

# Buxhall Farm, Histon, Cambridgeshire



Desk-Based Assessment



August 2009

Client: Cambridgeshire County Council

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**Buxhall Farm, Histon, Cambridgeshire**

*Desk-Based Assessment*

*By Nick Gilmour MA PIFA*

*With contributions by Rog Palmer*

*Editor: Stephen Macaulay BA MPhil MIFA*

*Illustrator: Lucy Offord BA*

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**Prepared by:** Nick Gilmour  
**Position:** Supervisor  
**Date:** Aug 09

**Checked by:** Stephen Macaulay  
**Position:** Project Manager  
**Date:** Aug 09  
**Signed:** 

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**Oxford Archaeology East,**  
15 Trafalgar Way,  
Bar Hill,  
Cambridge,  
CB23 8SQ

t: 01223 850500  
f: 01223 850599  
e: oaeast@thehumanjourney.net  
w: <http://thehumanjourney.net/oaeast>

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## Summary

*In July 2009 Oxford Archaeology East undertook a desktop assessment to examine the available historical and archaeological resources relating to the site of Buxhall Farm, Histon, Cambridgeshire (centred at TL 4427 6425). Cambridgeshire County Council commissioned the work. The aim of the assessment was to define the archaeological potential of the site in advance of possible redevelopment.*

*The site lies to the north of the Medieval centre of Histon and covers a total area of 30.6 ha of land currently under cultivation. Evidence of Iron Age, Roman, Saxon and medieval activity have all been revealed in the local area in recent years. In the development area itself geological anomalies made the interpretation of aerial photographs problematic and the lack of direct archaeological excavation in the immediate vicinity also hindered accurate conclusions being drawn. However, the potential for Romano-British archaeological remains, and to a slightly lesser extent Iron Age remains has been shown to be significant.*

## 1 INTRODUCTION

### 1.1 Planning Background

- 1.1.1 Oxford Archaeology East has been commissioned by Cambridgeshire County Council to produce a desk-based assessment of Buxhall Farm, Histon. The aim of this assessment is to determine the nature and extent of any archaeological remains within the proposed development area. In accordance with the guidelines set out in *Planning and Policy Guidance 16 – Archaeology and Planning* (Department of the Environment 1990).
- 1.1.2 This document is entirely comprised from desk-based research and does not include any data from physical investigation at the proposed development site. On completion a copy of this report will be held at the Cambridge County Council Archaeological store.

### 1.2 Location, Geology and Topography

- 1.2.1 The investigation area (TL 4427 6425) is located to the north of the village of Histon (Figure 1), in the area around Buxhall Farm, to the north of Garden Walk. To the east, the study area is bounded by Mill Lane. It comprises a total area of c.30.5ha of land which is currently under agricultural usage.
- 1.2.2 For development purposes, the area is to be considered in three plots (figure 1). Plot 1 is located in the south of the area and comprises an area of 13.67ha. Plot 2 is immediately to the north of this and covers an area of 8.27ha, with its northern boundary marked by the line of a drain. Plot 3 is to the north of this and includes 8.61ha of land.
- 1.2.3 The area lies on Third Terrace River Deposits overlying the Gault Clay and the site is located at approximately 11m OD.

### 1.3 Acknowledgements

- 1.3.1 The author would like to thank Stephen Conrad the Strategic Asset Development Manager of Cambridgeshire County Council for commissioning the work and funding the report. Thanks to Sally Thompson at the Historic Environment Record Office for providing the site data. The report was managed by Stephen Macaulay and Lucy Offord illustrated the assessment.



## 2 ARCHAEOLOGICAL AND HISTORICAL SOURCES

### 2.1 Historical Sources

2.1.1 The study area lies to the north of the village of Histon, outside of the Medieval centre, and there are no known direct historical sources. Histon is recorded in the Domesday Book as *Histonona*, although the meaning of this name is not known (Taylor 1998).

### 2.2 The Historic Environment Record (HER)

2.2.1 The HER research was gathered from a 0.5km search radius from the development area (figure 2). Very little archaeological data occurred in the immediate vicinity of the site. However many more entries occur just outside of this area to the south, mainly referring to listed buildings of Medieval and later date within the historic core of the village to the south and southwest of the site.

2.2.2 A Roman coin, a 3<sup>rd</sup> century radiate, was found on allotments c.200m to the northwest of the study area (HER 05918).

2.2.3 A Saxon circular loom weight (HER 5196), which had been partially burnt, was recovered during the construction of Histon and Impington school, c.500m to the south of the area under investigation.

2.2.4 A medieval house, parts of which date to the 14<sup>th</sup> century is located around 500m to the southeast of the site (HER 50591). A pair of cottages, originally constructed in the 17<sup>th</sup> century stand around 300m to the east of the site (HER 50592), while c.500m to the south there is a building of 18<sup>th</sup> century date (HER 50601). All of these buildings are grade II listed.

2.2.5 All other HER entries for the area refer to archaeological investigations and are discussed below in section 2.6 and are set out in Table 1.

### 2.3 Cartographic Evidence

2.3.1 The primary cartographic sources used were 1<sup>st</sup> and 3<sup>rd</sup> Edition Ordnance Survey maps, these were included to demonstrate the previous land use of the development area.

2.3.2 The 1<sup>st</sup> Edition Ordnance Survey map (figure 3) shows that Mill Lane, which forms the eastern boundary of the site, was already in place by 1885 when this map was issued. Mill Lane Farm is also shown in a similar location to the current farm buildings with the same name. Glebe Way, which forms part of the western boundary of the site is also shown in the same location on the 1<sup>st</sup> Edition map, although it was known as Pig Lane.

2.3.3 The 1<sup>st</sup> Edition map also indicated that the field boundaries surrounding the development area have not changed since 1885. However, the internal field divisions changed slightly.

2.3.4 The 3<sup>rd</sup> Edition Ordnance Survey map (figure 4) shows the layout of the study area to be much the same in 1926 and it was in 1885.

### 2.4 Aerial Photographs

2.4.1 An assessment of aerial photographs was carried out by Air Photo Services order to identify and accurately map archaeological, recent and natural features. The full report is given in appendix A, the following is a summary.

- 2.4.2 Archaeological, natural and recent features combine to provide a complexity of information on aerial photographs that extends beyond the Development Area but is common on the same soil association.
- 2.4.3 Archaeological features include two enclosures and parts of what may have been a field system associated with them.
- 2.4.4 Two circular, or near circular, features were also mapped but may be of natural origin.
- 2.4.5 Natural features form a background mesh that includes frost cracks, bands of deeper soil that may be infilled watercourses, pits and groups of pits and patches of darker soil. All are thought likely to have periglacial origins.
- 2.4.6 Boundaries of post-medieval field divisions have been mapped.
- 2.4.7 The 1999-2000 Cambridgeshire County Farms Estate Farm Management Plan (Plan No. 32 – Oakington & Histon) identified possible Iron Age/Roman cropmarks (HER No. 11453). at Bypass Farm and that these should be investigated prior to any potential change of landuse or sale.

## 2.5 Earthworks

- 2.5.1 There are no known earthworks in the development area, although 600m to the west the former site of St. Clements Church is marked by significant earthworks. Two depressions either side of the road to the church (c.500m to the southwest of the development area) are also potentially medieval in origin (HER 10843)

## 2.6 Archaeological Excavations and Surveys

### *Histon to Waterbeach Electricity Cable Watching brief*

- 2.6.1 An archaeological watching brief was carried out in 2003 along the line of the Histon to Waterbeach electricity cable (Dickens et al 2005), the trench ran along the edge of the development area, from Cottenham Road (MCB 16769), up the eastern edge (MCB 16770), before running across the area towards Mill Lane Farm (MCB 16772) (figure 2). This investigation produced evidence for Iron Age and Roman activity.
- 2.6.2 In the trench section running east-southeast from Cottenham Road to the corner of the field, five probably post-Medieval ditches were recorded. Although only one contained Post-Medieval pottery, the similar alignment of the others strongly suggests they were of the same date (Dickens et al 2005, 4). These are on a different alignment to the majority of the features identified in this area by areal photography, and so cannot be used to date these cropmarks.
- 2.6.3 Where the cable route turned north-northeast four Medieval/Post Medieval furrows containing residual Roman pottery were identified. A further five linear features, running northwest-southeast were believed to represent Roman ditches (*ibid*, 4). Three Roman coins were also recovered from the topsoil and subsoil during a metal detector survey of this strip.
- 2.6.4 The cable trench then ran east-southeast, along the edge of a drainage ditch towards Mill Lane Farm. In this section significant Roman remains were identified, including eight ditches and a pit. Two of these ditches ran parallel to each other and may have marked a trackway. A single pit was also excavated, which contained imported Central Gaulish Samian pottery dated 120-150AD (*ibid*, 5).

- 2.6.5 Running north-northeast, along the line of Mill lane and the eastern boundary of the development area, further archaeological features were identified in the cable trench. More Post-Medieval furrows were recorded, along with three Late Iron Age features. One of these was a linear, while the other two possibly made up the opposing ditch terminals of an entranceway (*ibid*, 6), all of these features were located to the north of the development area.

#### **Other Archaeological interventions**

- 2.6.6 Cambridgeshire County Council's Archaeological Field Unit (now OA east) conducted a watching brief to the south and east of the proposed development site, along the route of a new water pipeline from Milton to Histon. This revealed little of archaeological interest, but a section was excavated through Akeman Street Roman Road (Ozanne 1991), which runs c.2km to the east of the current study area.
- 2.6.7 Just to the east of the site, at 103 Cottenham Road, an archaeological evaluation was carried out prior to small residential development. This revealed an undated pit and ditch along with a probable medieval plough furrow (Fairbairn 2009). Only a single sherd of abraded Roman pottery was recovered.
- 2.6.8 A further archaeological evaluation took place on land adjacent to 53 Cottenham Road. This identified several features of later Post-Medieval date, but there was a lack of evidence for any Medieval or earlier activity (Schofield et. al. 2006).
- 2.6.9 Significant Late Iron Age and Early Roman remains have very recently been identified during an OA East archaeological evaluation of the former Unwins Nursery site c. 550m to the south of the development area. These included ditches and pits which contained large quantities of Roman pottery suggesting nearby settlement activity (Fletcher 2009).
- 2.6.10 In 1998 a fieldwalking survey was carried out on land c. 250m to the northwest of the site. This revealed a small scatter of Roman and Post-Medieval pottery (Figure 2 MCB 17758).

HER No.	Grid Ref	Keywords	Period	Form	Designation
5196	TL 441 638	Loomweight, Histon and Impington School	Saxon	Object	Find spot
5198	TL 445 649	Roman coin	3 <sup>rd</sup> century	Object	Findspot
8321	TL 450 645	Cropmark enclosure	Unknown	Cropmark	Monument
10843	TL 4369 6403	Two depressions either side of road	Medieval?	Earthwork	Monument
11453	TL 4440 6433	Cropmarks of incomplete enclosures	Unknown	Cropmark	Monument
MCB16216	TL 4397 5483	Two groups of incomplete cropmark enclosures	Unknown	Cropmark	Monument
MCB16769	TL 4419 64496	Four N-S linears	Post Medieval and Unknown	Watching Brief	Monument
MCB16770	TL 4450 6453	Liners and furrows	Roman and Post Medieval	Watching Brief	Monument
MCB16772	TL 4471 6464	Nine linears and pit	Roman	Watching Brief	Monument
MCB16778	TL 4533 6504	Linears, furrows and well?	Late Iron Age, Roman and Post Medieval	Watching Brief	Mounment
MCB17320	TL 4370 6440	Building remains	Post Medieval	Evaluation	Monument
MCB17758	TL 44585	Finds Scatter	Roman and Post-Medieval	Field Walking	Find Spot
MCB 18175	TL 4406 6457	Pit and Linears	Unknown	Evaluation	Monument
55091	TL 4365 6421	House	14 <sup>th</sup> century with later alterations	Building	Listed Building
50592	TL 4377 6437	Pair of cottages	17 <sup>th</sup> century	Building	Listed Building
50601	TL 4417 6370	House	18 <sup>th</sup> century	Building	Listed Building

Table 1: Summary of Historic Environment Records for the surrounding area.

### 3 DEPOSIT MAPPING

In this section, an attempt has been made to map all known finds, ancient monuments and events and, based on this mapping, to predict the existence of further remains within the study area. These predictions should not be used to produce 'constraint maps'.

#### 3.1 Prehistoric

- 3.1.1 There is little evidence for activity in the area prior to the Iron Age. Evidence for Iron Age activity is confined to small amounts of pottery found in ditches to the north of the development area. If Iron Age archaeology is present, it is most likely to be encountered in the north of the study area. However the nature of the archaeological interventions in the area (a watching brief) is such that prehistoric activity could easily have been missed and so it is possible that further remains exist elsewhere on the site.
- 3.1.2 The relative lack of/problematic cropmark evidence does not rule out the possibility of prehistoric archaeology. The underlying geology made interpretation of the air photographs difficult and the presence of sub-surface deposits does not necessarily result in cropmarks being visible.

#### 3.2 Roman

- 3.2.1 In spite of the limited nature of the archaeological investigations in the area, a significant number of Roman features and artefacts have been recorded. Even with the difficulties encountered with the aerial photographs, several features of probable Roman date have also been identified. The potential for Roman archaeology in the development area is therefore moderate to high.
- 3.2.2 Within the parishes of Impington, Histon, Milton, Waterbeach, Horningsea, Cottenham, Oakington, Swavesey, Over and Willingham, in what is the 'fen-edge' land north of Cambridge, is an area where Roman (and preceding Iron Age) rural settlement is well recorded. Lying to the west of the River Cam and north of the modern A14 (The Via Devana Roman Road) the modern arable fields routinely produce remains of this earlier agricultural landscape, and although many of these sites are suggested from aerial photography numerous sites have not appeared from any prior surveys.

#### 3.3 Saxon

- 3.3.1 The only evidence for Saxon activity in this area is a single loom weight recovered c.500m to the south of the site. The likelihood of Saxon activity in the area is therefore small. However, the nature of Saxon remains is often such that they are difficult to identify and their presence is still possible

#### 3.4 Medieval

- 3.4.1 No Medieval remains were identified within the development area and it lies c.600m to the northwest of the probable centre of the medieval village of Histon, making Medieval habitation unlikely. However, the site would lie within the agricultural hinterland and features and structures associated with agricultural practices may well be present. The remnants of a ridge and furrow cultivation system identified during a watching brief on the site (see 2.6.3 above) represents a part of this Medieval/Post-Medieval agricultural system.

## 4 DEGREE OF SURVIVAL

### 4.1 Assessment of Survival

- 4.1.1 This section broadly assesses the degree of survival of archaeological remains in the areas defined by deposit mapping. The assessment takes the form of a prediction model based on probability and not certainty. It is intended as a guide only.
- 4.1.2 The degree of preservation of potential buried remains within the study area is likely to have been affected by ploughing. Recent ploughing may have partially truncated archaeological features, while Medieval and post-medieval agriculture may also have had an effect on earlier deposits.
- 4.1.3 The potential for the survival of organic remains in waterlogged conditions is unlikely in this location. However, it is possible that any deeper features encountered may contain such deposits in their lower fills.

### 4.2 Rating

- 4.2.1 Based on the distribution of known finds and their degree of survival in the study area, as defined in the previous sections, rating can be summarised as follows:

<i>Period</i>	<i>Distribution</i>	<i>Survival</i>
Prehistoric	moderate	unknown
Roman	moderate/high	unknown
Saxon	low	unknown
Medieval	low/moderate	unknown
Post Medieval	low/moderate	unknown

### 4.3 Recommendations

- 4.3.1 Based on the previous sections, the areas within the development site where archaeological remains are more likely to be encountered are shown in figure 7. Given the minimal amount of archaeological work carried out in the immediate area and the difficulty of interpreting aerial photographs, this map can only be seen as an extremely rough guide as to potential likelihood.

#### ***Plot 1***

- 4.3.2 Within Plot 1 an area of 3.9ha, toward the southeast corner is seen to be the least likely area for archaeology to occur (figure 7). This is thought to be the case as no previous work has recorded archaeological features in this location and areal photography has failed to identify potential buried archaeological deposits. However, as previously noted, this suggestion only denotes a likelihood from the very limited available evidence.

#### ***Plot 2***

- 4.3.3 The probability of significant archaeological deposits existing in plot 2 is higher; archaeological features were recorded in trenches running along the western and northern boundary of this plot. In addition, areal photographs give an indication of further buried archaeological deposits. The density, extent and significance of these potential archaeological deposits cannot be ascertained from the information currently available.

***Plot 3***

- 4.3.4 There is no evidence from areal photographs for archaeological remains in plot 3. However, Roman remains were encountered in a trench running along the southern boundary of this plot. On balance, the northern end of plot 3 is less likely to contain significant archaeological remains, but difficulty in interpreting the areal photographs and a lack of archaeological work in this area make this interpretation uncertain.

## 5 CONCLUSIONS

- 5.1.1 The objective of this study was to assess the archaeological potential of the area around Buxhall Farm, Histon, by drawing together all known documentary, cartographic and archaeological evidence from the surrounding area.
- 5.1.2 The site has a moderate level of archaeological potential. Archaeological work previously carried out has revealed predominantly Roman remains. The site sits on good farming land on terrace gravels and offers a good location for early settlement.
- 5.1.3 Some evidence for Iron Age activity was revealed and while there is a possibility of earlier prehistoric land use on the site, previous work in the area has shown there is a low potential for such remains. Similarly, medieval features are less likely and would probably consist of features related to agriculture; ridge and furrow, field boundaries and potential agricultural structures .



## APPENDIX A. AREAL PHOTOGRAPHIC ASSESSMENT

*By Rog Palmer MA MIFA ©Air Photo Services 2009*

### A.1 Summary

- A.1.1 This assessment of aerial photographs examined an area of some 30 hectares (centred TL445644) in order to identify and accurately map archaeological, recent and natural features.
- A.1.2 Archaeological, natural and recent features combine to provide a complexity of information on aerial photographs that extends beyond the Development Area but is common on the same soil association.
- A.1.3 Archaeological features include two enclosures and parts of what may have been a field system associated with them.
- A.1.4 Two circular, or near circular, features were also mapped but may be of natural origin.
- A.1.5 Natural features form a background mesh that includes frost cracks, bands of deeper soil that may be infilled watercourses, pits and groups of pits and patches of darker soil. All are thought likely to have periglacial origins.
- A.1.6 Boundaries of post-medieval field divisions have been mapped.
- A.1.7 Original photo interpretation and mapping was at 1:2500 level.

### A.2 Introduction

- A.2.1 This assessment of aerial photographs was commissioned to examine an area of some 30 hectares (centred TL445644) in order to identify and accurately map archaeological, recent and natural features and thus provide a guide for field evaluation. The level of interpretation and mapping was to be at 1:2500.

### A.3 Archaeological and Natural Features From Aerial Photographs

- A.3.1 In suitable cultivated soils, sub-surface features – including archaeological ditches, banks, pits, walls or foundations – may be recorded from the air in different ways in different seasons. In spring and summer these may show through their effect on crops growing above them. Such indications tend to be at their most visible in ripening cereal crops, in June or July in this part of Britain, although their appearance cannot accurately be predicted and their absence cannot be taken to imply evidence of archaeological absence. In winter months, when the soil is bare or crop cover is thin (when viewed from above), features may show by virtue of their different soils. Upstanding remains, which may survive in unploughed grassland, are also best recorded in winter months when vegetation is sparse and the low angle of the sun helps pick out slight differences of height and slope.
- A.3.2 Such effects are not confined only to archaeological features as almost any disturbance of soil and bedrock can produce its own range of shadow, crop and soil differences. On the soils of this assessment area we may expect indications of periglacial cracks – which may be mistaken for archaeological ditches – and of patches of deeper and shallower soil. Both can affect the growth of crops and become visible at the same times as archaeological features. The visible edges and extents of deep soil areas tend to vary from year to year with the amount of ground moisture content.

## A.4 Photo Interpretations and Mapping

### *Photographs examined*

- A.4.1 The most immediately informative aerial photographs of archaeological subjects tend to be those resulting from observer-directed flights. This activity is usually undertaken by an experienced archaeological observer who will fly at seasons and times of day when optimum results are expected. Oblique photographs, taken using a hand-held camera, are the usual products of such investigation. Although oblique photographs are able to provide a very detailed view, they are biased in providing a record that is mainly of features noticed by the observer, understood, and thought to be of archaeological relevance. To be able to map accurately from these photographs it is necessary that they have been taken from a sufficient height to include surrounding control information.
- A.4.2 Vertical photographs cover the whole of Britain and can provide scenes on a series of dates between (usually) 1946-7 and the present. Many of these vertical surveys were not flown at times of year that are best to record the archaeological features sought for this Assessment and may have been taken at inappropriate dates to record crop and soil responses that may be seen above sub-surface features. Vertical photographs are taken by a camera fixed inside an aircraft and with its exposures timed to take a series of overlapping views that can be examined stereoscopically. They are often of relatively small scale and their interpretation requires higher perceptive powers and a more cautious approach than that necessary for examination of obliques. Use of these small-scale images can also lead to errors of location and size when they are rectified or re-scaled to match a larger map scale.
- A.4.3 Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and the National Monuments Record: Air Photographs (NMRAP), Swindon. Additional aerial photographs came from flights made by the writer and are held at Air Photo Services. Photographs included those resulting from observer-directed flights and routine vertical surveys. Images current on Google Earth and Flashearth at the time of this work (July 2009) were also examined.
- A.4.4 Photographs consulted are listed in the Appendix to this report.

### *Base maps*

- A.4.5 Digital data from original survey at scale of 1:2500 or greater were provided by the client.

### *Study Area*

- A.4.6 Photographs were examined in detail for an area extending at least 100m beyond the Assessment Area.

### *Photo interpretation and mapping*

- A.4.7 All photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. Digital copies of the most informative were transformed to match the digital data using the specialist program AirPhoto (Scollar 2002). All digital photographs were enhanced using the default setting in AirPhoto before being examined on screen. Transformed files were set as background layers in AutoCAD Map, where features were overdrawn, making reference to the original prints, using standard conventions. Layers from this final drawing have been used to prepare the figures in this report and have been supplied to the client in digital form.

A.4.8 Images in Google Earth were initially viewed and selected from within AirPhoto which automatically geo-references saved files (Scollar and Palmer 2008). These were then imported into AutoCAD, interpreted and overdrawn as necessary.

### **Accuracy**

A.4.9 AirPhoto computes values for mismatches of control points on the photograph and map. In all transformations prepared for this assessment the mean mismatches were less than  $\pm 1.50\text{m}$ . These mismatches can be less than the survey accuracy of the base maps themselves and users should be aware of the published figures for the accuracy of large scale maps and thus the need to relate these mismatches to the Expected Accuracy of the Ordnance Survey maps from which control information was taken.

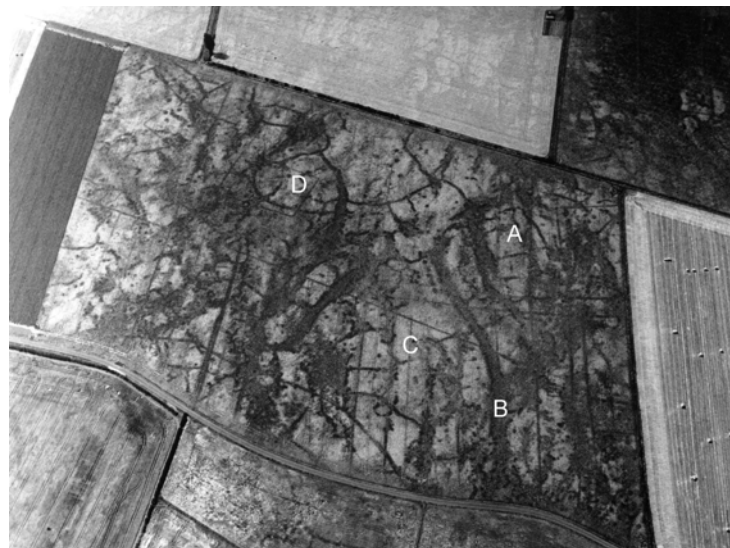
## **A.5 Commentary**

### **Soils**

A.5.1 The Soil Survey of England and Wales (SSEW 1983) shows the area to be situated on river terrace and chalky drift (soil association 512f: Milton) that overlays a bedrock of Oxford Clay (soil association 411c). Some terrace soils are well drained and show complex soil patterns.

### **Deciphering the photographs**

A.5.2 At first glance the aerial photographs of the Development area and its immediate environs seem to record a complex archaeological landscape (below). After further examination this was thought not to be the case. There is certainly a complex landscape, but it is more likely to result from periglacial action than from ditch digging human communities. In general terms, the ground is fissured by frost cracks (A) and pits among which are broader bands (B) that seem likely to indicate soil-filled hollows that were probably former watercourses. Straight lines (C) show former ditched field divisions that may, in some cases, match those on early maps. Among this mixture of features are other thin-lined forms (for example, D) that seem likely to indicate the archaeological features in this area.



A.5.3 All of these are showing on this and other photographs as differences in the growth of cereal crops. The colour photographs show that the crops in most fields are ripening and have turned light green-yellow. Against this background are bands of green

The photograph illustrates the range of crop-marked features in Plot 2 of the Development Area. See text for explanation.  
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crop that remain over deeper soil deposits, be these from natural causes or cut by former inhabitants. The division into feature types is based on differences in the character of the crop lines, in the regularity of their shape and form and on experience

gained during many years of photo interpretation. It is not claimed to be 100% correct, nor could it be, but it represents a 'best guess' based on the above criteria after lengthy examination of the photographs. Wilson (2000, 163-209) has illustrated and written at length about these and other forms of non-archaeological features and their appearance on aerial photographs.

### ***Archaeological features***

- A.5.4 Figure 5 is a map of those features thought to be archaeological and it also shows recent field divisions. The archaeological features are almost all visible on photographs as regular lines of crop that have a fairly uniform width. They include two enclosures – one rectangular (TL44546445), the other D-shaped (TL44476440) – that seem to be on a common alignment with ditches to their west that may remain from a system of fields. Within the 'fields' are four places where ditches are double and may indicate tracks.
- A.5.5 One near-circular feature was mapped at TL44326442. This is uncharacteristically broad ditched and may be a combination of natural features that the eye forms into a circle. For these reasons it is shown as a 'possible archaeological ditch'. A second circular feature is also slightly suspect as archaeological and appears to be situated in isolation at TL44526426. This also may be of natural origin.
- A.5.6 Except for one field in the angle of Plot 1 and 2, no archaeological features were identified within the larger Study Area. There are, however, several sites close by and to the east of the Study Area and these show the local soil to have been fairly densely occupied in prehistoric and Roman times. Sites mapped within the Development Area are one small part of this larger landscape.
- A.5.7 None of the photographs showed evidence of medieval cultivation. However, there are headlands, aligned roughly NE-SW in fields to the east and the slightest suggestion of one on the same alignment that is below, or close to, the more recent field ditches that cross Plots 2 and 3 in the Development Area. This has not been mapped.

### ***Non-archaeological features***

- A.5.8 Figure 6 underlays the mapped features with a mosaic made of parts of four transformed photographs that have been reduced to black and white images. This is to show the complexity of the local soils and to provide a guide for any evaluation trenches that may cross them. These are patterns of frost cracks – the thinner lines – and broader bands that may be soil-filled hollows or former watercourses. Scattered among these are many pits that are also likely to result from periglacial action (but could include some of anthropogenic origin) and the larger dark patches where pitting and erosion has created pockets of slightly deeper soil.
- A.5.9 The mosaics were not made for most fields without the Development Area although similar patterns can be observed all over this particular soil association.
- A.5.10 Boundaries of more recent, post medieval, field divisions have been mapped where they have been visible on the photographs. These show at least two phases of land allotment in Plot 2 that may have extended into the blank area of Plot 3.

### ***Land use***

- A.5.11 On all dates of photography, most fields within the Development Area were in arable use. The exception was in the western part of Plot 1 which was used for growing fruit between 1946 and 1961 but had been converted to arable by 1968. This arable use means that crops may have been indicating sub-surface features on photographs taken

at appropriate dates although the archaeological and natural evidence was photographed once in 1976 and then in and after 1990.

A.5.12 The two blank areas in Figure 6 are where fields have never had responsive crops when they have been photographed. It is likely that the natural features continue into those areas, but their archaeological content remains unknown. Note also that the dark areas in Plot 1 and 3 indicate areas of deeper soil in which archaeological features may not be visible through their effect on crops. All these areas require evaluation on the ground to assess their archaeological potential.

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- Scollar, I., 2002. Making things look vertical, in Bewley, R.H. and Rączkowski, W., (ed). *Aerial archaeology: developing future practice*. NATO Science Series, Vol 337, 166-172.
- Scollar, I. and Palmer, R., 2008. Using Google Earth Imagery. *AARGnews* 37, 15-21.
- SSEW, 1983. *Soils of England and Wales: sheet 4: Eastern England (1:250,000)*. Soil Survey of England and Wales, Harpenden.
- Wilson, D.R., 2000. *Air Photo Interpretation for Archaeologists*. Tempus, Stroud.

## APPENDIX

### Aerial photographs examined

Source: *Air Photo Services Cambridge*

#### Oblique photographs

90.39/7-8	19 July 1990	TL446645
94.139/ 6- 9	14 July 1994	TL445644
94.149/15	14 July 1994	TL445644

Source: *Cambridge University Collection of Aerial Photographs*

#### Oblique photographs

ID	SUBJECT	NGRE	NGRN	DATE
AWR54	Soil marks, Histon, running ENE from	544500	265000	31 Jan 1969
AWR55	Soil marks, Histon, running ENE from	544500	265000	31 Jan 1969
BY18	Crop patterns, 0.75 mile ENE of Histon	544600	264500	28 Jun 1976

#### Vertical photographs

ID	DATE	SUBJECT	SCALE	NGRE	NGRN
RC8JL 148-149	30 Jun 1987	South Cambridgeshire District Survey	10000	544766	264465
RC8knBG 203	12 Jun 1988	Cambridgeshire	10000	545191	264502

RC8knCP 210-211	19 Jul 1990	Vegetation, Willingham & Histon	6000	544220	264063
RC8MB 175	25 Jul 1990	Crop marks north east and north west of Histon	5000	545540	263825
RC8MB 176	25 Jul 1990	Crop marks north east and north west of Histon	5000	545133	264054
RC8MB 177	25 Jul 1990	Crop marks north east and north west of Histon	5000	544795	264333
RC8MB 178	25 Jul 1990	Crop marks north east and north west of Histon	5000	544370	264604

Source: National Monuments Record: Air Photographs

### Specialist collection

Photo reference	Film and frame number	Date	NGR
TL 4464 / 1	NMR 965 / 321-324	11 JUL 1976	TL 445644
TL 4464 / 2	NMR 1829 / 267	23 JUL 1980	TL 440649
TL 4464 / 3	NMR 4613 / 09	19 JUL 1990	TL 445643
TL 4464 / 4	NMR 15136 / 08	14 JUL 1994	TL 444645
TL 4464 / 5	NMR 15136 / 09	14 JUL 1994	TL 443646
TL 4464 / 6	NMR 15136 / 10	14 JUL 1994	TL 443645
TL 4464 / 7	NMR 15136 / 11	14 JUL 1994	TL 445642
TL 4464 / 8	NMR 15136 / 12	14 JUL 1994	TL 444644
TL 4564 / 1	NMR 4613 / 10	19 JUL 1990	TL 453640
TL 4564 / 3	NMR 15136 / 04	14 JUL 1994	TL 450641
TL 4564 / 4	NMR 15136 / 05	14 JUL 1994	TL 451640
TL 4564 / 5	NMR 15136 / 06	14 JUL 1994	TL 451640
TL 4564 / 6	NMR 15136 / 07	14 JUL 1994	TL 451642
TL 4564 / 7	NMR 15127 / 02	14 JUL 1994	TL 452640
TL 4564 / 8	NMR 15127 / 03	14 JUL 1994	TL 450642
TL 4564 / 13	NMR 15487 / 17	16 JUL 1996	TL 452640
TL 4564 / 14	NMR 15508 / 13	16 JUL 1996	TL 452641
TL 4564 / 15	NMR 15508 / 14	16 JUL 1996	TL 452641

### Vertical collection

Sortie number	Library number	Camera position	Frame number	NGR	Date	Scale 1:
RAF/106G/UK/1490	326	RP	3403	TL 447 653	09 MAY 1946	10000
RAF/106G/UK/1490	326	RP	3480	TL 453 654	09 MAY 1946	10000
RAF/106G/UK/1490	326	RP	3481	TL 445 654	09 MAY 1946	10000
RAF/106G/UK/1490	326	RP	3482	TL 438 654	09 MAY 1946	10000
RAF/106G/UK/1490	326	RS	4321	TL 454 634	09 MAY 1946	10000
RAF/106G/UK/1490	326	RS	4322	TL 446 634	09 MAY 1946	10000
RAF/106G/UK/1490	326	RS	4323	TL 438 634	09 MAY 1946	10000
RAF/106G/UK/1490	326	RS	4393	TL 446 635	09 MAY 1946	10000
RAF/58/1119	1455	F21	114	TL 455 643	11 MAY 1953	10000
RAF/58/1119	1455	F21	115	TL 456 649	11 MAY 1953	10000
RAF/58/1119	1455	F22	114	TL 432 643	11 MAY 1953	10000
RAF/58/1119	1455	F22	115	TL 433 649	11 MAY 1953	10000
RAF/540/1143	1462	F22	57	TL 449 648	09 JUN 1953	10000
RAF/540/1143	1462	F22	58	TL 449 642	09 JUN 1953	10000
RAF/58/4438	2021	F21	44	TL 438 645	05 JUN 1961	10500
RAF/58/4438	2021	F21	45	TL 448 646	05 JUN 1961	10500

MAL/68052	5154	V	99	TL 453 633	04 JUL 1968	10000
MAL/68052	5154	V	100	TL 445 633	04 JUL 1968	10000
MAL/68060	5156	V	191	TL 445 650	12 AUG 1968	10000
MAL/68011	5258	V	202	TL 455 635	24 MAR 1968	10000
MAL/69070	7126	V	177	TL 442 632	22 JUL 1969	10500
MAL/69070	7126	V	178	TL 453 632	22 JUL 1969	10500
MAL/69070	7126	V	204	TL 451 647	22 JUL 1969	10500
MAL/69070	7126	V	205	TL 441 647	22 JUL 1969	10500
OS/71498	10314	V	114	TL 443 644	08 SEP 1971	7500
OS/71498	10314	V	115	TL 443 650	08 SEP 1971	7500
OS/71498	10314	V	167	TL 456 652	08 SEP 1971	7500
OS/71498	10314	V	168	TL 456 645	08 SEP 1971	7500
OS/67145	11702	V	112	TL 443 650	05 JUN 1967	7500
OS/67145	11702	V	113	TL 443 643	05 JUN 1967	7500
OS/67145	11702	V	157	TL 456 641	05 JUN 1967	7500
OS/67145	11702	V	158	TL 456 648	05 JUN 1967	7500
OS/91030	13804	V	47	TL 441 657	12 APR 1991	8000
OS/91030	13804	V	48	TL 449 656	12 APR 1991	8000
OS/92378	14148	V	14	TL 441 645	29 JUL 1992	8200
OS/92378	14148	V	15	TL 447 646	29 JUL 1992	8200
OS/92378	14148	V	16	TL 454 646	29 JUL 1992	8200
OS/94279	14719	V	125	TL 449 658	15 AUG 1994	8000
OS/94279	14719	V	126	TL 443 658	15 AUG 1994	8000
OS/94280	14720	V	176	TL 438 644	15 AUG 1994	8000
OS/94280	14720	V	177	TL 445 643	15 AUG 1994	8000
OS/94280	14720	V	178	TL 452 643	15 AUG 1994	8000

***Most informative photographs***

94.139/6  
 94.139/8  
 94.139/9  
 RC8-MB 178  
 TL4464/1/323

## APPENDIX B. BIBLIOGRAPHY

Dickens, A., Pattern, R. and Swaysland, C. 2005; *Histon to Waterbeach Cable, Cambridgeshire. Archaeological Watching Brief 2003*. Cambridge Archaeological Unit Report 692.

Fairbairn, J. 2009; *Land at 103 Cottenham Road, Histon, Coambridgeshire. Archaeological Evaluation Report*. Oxford Archaeology East Report no. 1079.

Fletcher, T. 2009; *Iron Age Boundaries and Romano-British Settlement at the Unwins Nursery Site, Impington Lane, Impington, Cambridgeshire*. Oxford Archaeology East Report no. 1109.

Ozanne, R.W.G. 1991; *Mere Way Roman Road at Milton – Milton to Histon Pipeline*. Cambridgeshire County Council Archaeological Field Unit Report no. 039.

Taylor, A. 1998; *Archaeology of Cambridgeshire Vol 2: South East Cambridgeshire and the Fen Edge*. Cambridgeshire County Council.



## APPENDIX C. OASIS REPORT FORM

All fields are required unless they are not applicable.

### Project Details

OASIS Number	oxfordar3 - 62202			
Project Name	Land at Buxhall Farm, Histon; an archaeological desk based assesment			
Project Dates (fieldwork)	Start	10-07-2009	Finish	20-07-2009
Previous Work (by OA East)	No	Future Work	Unknown	

### Project Reference Codes

Site Code	HIS BUX 09	Planning App. No.	n/a
HER No.		Related HER/OASIS No.	n/a

### Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPG16
Development Type	Housing Estate

**Please select all techniques used:**

#### DBA

<input checked="" type="checkbox"/> Aerial Photography - interpretation	<input checked="" type="checkbox"/> Documentary Search
<input type="checkbox"/> Aerial Photography - new	<input checked="" type="checkbox"/> Visual Inspection (Site Visit)

### Monument Types & Period

List feature types using the [NMR Monument Type Thesaurus](#) together with their respective periods. If no features were found, please state "none".

Monument	Period
n/a	Select period...
	Select period...
	Select period...
	Select period...

### Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	n/a
District	South Cambridgeshire		
Parish	Hston		
HER	Cambridgeshire		
Study Area	30.6 ha	National Grid Reference	TL 4427 6425

### Project Originators

Organisation	OA EAST
Project Brief Originator	n/a
Project Design Originator	n/a
Project Manager	Steve Macaulay
Supervisor	Nick Gilmour

### Project Archives

Physical Archive	Digital Archive	Paper Archive
n/a	OA East, Bar Hill	CCC Store Landbeach
n/a	HIS BUX 09	HIS BUX 09

### Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
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Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media	Paper Media
<input type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input type="checkbox"/> Correspondence
<input type="checkbox"/> Images	<input type="checkbox"/> Diary
<input checked="" type="checkbox"/> Illustrations	<input type="checkbox"/> Drawing
<input type="checkbox"/> Moving Image	<input type="checkbox"/> Manuscript
<input type="checkbox"/> Spreadsheets	<input type="checkbox"/> Map
<input type="checkbox"/> Survey	<input type="checkbox"/> Matrices
<input checked="" type="checkbox"/> Text	<input type="checkbox"/> Microfilm
<input type="checkbox"/> Virtual Reality	<input type="checkbox"/> Misc.
	<input type="checkbox"/> Research/Notes
	<input type="checkbox"/> Photos
	<input type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input type="checkbox"/> Sections
	<input type="checkbox"/> Survey

### Notes:

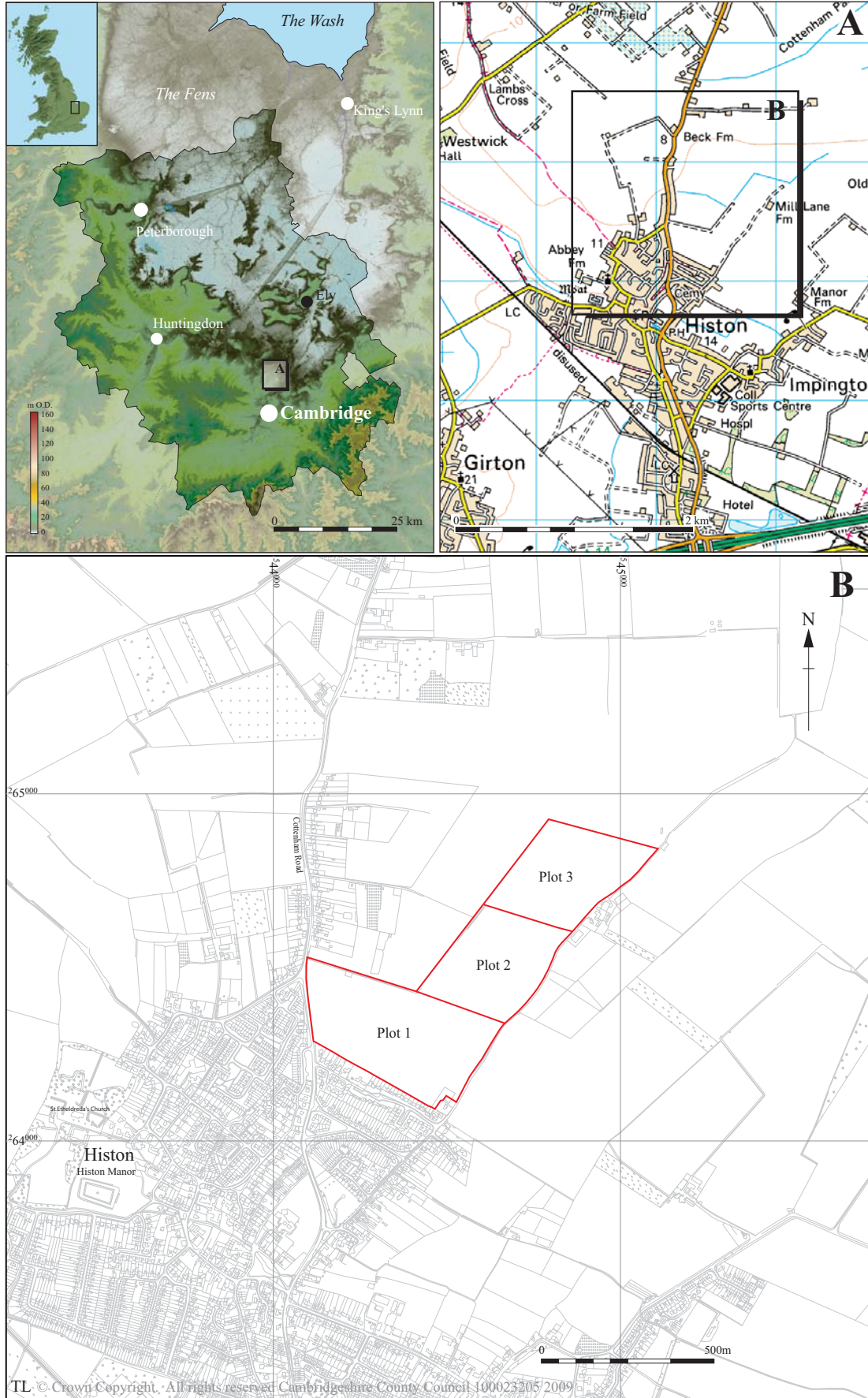


Figure 1: Location of development areas outlined (red)

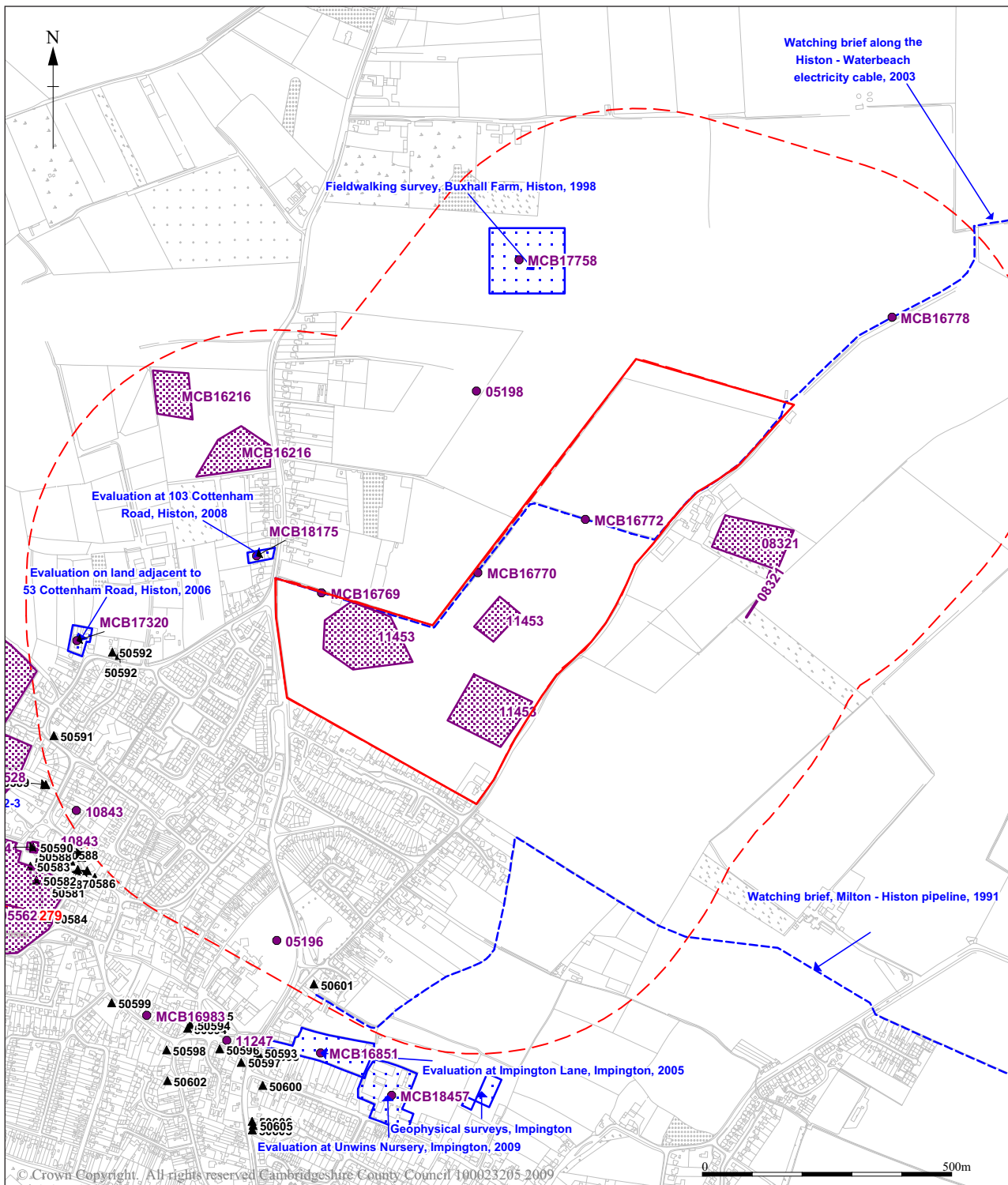


Figure 2: Map showing location of entries on the Historic Environment Record



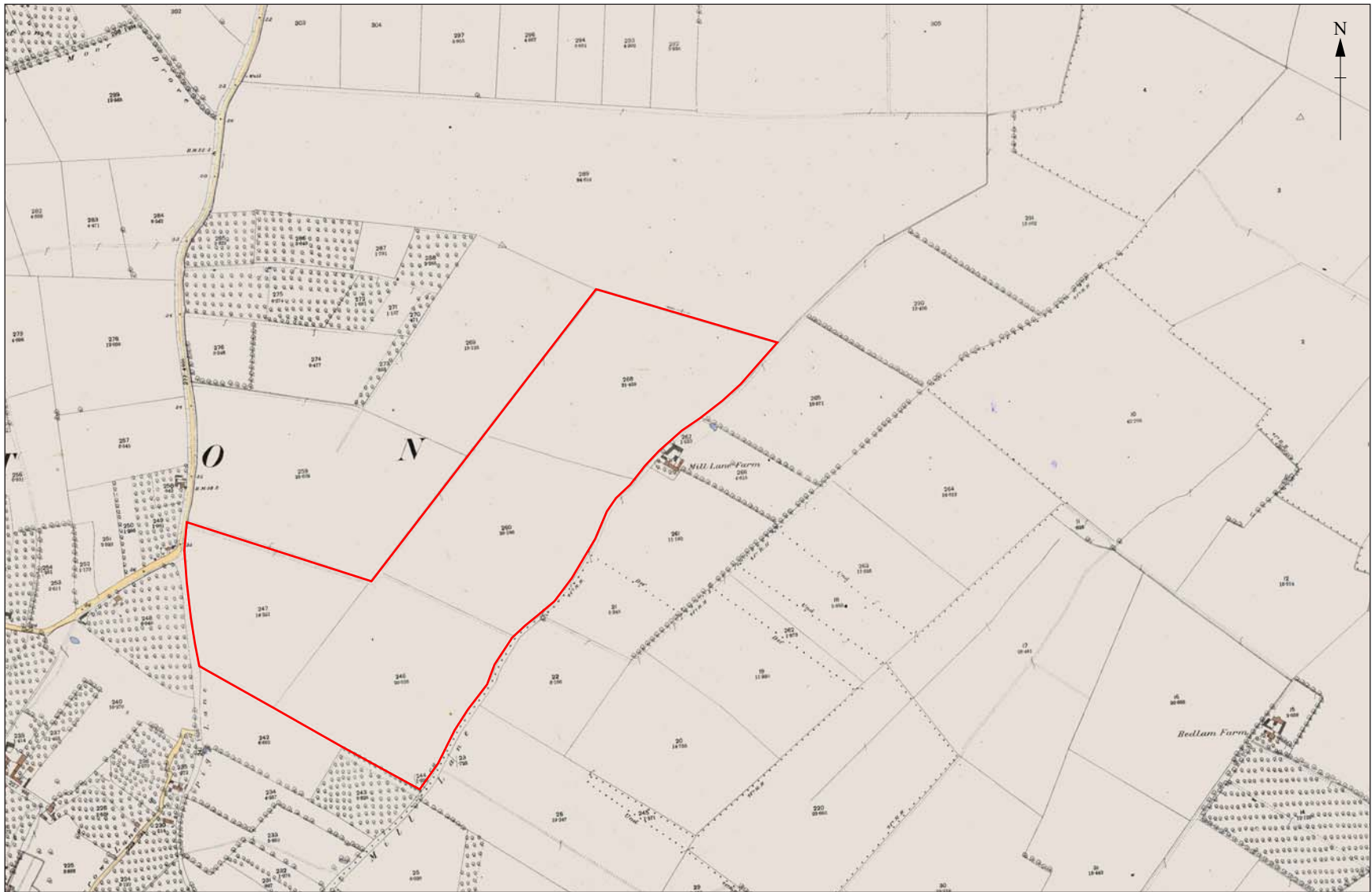


Figure 3: 1st edition Ordnance Survey map (1885), with development area (red)

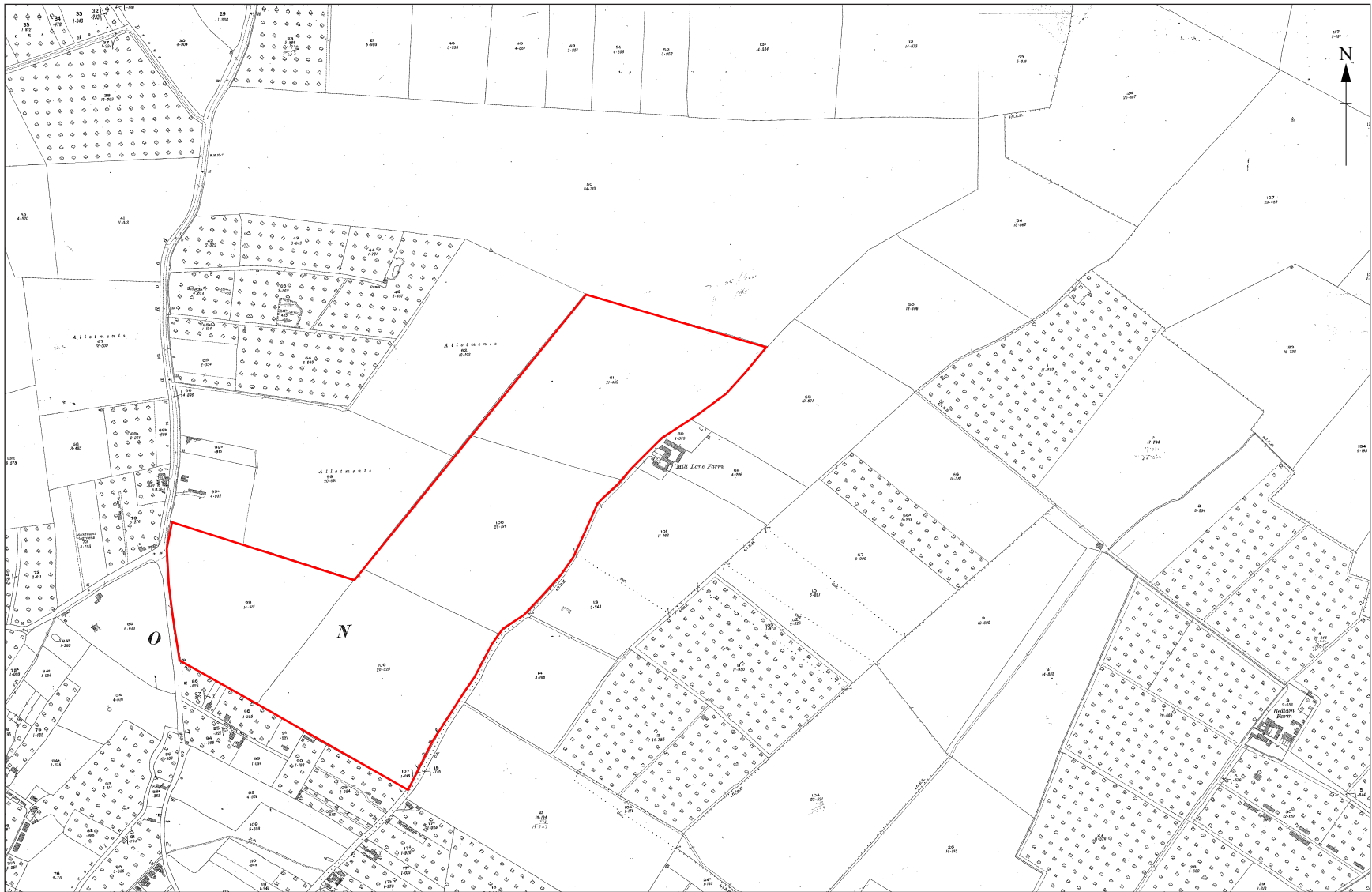


Figure 4: 3rd edition Ordnance Survey map (1926), with development area (red)

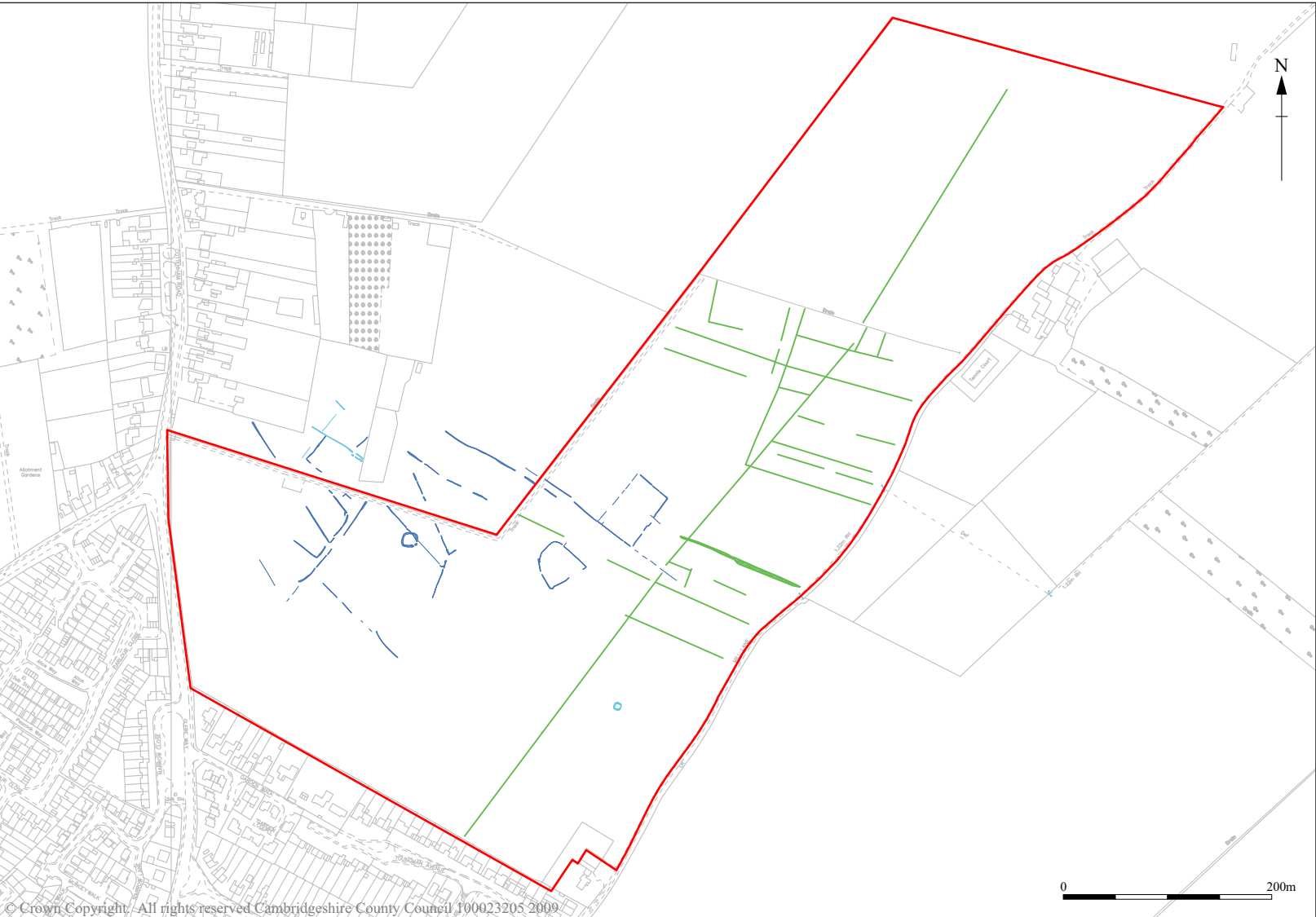


Figure 5: Interpretative map of aerial photographic anomalies

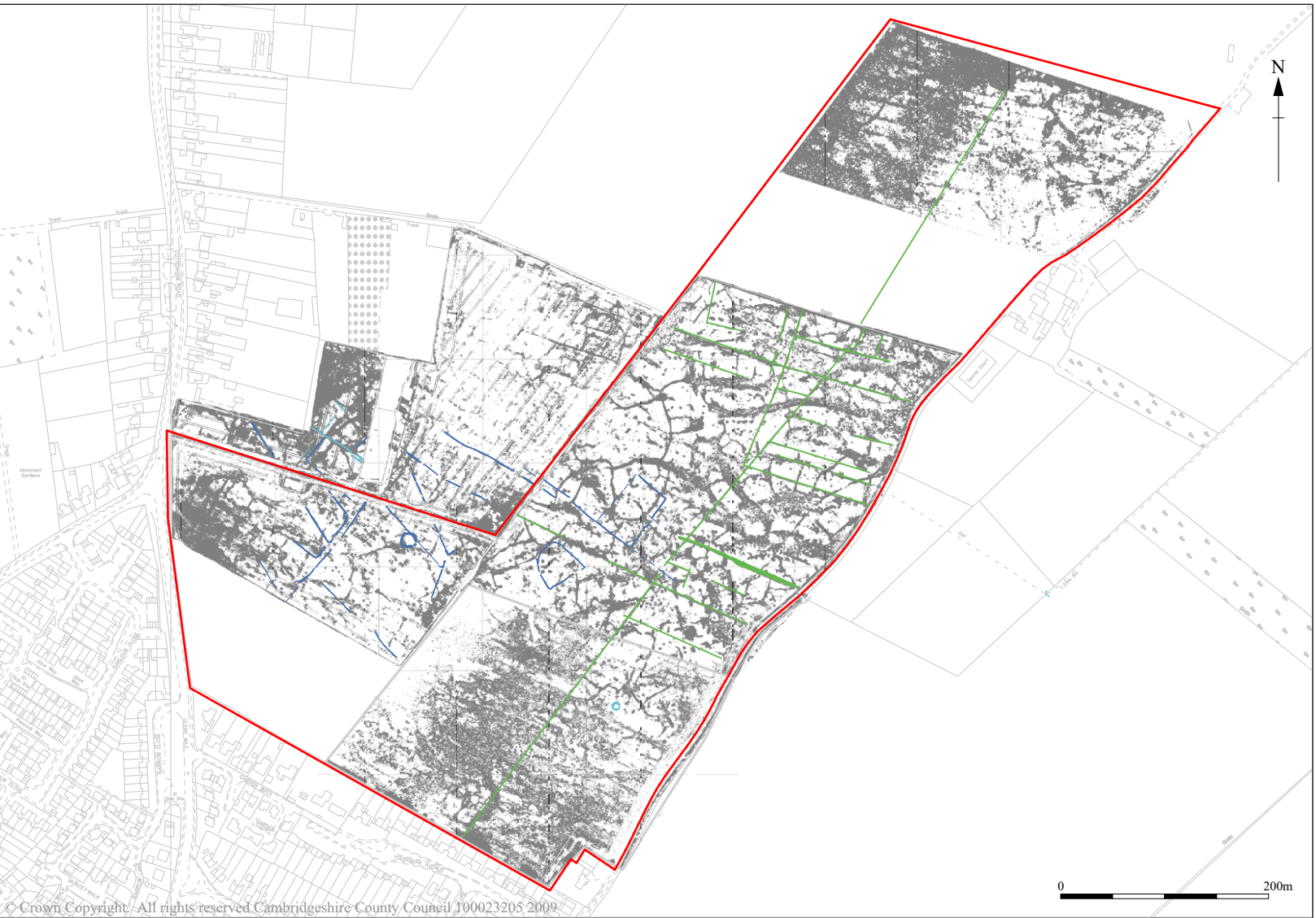


Figure 6: Interpretative map of aerial photographic anomalies including transformed photographs showing geological features



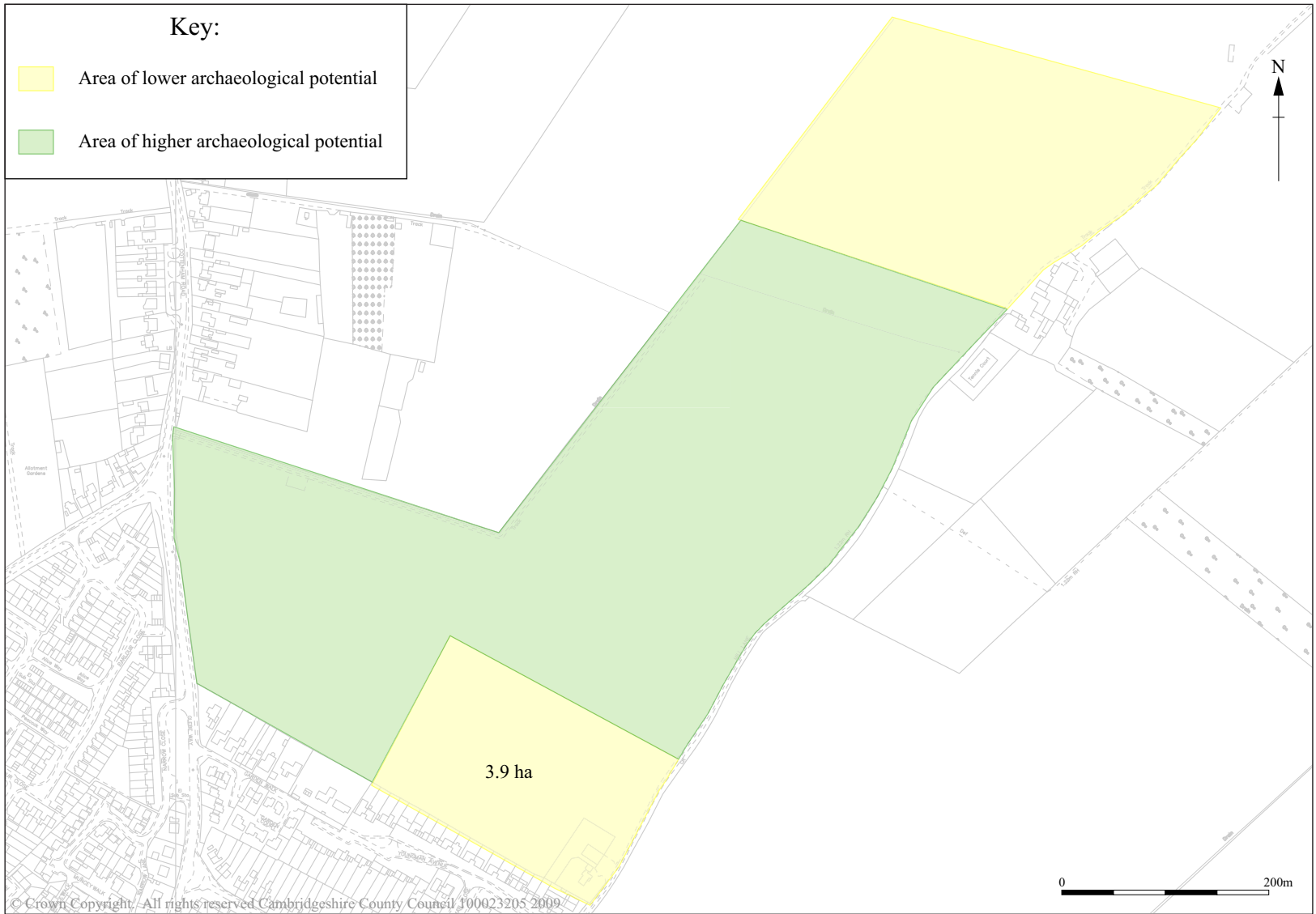


Figure 7: Map showing areas of higher potential archaeological interest



#### **Head Office/Registered Office**

Janus House  
Osney Mead  
Oxford OX2 0ES

t: +44 (0) 1865 263 800  
f: +44 (0) 1865 793 496  
e: [info@thehumanjourney.net](mailto:info@thehumanjourney.net)  
w: <http://thehumanjourney.net>

#### **OA North**

Mill 3  
Moor Lane  
Lancaster LA1 1GF

t: +44 (0) 1524 541 000  
f: +44 (0) 1524 848 606  
e: [oanorth@thehumanjourney.net](mailto: oanorth@thehumanjourney.net)  
w: <http://thehumanjourney.net>

#### **OA East**

15 Trafalgar Way  
Bar Hill  
Cambridgeshire  
CB23 8SQ

t: +44 (0) 1223 850500  
f: +44 (0) 1223 850599  
e: [oaeast@thehumanjourney.net](mailto: oaeast@thehumanjourney.net)  
w: <http://thehumanjourney.net/oaeast>

#### **OA Méditerranée**

115 Rue Merlot  
ZAC La Louvade  
34 130 Maugeio  
France

t: +33 (0) 4.67.57.86.92  
f: +33 (0) 4.67.42.65.93  
e: [oamed@oamed.fr](mailto: oamed@oamed.fr)  
w: <http://oamed.fr/>



**Director:** David Jennings, BA MIFA FSA

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