Name	Source	Format	Date layer captured	Coverage	Summary
National LiDAR Programme	Environment Agency	geoTIFF	2022	County	Complete coverage LiDAR data
Ordnance Survey MasterMap	Ordnance Survey	QGIS Vector shapefile	2022	County	MasterMap layer dated Jan 2022
CS Consultations	RPA	QGIS Vector shapefile	2022	County	CS consultations received 2020-2022
Low Risk Areas for woodland creation	Forestry Commission	QGIS Vector shapefile	2022	County	
Ordnance Survey Historic maps	CHET	Raster	2022	County	First to Third Edition historic maps, majority of the county covered.
Aerial Imagery	Cambridgeshire County Council	Raster	2022	County	Aerial imagery 1999-2013
HER Monuments	CHET	QGIS Vector shapefile	2022	County	
HER Events	CHET	QGIS Vector shapefile	2022	County	
SHINE	CHET	QGIS Vector shapefile	2022	County	County SHINE records
DC Planning Consultations	CHET	QGIS Vector shapefile	2022	County	
Local Plan Areas	Fenland, South Cambridgeshire, Cambridge City	QGIS Vector shapefile	2020	Fenland, South Cambridgeshire, Cambridge City	
Historic England Aerial Photographic Explorer	Historic England		Multiple (post 2020)	National	