

HERITAGE IMPACT ASSESSMENT:
GILLOW FARM, HAREWOOD END, HEREFORDSHIRE

NGR: SO 53250 25850
Planning Reference: Pre-planning
AAL Site Code: HEGF 14
OASIS Reference Number: allenarc1-191848



Report prepared for Ecotec Services Ltd
On behalf of
K E & J M Watkins & Son

By
Allen Archaeology Limited
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Allenarchaeology



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Executive Summary

- A heritage impact assessment was carried out for Ecotec Limited on behalf of K E & J M Watkins & Son in order to assess the archaeological potential of land at Gillow Farm, Harewood End, Herefordshire, in order to accompany a planning application that will be submitted in due course for construction of a poultry farm.
- This assessment comprised archaeological desk-based research and a geophysical survey by magnetometry.
- For the desk-based research, data was gathered from a range of primary and secondary sources including a search of the Herefordshire Historic Environment Record, historic maps and online resources.
- The desk-based research identified twenty-four heritage assets within the search area, none of which will be directly or indirectly affected by the proposed development. These assets included an Iron Age hillfort enclosure, a possible Romano-British settlement site and the medieval Gillow Farm manorial complex.
- A geophysical survey by magnetometry was undertaken over the footprint of the development area, and identified few anomalies of potential archaeological interest.
- Overall the non-intrusive surveys have shown that there is a **low** potential for archaeological deposits to be encountered during the proposed development, and that the impact of the proposed development will be similarly **low**.

1.0 Introduction

- 1.1 Allen Archaeology Limited (hereafter AAL) was commissioned by Ecotec Limited on behalf of K E & J M Watkins & Son to prepare a heritage impact assessment to assess the archaeological potential of land at Gillow Farm, Harewood End, Herefordshire, to support a planning application for a poultry farm development that is due to be submitted soon.
- 1.2 The works have been carried out in a manner consistent with current national guidelines, as set out in the Institute for Archaeologists *'Standard and guidance for archaeological desk-based assessments'* (IfA 1994, revised 2001 and 2008) and the English Heritage document *'Management of Research Projects in the Historic Environment'* (English Heritage 2006). The geophysical survey works and reporting conform to current national guidelines as set out in *'Geophysical Survey in Archaeological Field Evaluation'* (English Heritage 2008), *'The Use of Geophysical Techniques in Archaeological Evaluations'* (IfA Paper 6) and the Institute for Archaeologists *'Standard and guidance for archaeological geophysical survey'* (IfA 2011).

2.0 Site Location and Description

- 2.1 Gillow Farm is located approximately 11.2km west of Ross-on-Wye and 9.5km north of Whitchurch, within the parish of Hentland in the administrative district of Herefordshire Council. The proposed development site (hereafter referred to as 'the site') is north of the main farm complex and currently comprises two arable fields and measures approximately 2.33ha and is centred at NGR SO 53250 25850.
- 2.2 The site is located in old floodplains and the local bedrock geology comprises Lower Devonian rocks (sandstone and conglomerate), with no superficial deposits recorded (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

3.0 Planning Background

- 3.1 A planning application is to be submitted for a proposed poultry development at Gillow Farm, Harewood End, Herefordshire. This heritage impact assessment has been prepared to inform this planning application and this is the first stage of archaeological investigation, intended to provide detailed information that will allow the planning authority to make an informed decision as to whether further archaeological investigations will be required prior to or following the determination of a planning application for the proposed development.
- 3.2 The relevant planning policy which applies to the effect of development with regard to cultural heritage is Chapter 12: Conserving and Enhancing the Historic Environment of the National Planning Policy Framework (NPPF) (Department for Communities and Local Government 2012).
- 3.3 NPPF Chapter 12, paragraph 128 states that *'Local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment...'*

- 3.4 The Herefordshire Council adopted its Unitary Development Plan (UDP) in 2007 (Herefordshire Council 2007) it remains the enforcement on planning within the borough until the new Core Strategy within the new Local Plan is adopted, a draft form of which is due to be submitted to the Secretary of State for examination in late 2014. The current policies relating to heritage are contained in Chapter 9 of the UDP and state that the council will:

Conserve and enhance the natural and historic heritage of the County, whilst promoting change that contributes positively to people's quality of life

Avoid, wherever possible, adverse environmental impact of development in respect of landscape, character, sites and species of national and international nature conservation importance biodiversity and features of geological interest, historic buildings and areas, and archaeology

Minimise any unavoidable adverse impacts on these features by means of measures to mitigate or compensate for any loss or damage, including restoration or enhancement of features, provision of replacement features and future management

Protect and enhance the vitality of conservation areas

Prior to the determination of applications for development on sites where there is reason to believe there are remains of archaeological importance, an archaeological field evaluation may be required

And

Planning permission for development which would destroy or seriously damage unscheduled, nationally important remains or sites of regional importance, or their character or setting, will not be permitted

But

Development proposals which adversely affect a site of lesser regional or local importance that is unlikely to merit full preservation in situ will be permitted where the impact on the archaeological interest of the site can be shown to have been adequately mitigated

Where preservation in situ is not feasible, conditions on planning permissions will be imposed to ensure that, where appropriate, sites of archaeological interest including standing structures are excavated and/or recorded before alteration, demolition, site clearance or development commences, or are alternatively subject to a limited recording project during development

4.0 Methodology

Desk-based assessment:

4.1 A full range of primary and secondary archaeological and historical sources were consulted in the preparation of this document. The sources consulted were as follows:

- Herefordshire Historic Environment Record (HHER) – a database of archaeological sites and artefacts, listed buildings and Scheduled Monuments. A search for records on the HHER extending 1km from the centre of the site undertaken.
- Herefordshire Record Office – holds a range of historic maps, for example enclosure maps, Tithe maps, estate plans, and former editions of Ordnance Survey maps of the development area. Online historic mapping sources were also consulted.
- Allen Archaeology's own reference library – secondary sources pertaining to the archaeology and history of the region.
- Heritage Gateway Website – searchable online resource allowing access to the National Monuments Record (NMR) and Archaeology Data Service (ADS), online national databases of archaeological sites and artefacts. Also includes information pertaining to Scheduled Monuments and Listed Buildings, as well as data from the Defence of Britain project, which has mapped surviving monuments relating to 20th century military sites. A search was conducted of these resources to identify any significant buildings, sites or findspots not covered by the NLHER search, and to highlight other major sites within a wider study area.
- A site visit was carried out on Wednesday 3rd September 2014 in order to assess the present situation of the development area, to identify any areas where the potential archaeological resource may be particularly well preserved or damaged by recent development, and to observe the site in its landscape context.

4.2 Each archaeological and historic site and Listed Building identified in the study area has been allocated a one or two digit 'Site' number and described in the Archaeological and Historical Background section (See Section 5.0 below). Further details are provided for each site in Appendix 1, and where applicable the sites are depicted on Figure 3.

Geophysical survey:

5.0.1 The geophysical survey consisted of a detailed gradiometer survey of the maximum available area of the development site, totalling approximately 2.3 hectares.

5.0.2 The fieldwork was carried out over a period of one working day, Wednesday 3rd September 2014 by a team of two experienced geophysicists. The site was divided into 30m by 30m grids, established on site with reference to local fixed boundaries and accurately tied into the

National Grid with Ordnance Survey base mapping, using a Leica GS08 Netrover receiving RTK corrections.

- 5.0.3 The survey was undertaken using a Bartington Grad601-2 Dual Fluxgate Gradiometer with an onboard automatic DL601 data logger. This instrument is a highly stable magnetometer which utilises two vertically aligned fluxgates, one positioned 1m above the other. This arrangement is then duplicated and separated by a 1m cross bar. The 1m vertical spacing of the fluxgates provides for deeper anomaly detection capabilities than 0.5m spaced fluxgates. The dual arrangement allows for rapid assessment of the archaeological potential of the site. Data storage from the two fluxgate pairs is automatically combined into one file and stored using the onboard data logger.
- 5.0.4 Data collection was undertaken in a zigzag traverse pattern, using a sample interval of 0.25m and a traverse interval of 1m.
- 5.0.5 The fieldwork and reporting were carried out in accordance with the procedures in 'Geophysical Survey in Archaeological Field Evaluations' (English Heritage 2008) and 'The Use of Geophysical Techniques in Archaeological Evaluations: IfA Paper 6' (Gaffney et al. 2002).

5.1 Summary of Survey Parameters

5.1.1 Fluxgate Magnetometers

Instrument 1:	Bartington Grad601-2 Dual Fluxgate Gradiometer
Sample interval:	0.25m
Traverse interval:	1.00m
Traverse separation:	1.00m
Traverse method:	Zigzag
Resolution:	0.01 nT
Processing software:	Terrasurveyor 3.0.25.1
Surface conditions:	Agricultural stubble
Area surveyed:	2.32 ha
Date surveyed:	Wednesday 3 rd September 2014
Geophysical Surveyor:	Robert Evershed
Survey Assistant:	Iain Pringle
Data interpretation:	Iain Pringle

5.2 Data Collection and Processing

- 5.2.1 The grids were marked out using pre-programmed coordinates on the Leica GS08 Netrover. The collection of magnetic data using a north – south traverse pattern is preferable for a magnetic survey, as enhancements to the magnetic field caused by buried features is mapped increasingly stronger the closer the traverse direction can get to a magnetic north – south direction (Breiner 1999). Data was collected by making successive parallel traverses across each grid in a zigzag pattern. Several key points of the survey grids were accurately tied into the National Grid with Ordnance Survey base mapping using a Leica GS08 Netrover receiving RTK corrections.
- 5.2.2 The data collected from the survey has been analysed using the current version of Terrasurveyor 3.0.25.1. The resulting data set plots are presented with positive nT/m values and high resistance as black and negative nT/m values and low resistance as white.

The data sets have been subjected to processing using the following filters:

- De-stripe
- Clipping
- De-staggering

- 5.2.3 The de-stripe process is used to equalise underlying differences between grids or traverses. Differences are most often caused by directional effects inherent to magnetic surveying instruments, instrument drift, instrument orientation (for example off-axis surveying or heading errors) and delays between surveying adjacent grids. The de-stripe process is used with care however as it can sometimes have an adverse effect on linear features that run parallel to the orientation of the process.
- 5.2.4 The clipping process is used to remove extreme data point values which can mask fine detail in the data set. Excluding these values allows the details to show through.
- 5.2.5 The de-staggering process compensates for data correction errors caused by the operator commencing the recording of each traverse too soon or too late. It shifts each traverse forward or backwards by a specified number of intervals.
- 5.2.6 Plots of the data are presented in processed linear greyscale (smoothed) with any corrections to the measured values or filtering processes noted, and as separate simplified graphical interpretations of the main anomalies detected.

5.0 Archaeological and Historical Background

- 5.1 A search of the HHER and other sources has revealed evidence for activity dating from the Bronze Age to modern periods, but especially of Medieval date, within the defined study area.
- 5.2 There is scant evidence for earlier prehistoric activity in the study area with only a single isolated find of a flint knife and Bronze Age arrowhead (Site 1) 640m northwest of the site.
- 5.3 There is significant evidence for Iron Age occupation in the area as there is a large settlement site 450m to the southeast of the proposed development area (Site 2) dating from this period which may have continued into the Roman period. The Gaer Cop hilltop enclosure, a large sub-oval enclosure that has been largely removed by ploughing, is believed to be of Iron Age or Romano-British dated based on coins recovered nearby; however there has not been any intrusive investigations in order to recover definite dating evidence. The hillfort has been badly truncated by a turnpike road from Monmouth through New Inn to Hereford that bisects the earthwork.
- 5.4 More definite evidence of a Roman presence comes from a cropmark site (Site 3) located directly northeast of the proposed development area, which had a geophysical survey and excavation as part of Landscape Origins of the River Wye project. The enclosure was interpreted as a Romano-British settlement as Roman pottery (Severn Valley ware) and iron slag was found within the ditch.
- 5.5 Less than 50 metres northeast of the probably Roman enclosure lies a second smaller cropmark site (Site 4) identified on aerial photographs. Although the site was initially thought to be a ploughed-out Bronze Age barrow, medieval pottery was found during an excavation and therefore is likely to be medieval in date.

- 5.6 At the time of the Domesday survey of 1086 AD, Harewood End would have been one of a number of small hamlets, which lay within the small kingdom of Archenfield, a border territory between the Welsh kingdoms to the west and the Saxon lands to the east of the Wye (Williams and Martin 2002). Archenfield maintained a form of independence in return for providing men to fight the Welsh until the formal conquest of Wales in the 13th century.
- 5.7 The proposed development site lies within Gillow Farm, which has medieval origins. The earliest evidence on the farm is a moated enclosure, for which documentary evidence suggests a construction date between the 11 - 12th century (Site 5). The surviving northwest arm of the moat was remodelled as a garden feature, reportedly in excess of 5m deep. Earthworks, including platforms, possible headlands and a bank, survive in the fields to the northwest of the house (Site 6) either side of a possible overflow leat from the moat (Site 5) down towards contemporary medieval fishponds (Site 7).
- 5.8 Gillow Manor (Site 8) is a Grade II* Listed house (Reference 1214488) that may date from the latter part of the 14th century or earlier. It was built by the de Braose family but was altered in the 15th to 16th century and has subsequently been converted to a farmhouse. The manor house would have been impressive, defended by a moat and a low entrance tower commanding the bridge, access was through a wide archway to a quadrangle. Most of the 14th century manor buildings were destroyed during the conversion to the farmhouse but some remain, including four ranges built round a rectangular courtyard. There is also a projecting gatehouse on the southwest front and some of the courtyard walls are extant. Gillow Farm itself was first depicted on the Tithe Award map of 1842 and has been included in the Herefordshire Historic Farmsteads Characterisation Project.
- 5.9 The remains of a medieval manorial chapel (Site 9), St. David's Chapel, is likely to have been incorporated into the farmhouse, one window of which can be traced in the south wall. 18th century mapping shows the symbols for old foundations or ruined chapel at the site and an effigy of a male figure found at the site probably commemorated someone buried within the chapel.
- 5.10 The farmstead was developed in the post-medieval period with a late 17th or 18th century timber-framed barn (Site 10), and a cider press (Site 11) within the garden of Gillow Manor. A purpose built rabbit warren (Site 12) is believed to have existed on the former manorial land, probably built in the post-medieval period to supply animals for coursing. There is also a barn and fold (Site 13) present on the First Edition Ordnance Survey and pre-World War II maps but not on modern maps. This barn was located within the same field as the proposed development site, only 30m to the northeast.
- 5.11 A Tudor Manor is known to have existed to the east and northeast of the development site within Pengethley Park (Site 14), 330m east of the proposed site across the A49. The Manor survived through the Civil War, when it was pillaged by Royalists; until a fire in 1820 necessitated a substantial rebuild (Robinson 1872). At this time the former Tudor deer park was also replanted as a landscaped park (Parks and Gardens Record ID 5493). There is also a fishpond in this area (Site 15), part of Fishpond Brake, depicted on the 1842 Tithe Award map.
- 5.12 The Manor once held many large oak and elm trees; however, in an attempt to curry favour with parliament, Sir Thomas Symonds sold off many of the best trees in the late 1700s and early 1800s for constructing or refitting British warships. Approximately half of Nelson's fleet were constructed from aged oaks from the nearby Royal Forest of Dean (Pengethley Manor, no date).

- 5.13 The post-medieval landscape includes the site of Mushroom Cottage (Site 16), Little Pengethley Farm (Site 17), Dason Court Farm (Site 18) and three quarry sites (Sites 19- 21) depicted on the 19th century mapping.
- 5.14 The 19th century witnessed significant improvements in communication, with new turnpike roads leading into Monmouth (Site 22) and there is an extant milepost (Site 23) which dates from 1867 – 1899, located on the A49 to the east-southeast of the site.
- 5.15 Historic Landscape Characterisation data (HLC) defines the study area as a mixture of “small enclosures and modified grid system” and “reconfiguration of former common arable fields”. The site itself is within the latter, which alludes to major change of field boundaries and the enlargement of fields.

6.0 Cartographic Information

- 6.1 The earliest map available for consultation was the Tithe Award map of 1841 (Figure 4). The map shows that at the time the land was parcelled into large plots, characteristic of medieval and post-medieval field systems, predating enclosure by Act of Parliament. Gillow Barn is shown northeast of the site, comprising two main building blocks with a smaller outbuilding to the south. There is no evidence of development on the site although there are two field boundaries through the site; one running northwest to southeast representing the extant field boundary, and the second boundary curving through the northeastern corner of the site.
- 6.2 The 1888 First Edition 6” scale Ordnance Survey (Figure 5) shows that the site is still predominantly as shown on the earlier Tithe map. A new farm track is shown running parallel to the existing field boundary and passing through the southeastern corner of the site. The small southern outbuilding at Gillow Farm is no longer depicted and the curving field boundary at the northeastern end of the site has been removed.
- 6.3 The 1904 25” Ordnance Survey map shows no further changes to the site itself (Figure 6) or the surrounding area.
- 6.4 The 1:2,500 Ordnance Survey map of 1974 (Figure 7) indicates that a number of earlier field boundaries had been removed and the field in which the site lies is depicted as two large open fields. Gillow Barn is no longer depicted to the northeast of the site.
- 6.5 Post-1974 Ordnance Survey mapping is not reproduced as it shows no significant changes.

7.0 Aerial Photographs

- 7.1 Aerial photographs held by English Heritage were consulted, with two found to be near the site (EH References RAF/106G/UK/1652/2044 and CPT/16319/929). The former is a vertical image taken on 11th July 1946 and the latter is an oblique on 29th July 1995. No features of note were visible within the development area.

8.0 Site Visit

- 8.1 The site was visited by Iain Pringle and Robert Evershed of AAL on Wednesday 3rd September 2014. Selected photographic images taken during the site visit are included in Appendix 1, and their locations are indicated on Figure 2.
- 8.2 The proposed development area is relatively flat with a gentle slope to the west and comprises two arable fields with recently harvested crop (Plates 1 and 2).
- 8.3 The site is within two large arable fields bordered by a lane to the east and south and mature tree and hedge boundaries to the north and west. The site is divided by a field boundary consisting of a small tree and hedge boundary (Plate 3).
- 8.4 Although there are minor undulations and rises in the fields, there was no sign of earthworks and along the field boundary, visibility was obscured by overgrowth in places (Plate 4) and detailed observations could not be made.
- 8.5 No archaeological material was visible on the surface and there is no visible evidence for any archaeological remains within the development area.

9.0 Constraints

- 9.1 The site is not situated in a designated conservation area and there are no Scheduled Monuments, or Registered Battlefields within the study area. There is a single Designated Park or Gardens in the study area; Pengethley Park, to the east of the site. This will not be directly affected by the proposed development, and the setting of this heritage asset should also be unaffected, as it is physically separated from the site by the A49, from where the principal views of this designed landscape should be achieved.
- 9.2 There are two nationally listed structures, one of which is the Grade II* Listed (Ref. 1214488) medieval Gillow Farm and the other is the Grade II Listed (Ref 1288510) milepost. Neither of these structures will be physically affected by the development, being too distant from the site and screened by intervening topography and vegetation for any indirect effects in terms of setting.

10.0 Significance of Impacts

- 10.1 This section will be used to assess the archaeological potential of the proposed development area on a period by period basis, and the likely impact of the proposed development on each aspect of the identified archaeological resource. The tool used for this purpose is the significance of impact table, which combines the receptor sensitivity and magnitude of impact, summarised in Tables 1 to 3. Table 4 summarises the results on a period-by-period basis.

Receptor sensitivity	Examples
High	<p>A legally protected site, including:</p> <ul style="list-style-type: none"> Listed Buildings (I, II* and II) Scheduled Monuments World Heritage Sites <p>Internationally and nationally significant sites that are not currently legally protected:</p> <ul style="list-style-type: none"> Grade I and II* Registered Parks and Gardens Registered Battlefields Major Settlements (e.g. Villas, Deserted Medieval Villages) Burial Grounds Standing Historic Buildings (non-listed)
Moderate	<p>Regionally significant site:</p> <ul style="list-style-type: none"> Grade II Registered Parks and Gardens Some settlements Find Scatters and find spots Roman Roads Sites of significant historic buildings
Low	<p>Locally significant site:</p> <ul style="list-style-type: none"> Field systems Ridge and furrow earthworks Trackways Wells Non-archaeological sites held by data source e.g. natural mound or palaeochannel
Negligible	<p>Site of limited significance:</p> <ul style="list-style-type: none"> Finds or features of a type common or abundant in the local area Locally important features significantly damaged or altered

Table 1: Receptor sensitivity

Magnitude	Examples
High	Total or near total destruction of the remains or sufficient change to result in a fundamental and irreparable reduction in the ability to understand the archaeological resource, its context and setting.
Moderate	Substantial destruction of the remains resulting in an appreciable reduction in the ability to understand the archaeological resource, its context and setting.
Low	Small-scale destruction of the remains resulting in a slight reduction in the ability to understand the archaeological resource, its context and setting.
Negligible	Very little or no substantive change to the remains with marginal reduction in the ability to understand the archaeological resource, its context and setting.

Table 2: Magnitude of impact

		Receptor sensitivity			
		Negligible	Low	Moderate	High
Magnitude of impact	Negligible	Negligible	Negligible	Negligible	Negligible
	Low	Negligible	Negligible	Low	Moderate
	Moderate	Negligible	Low	Moderate	High
	High	Negligible	Moderate	High	High

Table 3: Significance of impact

Period	Description	Receptor sensitivity	Magnitude of impact	Significance of impact
Prehistoric (c.500,000 BC–AD 43)	There are only isolated finds from the earlier prehistoric period but there is a hillfort enclosure southeast of the site which is likely to have Iron Age origins.	Moderate	Negligible	Negligible
Romano-British (AD 43–c.AD 410)	There is limited evidence for Roman activity in the area with a possible cropmark site northeast of the site which may be a Romano-British settlement site and the Iron Age hillfort may have continued into the Roman period. The geophysics suggests this activity does not extend into the site.	Moderate	Low	Low
Anglo-Saxon (c.AD 410–1066)	There is no recorded evidence for Anglo-Saxon occupation within the study area.	Negligible	Negligible	Negligible
Medieval (1066–1485)	Although there is a small cropmark site with medieval pottery northeast of the site, settlement in the area is likely to have been focussed on the historic core of the villages at some distance from the site. Some evidence for ridge and furrow agriculture may be encountered. Gillow Farm itself has medieval origins as a moated enclosure with surrounding earthworks, although these are at some distance from the site.	Moderate	Negligible	Negligible
Post-medieval (1485–1800)	The site is likely to have remained agricultural land in the post-medieval period and Gillow Barn was located east of the site.	Moderate	Low	Low
Early modern (1801–2014)	The area persisted as agricultural land until the present day.	Negligible	Negligible	Negligible

Table 4: Summary of impacts

11.0 Geophysical Survey Results

- 11.1 For the purposes of interpreting the anomalies, the survey data has been processed to the values of -3 to 3 nT/m (Figure 3). This enhances faint anomalies that may otherwise not be noted in the data. The survey results revealed a number of anomalies across the data set, and these are discussed in turn and noted as two digit numbers in square brackets.
- 11.2 Immediately noticeable are the large areas of magnetic noise [01] aligned diagonally through the site and covering a number of areas within the site. The magnetic noise produced varying readings across the site, between -40 to 40nT/m, although there were areas of higher readings. Through the centre of the site the magnetic noise is likely to be related to the hedge which separates the two areas and the areas within the site are most likely associated with scattered detritus in the ploughsoil.
- 11.3 Also very clear within the data are the lines of dipolar responses [02]. These gave readings between -100 to 100nT/m. These readings are most likely the result of service pipes within the area. To the northeast of these is a smaller dipolar linear [03], giving readings of -6 to 6nT/m. This is likely to be the result of a field drain or service.

- 11.4 Scattered randomly throughout the site are a number of strong and weak dipolar responses [04], which gave readings averaging -20 to 40nT/m. The characteristic dipolar response of pairs of positive and negative 'spikes' suggest near surface ferrous metal or other highly fired material in the soil.
- 11.5 Aligned diagonally, northeast to southwest, across the northern part of the site are pairs of negative linear anomalies [05] giving readings of between -1 to -3nT/m. These are the result of tractor tracks which are visible within the field. Between these are more linears [06] aligned in the same direction which are modern cultivation trends and are also visible on site.
- 11.6 Towards the north edge of site there are a number of positive amorphous anomalies [07], producing readings of 2 to 8nT/m. These may represent pits, former ponds or filled in hollows.
- 11.7 Across the site are a number of positive linear anomalies [08], with readings of 2 to 4nT/m. These likely represent possible former tracks or ditches.
- 11.8 Situated in the northeast corner of the surveyed area is a positive curvilinear anomaly [09]. This produced readings of 2 to 10nT/m and possibly represents a former path, track or ditch, although a geological origin cannot be discounted.
- 11.9 The two areas which have not been surveyed; [10] are due to the hedge line aligned northwest to southeast through the site and piles of hay and rubbish on the site.

12.0 Discussion and Conclusions

- 12.1 There is evidence for prehistoric and Roman activity within the study area with Gaer Cop Iron Age hillfort enclosure southeast of the site, which may have continued in use into the Roman period, and a likely Romano-British settlement site northeast of the site. The site appears to be too far removed to contain any features associated with Gaer Cop and the geophysical survey did not identify anything that could be confidently associated with the settlement site to the north, although a small number of discrete linear and pit like anomalies may be of archaeological interest.
- 12.2 Gillow Farm developed as a prosperous farmstead in the medieval period and much of the medieval manorial features survive to some degree, including part of the moat, fishponds and the manor house. This is some distance to the southwest of the site, and it is likely that the development area remained as agricultural land during this period, and into the following post-medieval period. No evidence for medieval ridge and furrow ploughing was recorded in the geophysical survey, although modern ploughing was identified, and this may have removed any evidence of earlier agricultural regimes.

13.0 Effectiveness of Methodology

- 13.1 The non-intrusive evaluation methodology employed was appropriate to the scale and nature of the site surveyed, and has identified a limited archaeological potential for the proposed development area. Magnetometry surveying was the prospection technique best suited to the identification of archaeological remains on the site. Other techniques would have required justification and may have proved too time consuming or cost-prohibitive.

14.0 Acknowledgements

14.1 Allen Archaeology Limited would like to thank Ecotec Services Limited for this commission.

15.0 References

Bartington, G. and Chapman, C.E., 2004, 'A High-stability Fluxgate Magnetic Gradiometer for Shallow Geophysical Survey Applications'. *Archaeological Prospection* 11 (1) 19-34

Breiner, S., 1999, *Applications Manual for Portable Magnetometers*, Geometrics, California

Department for Communities and Local Government, 2012, *National Planning Policy Framework*. London, Department for Communities and Local Government

English Heritage, 2008, *Geophysical Survey in Archaeological Field Evaluation*. English Heritage

English Heritage, 2006, *Management of Research Projects in the Historic Environment*. Historic Buildings and Monuments Commission for England. London

Gaffney, C., Gater, J., and Ovenden, S., 2002, *The Use of Geophysical Techniques in Archaeological Evaluations*. IFA Paper No.6. Institute for Archaeologists, Reading

Herefordshire Council, 2077, *Unitary Development Plan (UDP)*. Local Development Framework

IfA, 2011, *Standard and Guidance for Archaeological Geophysical Survey*, Institute for Archaeologists, Reading

IfA, 1994 (revised 2001 and 2008), *Standard and Guidance for Archaeological Desk-Based Assessments*, Institute for Archaeologists, Reading

Pengethley Manor, nd, *The History of Pengethley Manor Hotel*. Unpublished leaflet

Robinson, Rev. C J, 1872, *Mansions and Manor Houses of Herefordshire*

Scollar, I., Tabbagh, A., Hesse, A. and Herzog, I. (eds.), 1990, *Archaeological Prospecting and Remote Sensing*. Cambridge University Press

Wilbourn, D., 2013, *Terrasurveyor Program version 3.0.20 User Manual*. DW Consulting

Williams, A and Martin, G. H. *Domesday Book A Complete Translation* Penguin Books

Cartographic Sources

1841 Tithe Award map (Herefordshire Record Office)

1888 First Edition 6" scale Ordnance Survey map (www.promap.co.uk)

1904 25" Scale Ordnance Survey map (www.promap.co.uk)

1974 1:2,500 Scale Ordnance Survey map (www.promap.co.uk)

Appendix 1: Colour Plates



Plate 1: View of the eastern field, looking north



Plate 2: View of the western field, looking north



Plate 3: View of the field boundary dividing site, looking east



*Plate 4: View of the overgrowth
on site, looking east*

Appendix 2: List of Herefordshire HER Entries within a 1km search area

Fig. 3 Site No.	HHBR No.	Listed Building Grade and No.	Eastings	Northings	Description	Date
1	6437		352850	226520	Flint knife and Bronze Age arrowhead	Prehistoric
2	6422		353600	225203	Gaer Cop Hillfort, Iron Age hillfort and a possible Roman camp	Iron Age / Roman
3	30264		353288	226035	Excavated circular enclosure	Roman
4	53226		353335	226103	Excavated circular enclosure	Medieval
5	26912		353070	225370	Moated manor, moat formerly surrounded Gillow Manor as a square outer enclosure	Medieval
6	26913		353030	225400	Earthworks including platforms, possible headlands, a bank and a possible ridge and furrow	Medieval
7	26806		352800	225400	Earthworks consisting of fishponds shown on historical mapping	Medieval
8	6428	Grade II*, 1214488	353129	225361	Gillow Manor, late 14th century house, partly rebuilt in 16th and 17th centuries with 20th century restorations	Medieval
9	6429		353077	225349	Remains of chapel incorporated in foundations of Gillow Manor	Medieval
10	26915		353133	225332	Timber-framed late 17th or 18th century barn at Gillow Manor	Post-medieval
11	26914		353047	225291	Cider mill and press within the garden of Gillow Manor	Post-medieval
12	19209		353400	225600	Rabbit warren, placename evidence	Post-medieval

Fig. 3 Site No.	HHBR No.	Listed Building Grade and No.	Eastings	Northings	Description	Date
13	19210		353320	225961	Site of Gillow barn and fold shown on 1st Edition OS map	Post-medieval
14	24495		354148	226018	Pengethley Park	Post-Medieval
15	19207		354121	225688	Fishpond shown on 1842 Tithe Award map	Post-medieval
16	19208		353538	225667	Site of Mushroom Cottage and garden shown on 1842 Tithe Award map	Post-medieval
17	47389		353969	225485	Little Pengethley Farm shown on 1st Edition OS map	Post-medieval
18	47388		353796	226730	Dason Court (Dason Farm) shown on 1st Edition OS map	Post-medieval
19	19211		353125	225203	Quarry shown on 1842 Tithe Award map	Post-medieval
20	19206		353556	226225	Quarry shown on 1842 Tithe Award map	Post-medieval
21	40788		352650	226460	Quarry shown on 1885 OS map	Post-medieval
22	34184		353555	225999	Turnpike Roads leading into Monmouth	Early Modern
23	4980	Grade II, 1288510	354077	225574	Late 19th century milepost, dating from 1867-1899	Early Modern
24	26916		352900	225600	Boundary bank in woodland	Undated

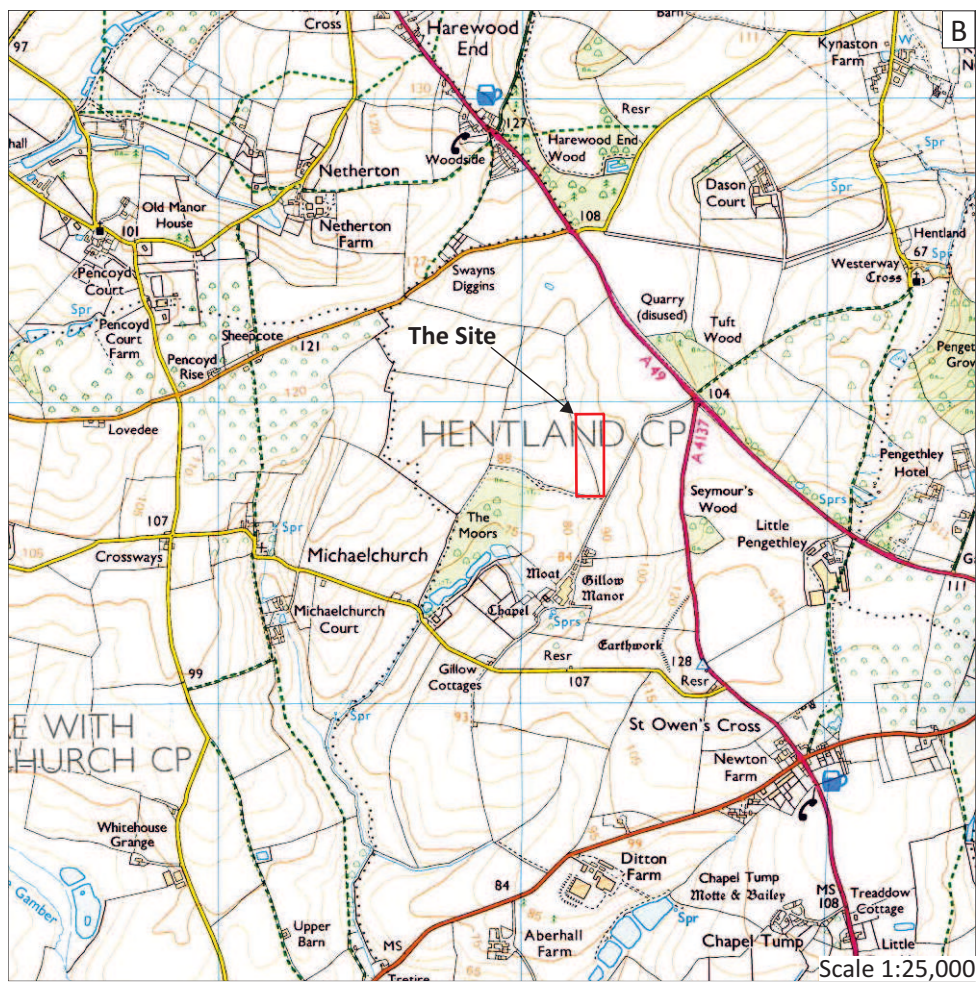
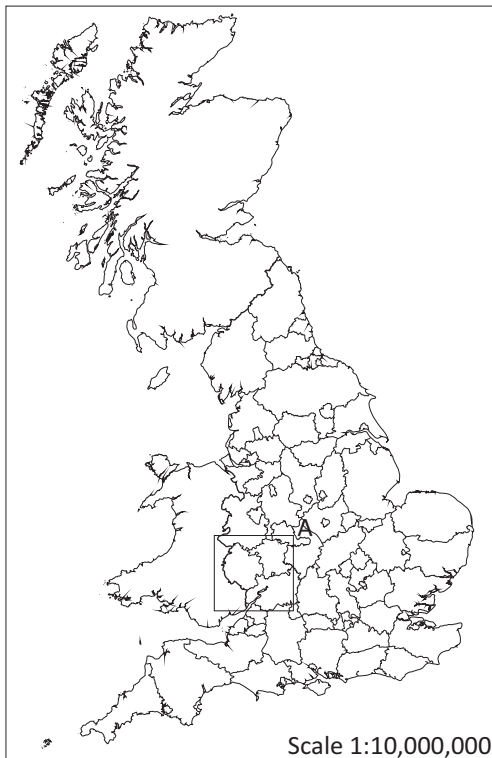


Figure 1: Site location outlined in red

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Site Code	HEGF 14
Scales	1:10,000,000 1:1,000,000 1:25,000 @ A4
Drawn by	I Pringle
Date	06/10/14

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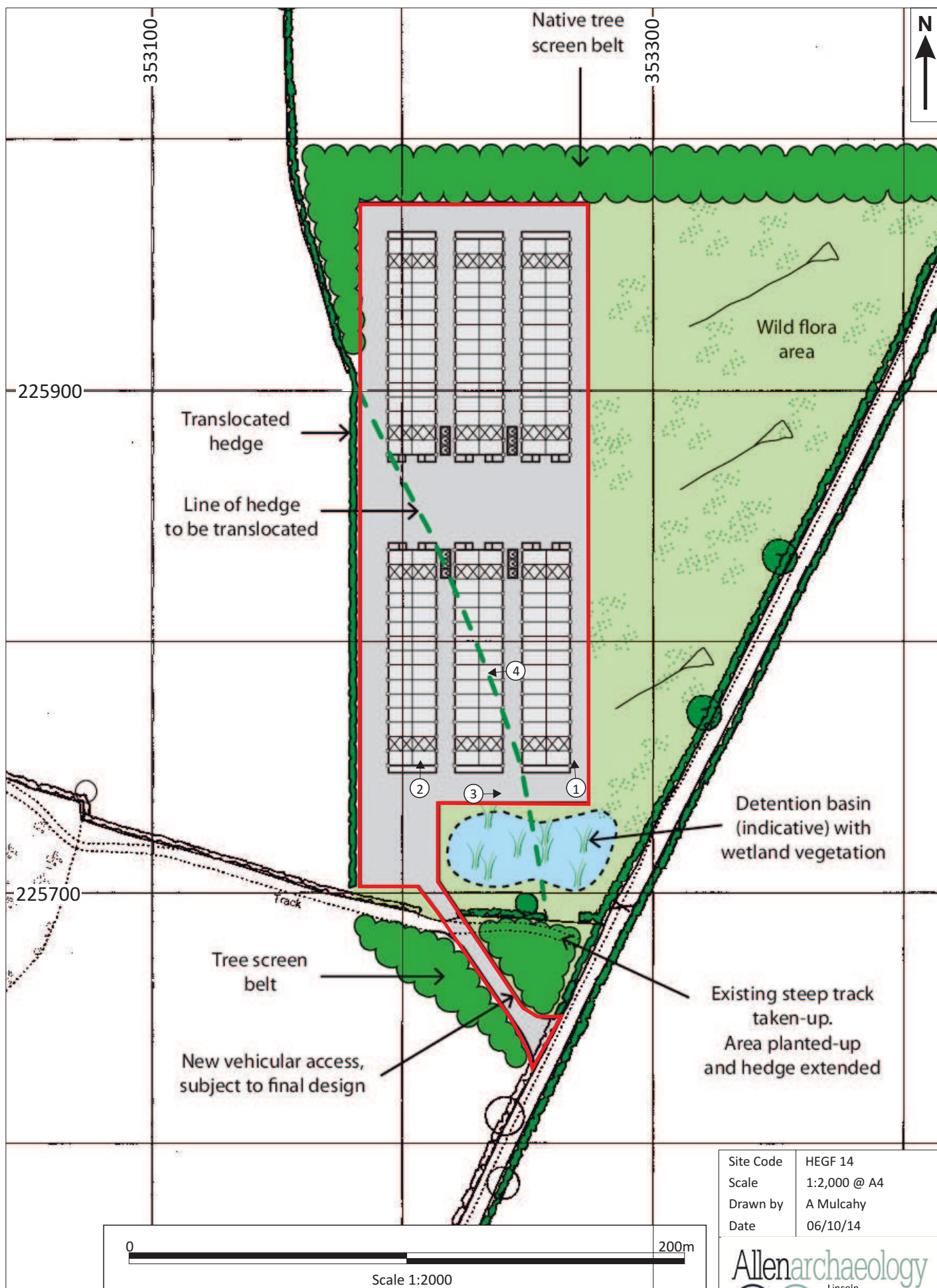


Figure 2: Plan of proposed development. Location of photographs shown in Appendix 1 (background plan supplied by the client)

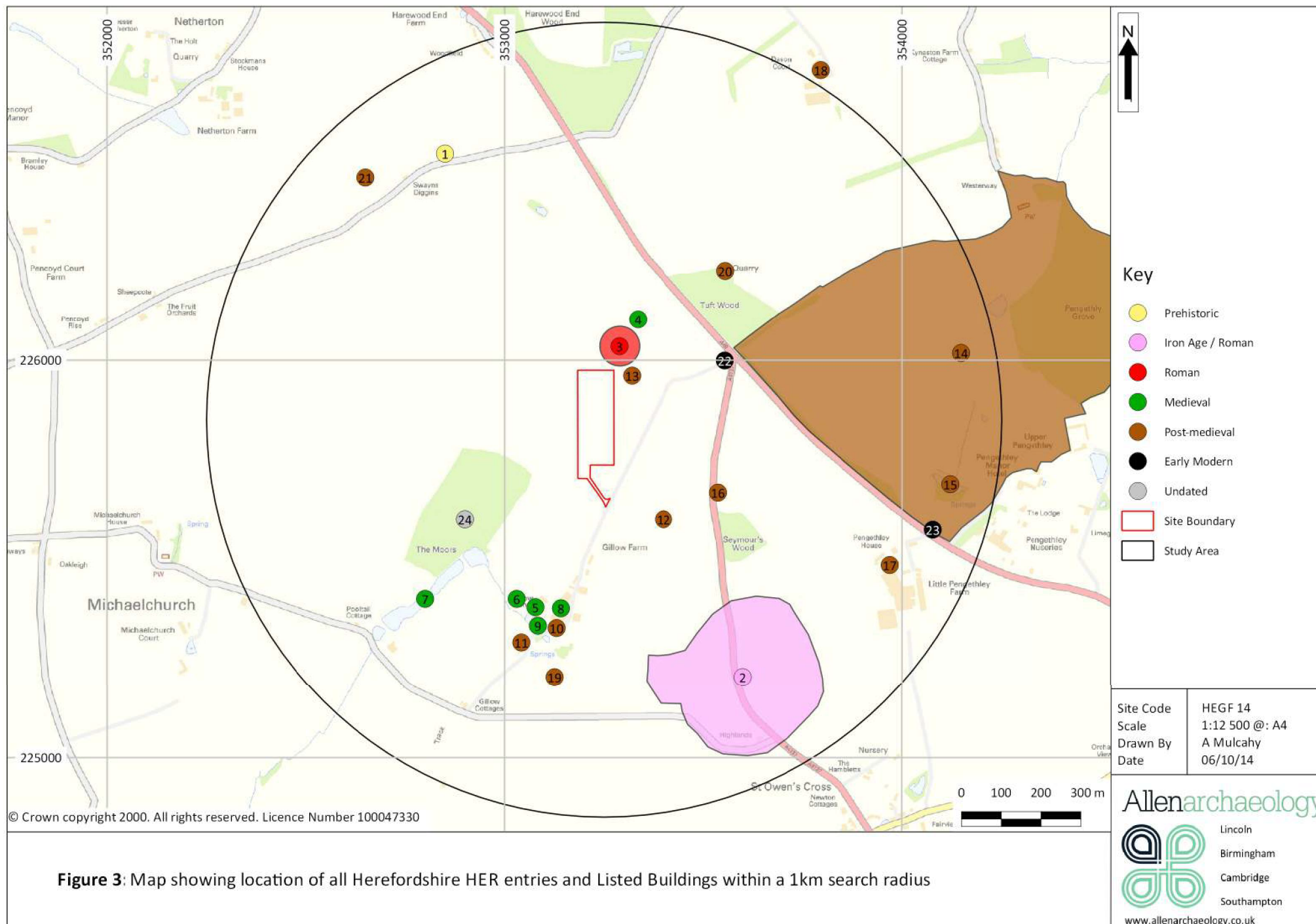
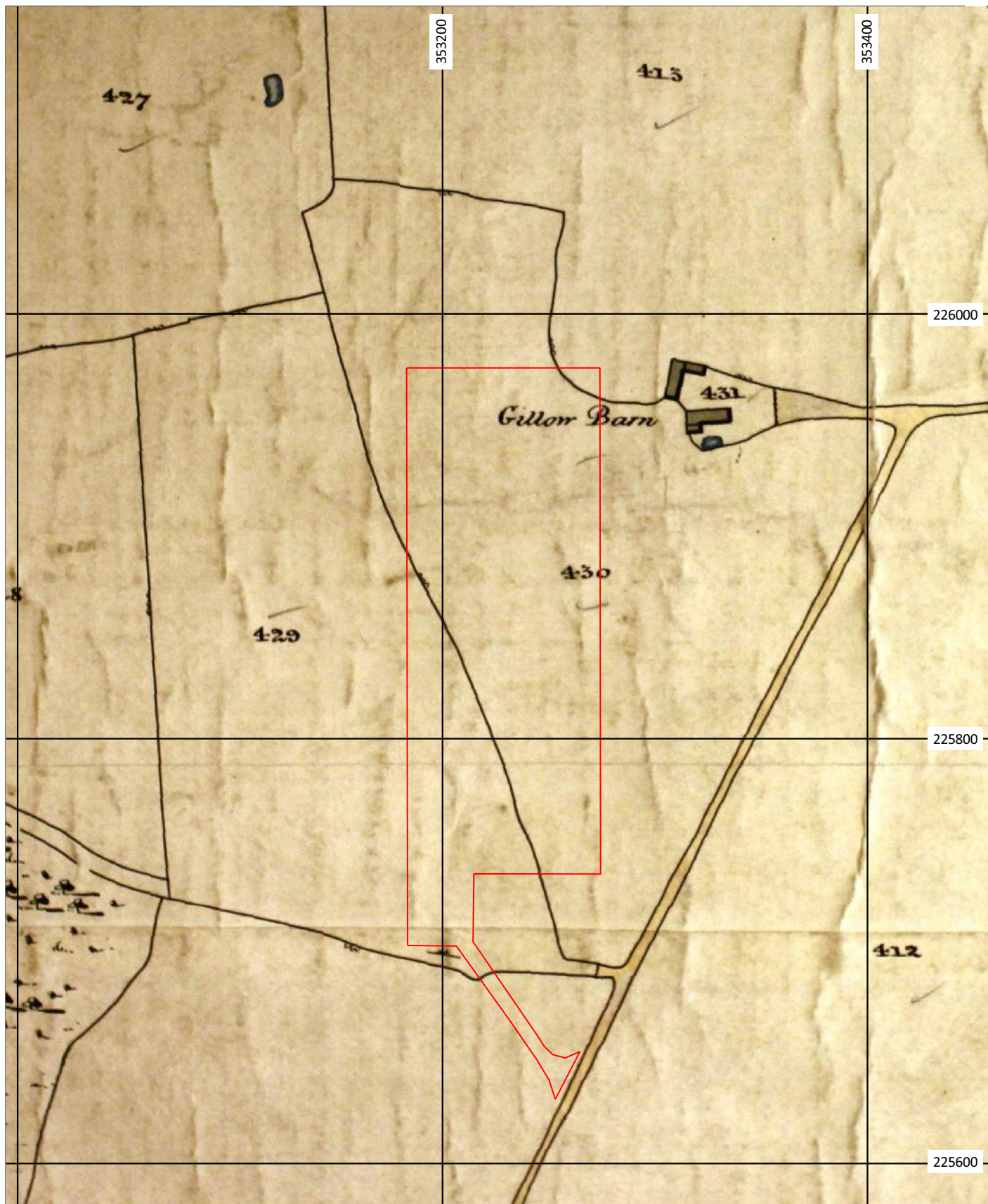
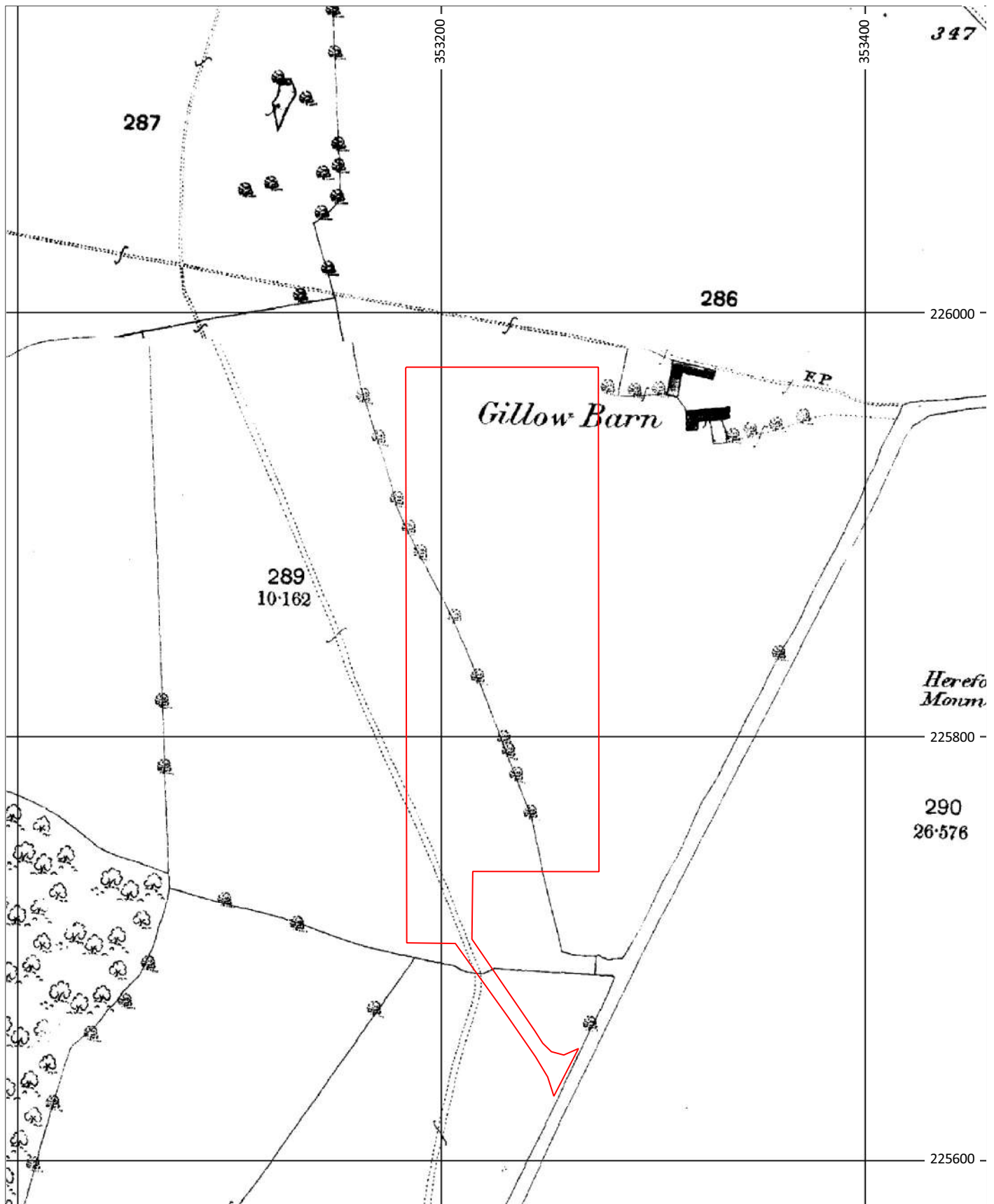


Figure 3: Map showing location of all Herefordshire HER entries and Listed Buildings within a 1km search radius



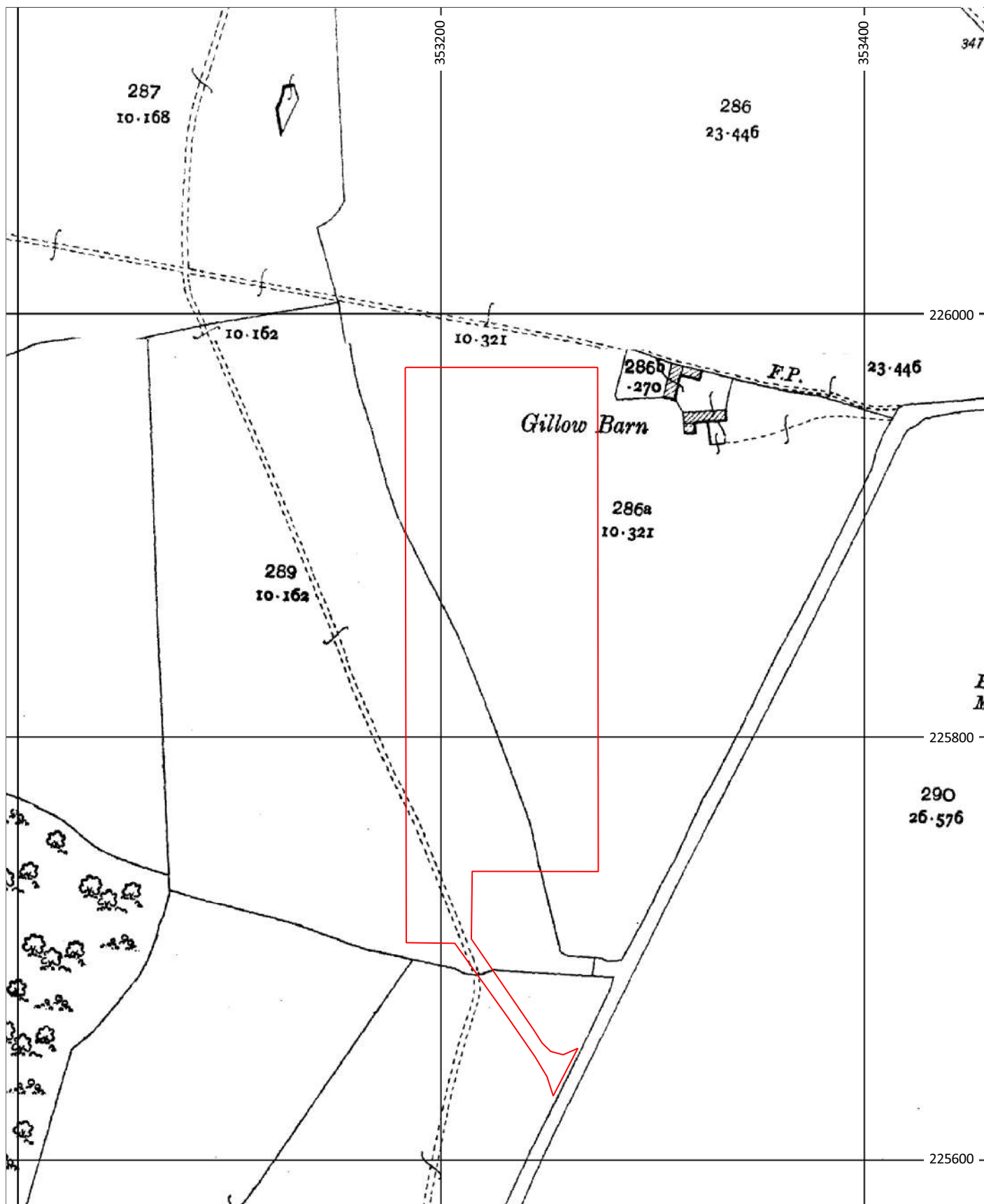
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 Scale 1:2500 @: A4
 Drawn By A Mulcahy
 Date 06/10/14

Figure 4: 1841 Tithe Award map with the site outlined in red



Site Code	HEGF 14
Scale	1:2500 @: A4
Drawn By	A Mulcahy
Date	06/10/14

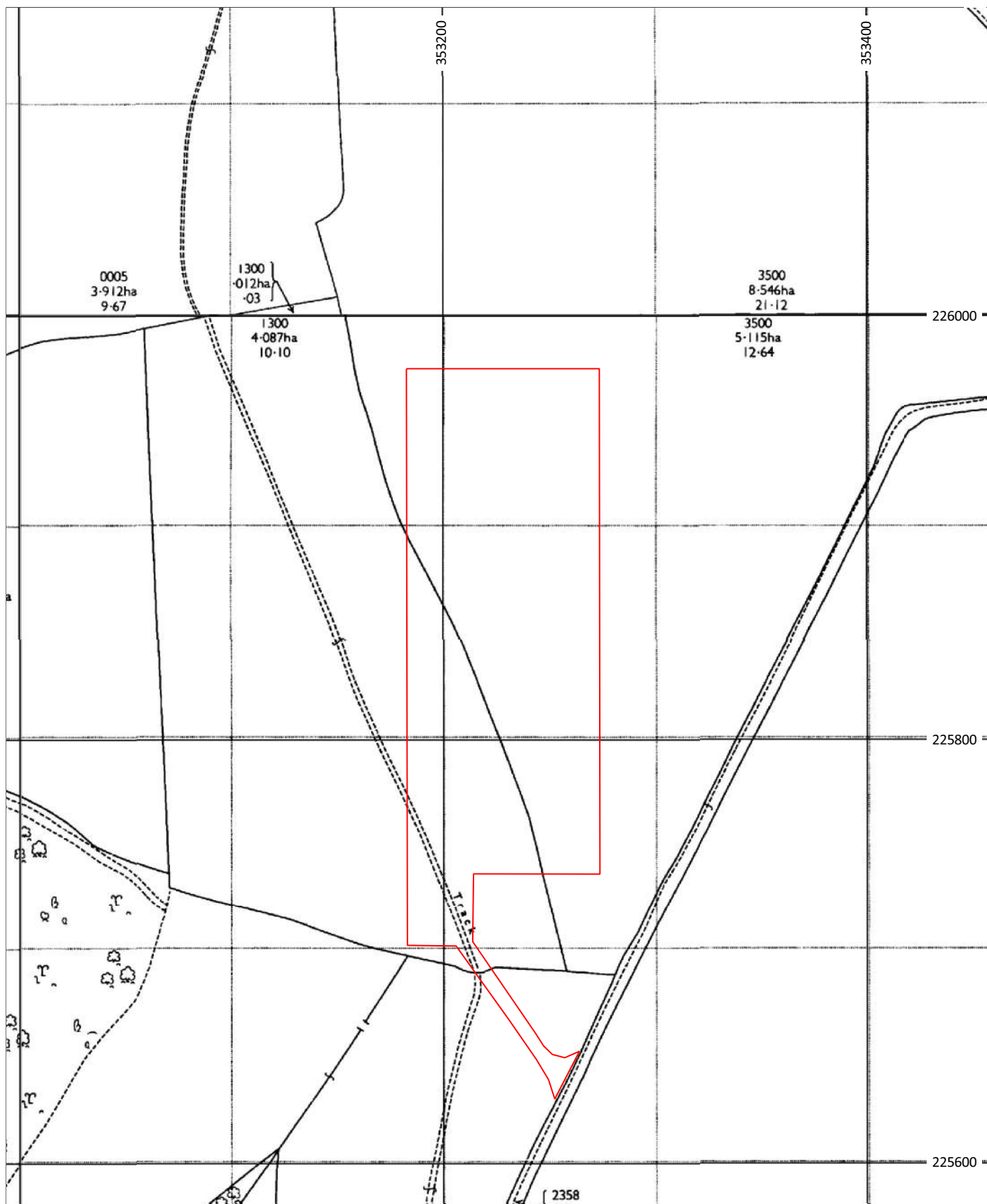
Figure 5: 1888 First Edition Ordnance Survey map with the site outlined in red



Site Code HEGF 14
 Scale 1:2500 @: A4
 Drawn By A Mulcahy
 Date 06/10/14



Figure 6: 1904 Ordnance Survey map with the site outlined in red



0 50 100 150 m

Site Code HEGF 14
Scale 1:2500 @: A4
Drawn By A Mulcahy
Date 06/10/14

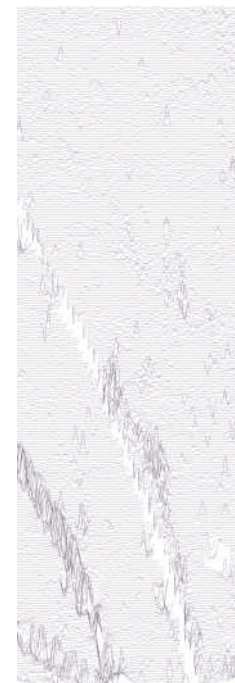
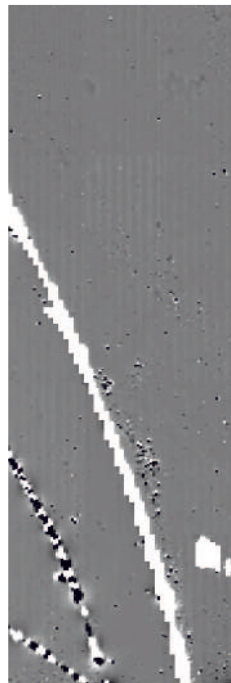
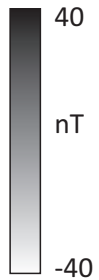
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Figure 7: 1974 Ordnance Survey map with the site outlined in red

Raw data (clipped to +/- 40 nT)

Trace Plot (ZMT and clipped to +/- 25nT)



25nT



Site Code	HEGF 14
Scale	1:3,000 @ A4
Drawn by	Iain Pringle
Date	06/10/14

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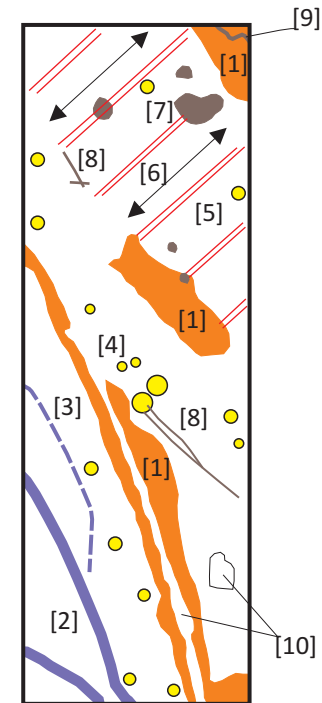
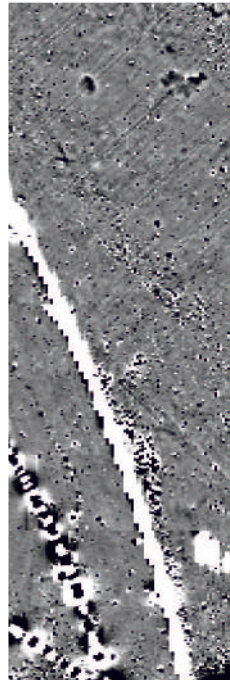
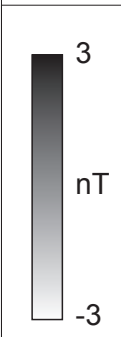
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Figure 8: Greyscale raw data and processed trace plot

Processed (ZMT and clipped to +/- 3 nT)

Interpretation of Survey Results



-  Negative magnetic anomaly
-  Positive magnetic anomaly/field drain
-  Area of magnetic noise

-  Dipolar linear anomaly
-  Current ploughing trend
-  Examples* of individual dipolar responses
Indicative of ferrous or highly fired material
*smaller responses omitted for clarity

Site Code	HEGF 14
Scale	1:3,000 @ A4
Drawn by	Iain Pringle
Date	06/10/14

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Figure 9: Processed greyscale plot of survey area with geophysical interpretation

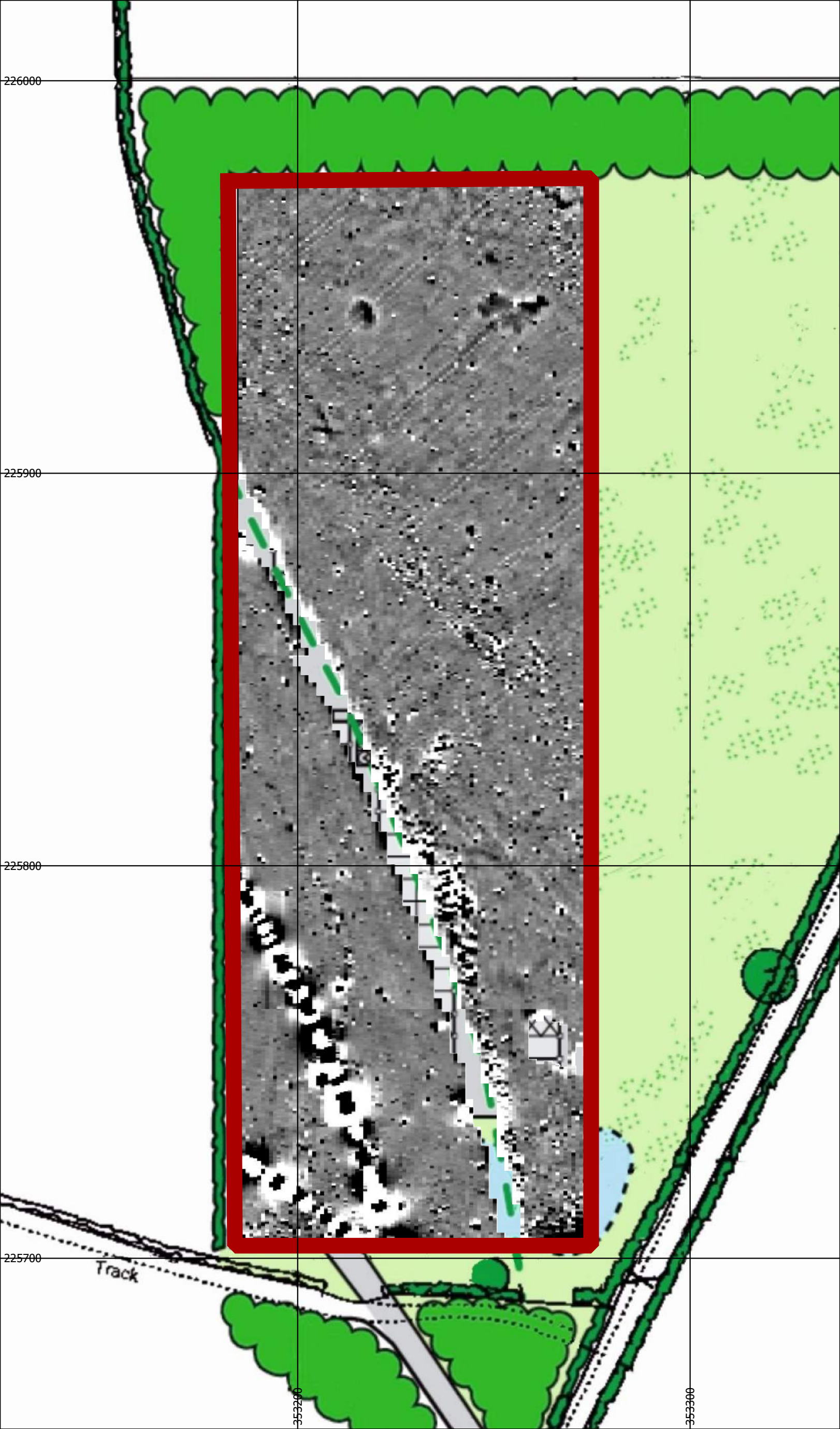


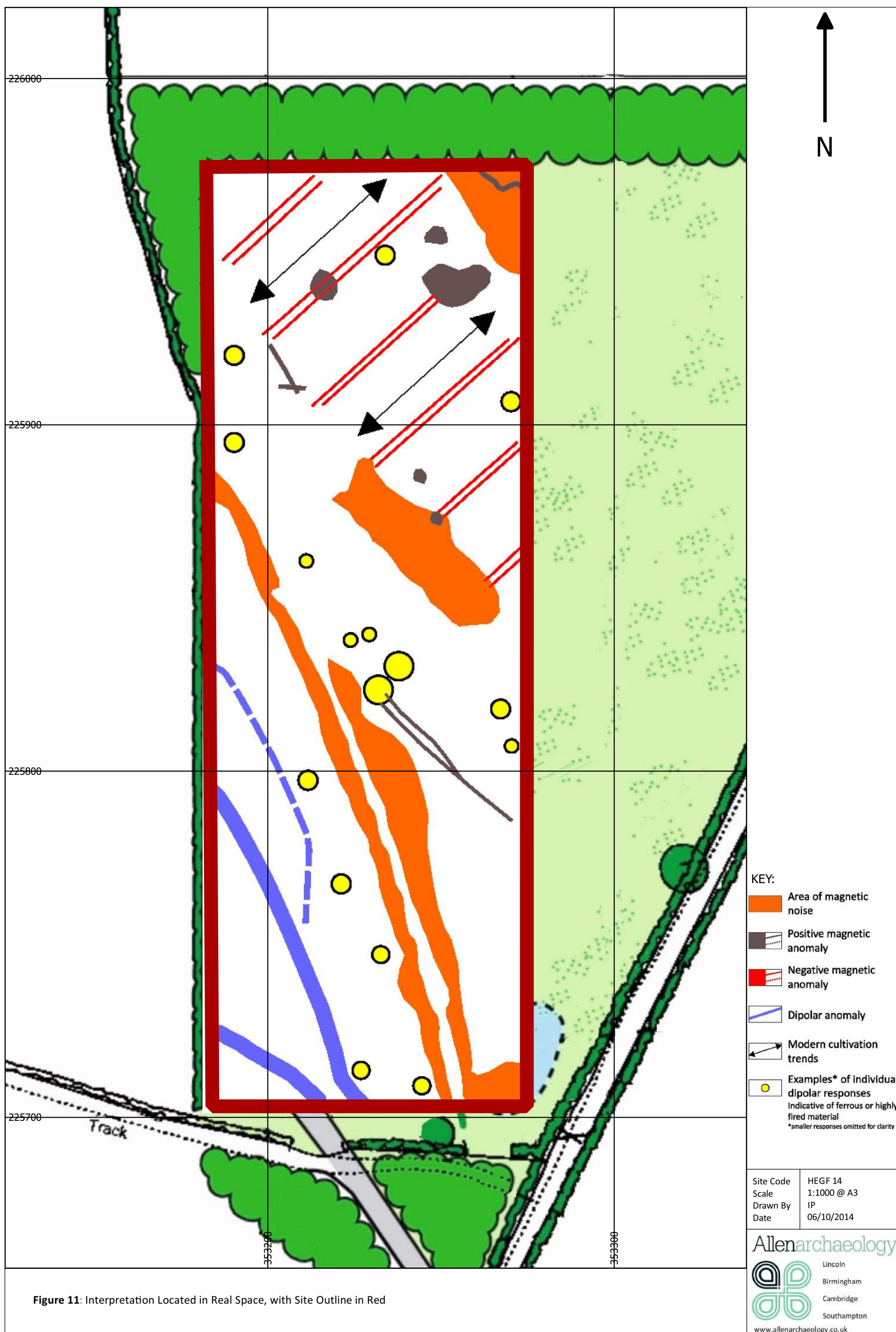
Figure 10: Processed Greyscale Located in Real Space, with Site Outline in Red

Site Code	HEGF 14
Scale	1:1000 @ A3
Drawn By	IP
Date	06/10/2014

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