GROVE LANE, ELLINGTON, CAMBRIDGESHIRE

ARCHAEOLOGICAL FIELD EVALUATION

Parish: Ellington
NGR: TL164/721

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Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the specification. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

This report was written by Reuben Thorpe and Wesley Keir. The re-analysis of aerial photographs was undertaken by Roger Palmer and is contained at the rear of the report as Appendix 2. The illustrations in this report were prepared by Joan Lightning except for Figure 2, which is provided courtesy of the Cambridgeshire SMR and Figure 3 which was compiled by Roger Palmer. Finds analysis and reporting were by Jackie Wells.

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Structure of this report

After the introductory section one, this report presents the results of the non-intrusive desk-based assessment in section two, followed by a summary of the results of the trial excavation in section three. A synthesis of the results and their significance is presented in section four. Summary details from the evaluation trenches are presented in Appendix 1. The full report on the re-plotting and re-interpretation of the aerial photographs is contained in Appendix 2. All figures are bound at the end of this report.

Key Terms

Throughout this report the following terms or abbreviations are used:

CPA	Cambridgeshire County Council Planning Archaeologist
Client	Bedfordia Developments Ltd
SMR	Sites and Monuments Record

Brief	Brief for Archaeological Evaluation (Grove Lane, Ellington).
IFA	Institute of Field Archaeologists
Procedures Manual	*Procedures Manual Volume 1 Fieldwork*, 2nd edn, 2001 Albion Archaeology

Non-Technical Summary

Huntingdon DC has granted planning consent (00/01585/OUT) to Bedfordia Developments Ltd for re-development of land at Grove Lane, Ellington, Cambridgeshire, NGR TL164/721. An archaeological condition on the consent requires a programme of works prior to development, to allow an evaluation of the archaeological potential of the site and inform any possible mitigation strategies.

The County Planning Archaeologist issued a brief for an evaluation comprising an archaeological desk-based assessment, the re-plotting and analysis of relevant aerial photographs and trial trench excavation. Its aims were to determine the date, character and extent of any archaeological remains within the development area. The evaluation was undertaken by Albion Archaeology on behalf of Bedfordia Developments Ltd.

The archaeological desk-based assessment and re-plotting of the aerial photographs and their assessment revealed the development area to be within an historic landscape largely dominated by the evidence of medieval fields and cultivation terraces associated with the medieval village of Ellington 200m to the south. However, they did not demonstrate the presence of archaeological deposits within the development area.

A programme of extensive trial trenching failed to identify any significant archaeological deposits. The trial trenches revealed modern features and deposits associated with levelling up of the land to the north of Ellington Brook, dredged material from the brook to the south of Ellington Brook and make-up layers associated with the depot site at the north of the development area. It is possible that the site has been used exclusively for pasture in the past, as it is in the present, due to its susceptibility to flooding.

1. INTRODUCTION

1.1 Planning Background

Planning permission (00/01585/OUT) has been granted for the re-development of a former 'depot and works', at Grove Lane, Ellington, Cambridgeshire as a distribution centre. However, due to the inferred potential of the site to contain remains of archaeological significance, an archaeological condition was placed on the consent which required the implementation of an archaeological field evaluation. A *Brief for Archaeological Evaluation* was prepared by Cambridgeshire County Council's Planning Archaeologist (CPA), dated 2nd June 2003.

1.2 Stages of the Evaluation

The evaluation was carried out in three separate, though closely linked stages. Initially a visit was made to the Cambridgeshire Sites and Monuments Record (SMR) to facilitate the production of a desk-based assessment. Albion Archaeology then commissioned a re-appraisal, re-plotting and re-interpretation of the aerial photographs covering the development area and the area within 1km of the village of Ellington (500m from application area). Finally, a trial trench excavation was carried out between Friday 5th March and Thursday 11th March.

1.3 Site Location and Description

The site lies 200m to the north-east of the historic village of Ellington, immediately to the north of the A14 Kettering to Cambridge road, centred on NGR TL 164/721 (Figure 1).

The development area encloses an area of some 5.45 ha, on the north bank of the Ellington brook, a tributary of the River Great Ouse. Current land use consists of disused industrial works and depot to the north of the plot, a spinney of pine trees to the north-west and fallow open ground, adjacent to the Ellington brook, to the south.

The development area is relatively low lying, situated on a floodplain at around 20m OD and has been susceptible to flooding, the last significant episode of which occurred in 1981. The underlying geology consists of alluvial deposits over a substrate of Jurassic and Cretaceous clays.

1.4 Archaeological Background

An archaeological desk-based assessment, including a site walkover, a consultation at the Cambridgeshire SMR on 14th August 2003 and the re-plotting and analysis of relevant aerial photographs[1] were undertaken prior to preparation of a project design[2] for the approval of the CPA.

[1] *Grove Lane, Ellington, Cambridgeshire: Aerial Photographic Assessment*. Palmer, R. 2003. Air Photo Services Report No 2003/13.

[2] *Grove Lane, Ellington, Cambridgeshire: Project Design for Archaeological Field Evaluation*. Albion Archaeology document 2003/50

The development area lies within an historic landscape, in an area largely dominated by evidence of medieval fields and cultivation terraces associated with the medieval village of Ellington 200m to the south. Manor Farm and Yew Tree Farm both date from the 16th century and also lie 200m to the south of the development area. Evidence, some equivocal, of earlier human habitation is present in the wider, surrounding, area[3] though there is no trace of such evidence within the development area itself.

[3] Ibid, contra Cambridgeshire Sites and Monuments (SMR) record No 10803.

2. DESK-BASED ASSESSMENT

2.1 Introduction

This assessment examines an area of some 5.45 hectares (centred TL164721) in order to identify and accurately map archaeological and natural features. The level of interpretation and mapping was at 1:2500 for features other than traces of medieval / post-medieval cultivation terraces (ridge and furrow).

2.2 The Study Area.

The study area encompassed an area of 1km in diameter from the centre of the development area. Digital data from a survey scale of 1:2500 were provided by Albion Archaeology to Air Photo Services. The photographs were examined in detail for the four kilometre squares, centred TL1672, covered by the digital data. (Figures 2 and 3)

2.3 Previous Archaeological Work

No previous archaeological work has been undertaken within the study or development area.

2.3.1 Known Sites within the Study Area

A study of the SMR revealed that no archaeological sites are listed within the development area, though nine are listed from within the study area.

SMR No	NGR	Monument type/Description	Period
07609	TL 166/727	Cropmark	Unknown
10803	TL 155/722	Enclosures	Unknown
10809	TL 158/723	Hollow way, ridge and furrow	Medieval
00758	TL 1578/7179	Windmill	Medieval/post-medieval
00767	TL 1602/7178	Church	Medieval/post-medieval
00768	TL 160/719	Cottage	Post-medieval
03712	TL 1629/7185	Moated manor	Medieval
03712a	TL 162/718	House	Post-medieval

Table 1: SMR sites within the study area

The bulk of the sites listed within the SMR relate to the medieval and post-medieval occupation of the village of Ellington and lie to the south of the development area, on the opposite side of the Ellington Brook. Of the three sites near to the development area to the north of the Ellington Brook, one, 10809, which lay some 550m to the west of the development area is recorded as remnants of medieval cultivation and field access. Two other listed sites, 07609 and 10803 recorded as cropmarks within the SMR also appear to relate to either medieval cultivation (07609) see 2.5.1. below or the extraction of clay (1083) see 2.5.2 below.

2.4 Aerial Photographic Analysis

The results of the aerial photographic analysis are summarised below. The full report is presented in Appendix 2.

2.4.1 Photographs Examined

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and Cambridgeshire (Huntingdon) Record Office. If results were good, or seemed promising, photographs at the National Monuments Record: Air Photographs (NMRAP) would have been examined. However, this was considered unnecessary. Photographs included those resulting from specialist archaeological reconnaissance and routine vertical surveys.

Date	Flight details	Image numbers	Image type	Location
**31 May 1962*	AEV	58	O	CUCAP
12 Apr 1968	AUA	92-99	O	CUCAP
* 27 Apr 1981	COD	75-77	O	CUCAP
*30 Aug 1988	RC8-KnBO	144-146	V	CUCAP
*10 Aug 1945	106G/UK/635:	3272-3274, 4354-4356	V	CHRO
13 May 1969	HSL/UK/69876:	096-097	V	CHRO
Spring 1971	BKS:	647274, 647185-647187	V	CHRO

Table 2: Aerial photographs consulted

O – Oblique V- Vertical * - most useful photographs

2.4.2 Method

All photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. One interpretation, made at 1:2500 level, was marked on an overlay to a print following procedures described by Palmer and Cox (1993). This overlay was then scanned and transformed to match the digital data using Irwin Scollar's AirPhoto program (Scollar 2002). The transformed file was set as a background layer in AutoCAD Map, where features were overdrawn using standard conventions. Ridge and furrow and other features were sketched on a 1:10000 copy of the digital data and are schematically shown in Figure 3.

2.4.3 Results

2.4.3.1 Archaeological features

No pre-medieval features were identified during examination of the listed aerial photographs. Nor was anything archaeological identified in the areas noted as 'crop marks' on the Cambridgeshire SMR (10803: TL155723, 10809: TL158723) or at the record north-east of the development area (07609: TL166727). However, in the case/s where these sites originated from aerial photographs the source photograph/s are not known, they may be among those at NMRC, Swindon but were not examined for this Assessment.

Ridge and furrow, probably remaining from medieval cultivation, was the only archaeological feature identified within the development area. This is part of a once-extensive system that has been mapped as it was visible in 1945. Most of the furlongs illustrated were levelled in the 1960s when land was converted to arable. Ridge and furrow, even when plough-levelled, can have a masking effect on earlier features (Palmer 1996) and evaluations elsewhere in Cambridgeshire have identified iron age and Romano-British features in areas where air photographs have shown only medieval fields.

To the immediate south and south-west of the development area are scarps that remain from former land division but it is unknown whether these remain from recent (post-medieval) changes or indicate earlier settlement traces. This information was computer-transformed from a vertical photograph. Oblique photographs taken in 1981 recorded flooding in the Ellington area (see Figure 3). This and the topography visible from stereoscopic viewing of air photographs suggests the scarps are unlikely to remain from occupation features as the area is low-lying and – unless modern changes have seriously affected drainage – liable to flood. Settlement, as it is now, was more likely to have been on the higher ground.

2.4.3.2 Non-archaeological features

A shallow rectangular depression was apparent at TL154723 when viewing the 1945 verticals stereoscopically. This cuts through ridge and furrow and is likely to remain from hand-extraction and may be the cause of the features identified on the SMR map (SMR 10803). A smaller pit was open in 1945 immediately north of the rectangle. Another shallow depression remaining from post-medieval quarrying has been mapped to the south (TL154721).

Among the scarps north of the village at TL162720 is an area of probable quarrying. This is visible as a slight depression on all photographs that could be viewed stereoscopically and its curved east side reflects the course of a stream before it was diverted when the new A14 was constructed after 1988.

2.4.3.3 Land use

The mapped distribution of medieval fields is a good indication of the extent of pasture fields in 1945 as most ridge and furrow then was recorded in earthwork condition. Much conversion to arable had taken place by 1969 and the most recent photographs (1988) show only a few fields – most lying close to the modern village – remaining as pasture.

The development area appeared to be in arable cultivation in 1945 but has been recorded as pasture since then. Pasture on clay is very unlikely to show any indications of levelled sub-surface archaeological features.

Within the development area the building marked ‘depot’ was constructed by 1971, ‘works’ by 1988.

3. TRIAL EXCAVATION

3.1 Introduction

A total of thirty-six trenches (Figure 4) were excavated and recorded. The results of the trenching are summarised below; full details are contained in Appendix 2. The trenches varied in length varied from 10m, 20m, 30m to 50m, due to constraints of public footpaths, overhead power lines and other site boundaries. The location of the evaluation trenches was designed to provide an even coverage of the development area, apart from in the works compound where their positioning was affected by access restrictions. The trial trenches, as outlined in the brief, were primarily designed to:

- Investigate the location, extent, nature and date of any archaeological deposits that were present.
- Assess the integrity, state and level of preservation of any archaeological features or deposits that were present.

The trial trench excavation was carried out between 5th March and 11th March 2004. The CPA attended the site on 11th March for a monitoring meeting and to confirm that the evaluation had been completed within the terms of the brief.

3.2 Method Statement

Throughout the project the standards set in the IFA's *Standard and Guidance for Field Evaluation* have been adhered to as well as Albion Archaeology's *Procedures Manual for Archaeological Fieldwork and the Analysis of Fieldwork Records* (2001) and English Heritages Management of Archaeological Projects (MAP II) (1992).

All archaeological deposits were recorded using a unique recording number sequence. Each trench was issued a unique block of recording numbers in a continuous sequence. Therefore feature [911], a pit, is located in Trench 9, context (2703), a make-up layer, is located in Trench 27, etc. The trenches were inspected by the CPA, prior to being backfilled.

3.3 Results of the Trial Excavation

No archaeological features or deposits were revealed apart from modern disturbance, largely consisting of make-up layers. Modern disturbance was confined to the south and south-west of the development area, just to the north of Ellington Brook (trenches 8, 9, 25, 27, 28). The trenches to the south of the Ellington Brook (trenches 29-33) contained deposits associated with modern dredging. The trenches within the depot yard (trenches 34-36), to the north of the plot, were excavated through modern hard standing and aggregate make-up layers which in turn overlay the natural geological clay, itself heavily contaminated by industrial waste.

3.3.1 Plough soil and Subsoil

Plough soil deposits were generally uniform across the site consisting of a dark, grey brown, clay silt between 0.10m and 0.30m thick.

Subsoil deposits were present in the majority of the trenches and comprised mid grey brown silty clay between 0.10m and 0.40m thick.

3.3.2 Evidence for Recent Human Activity

Trenches 29-33, situated to the south of Ellington Brook, contained deposits (2901, 3101, 3201, 3301, 3302) associated with modern dredging of the brook. These comprised grey brown silty clays and yellowish brown clay mixed with small-medium gravel. These deposits were between 0.10m and 1.02m thick, were overlain by the plough soil and themselves overlay subsoil.

Trenches 8, 25, 27 and 28 contained modern make-up layers (see Figure 4). Those in trenches 25-28 are likely to be associated with the remains of a nearby farm building. Layers (2508) and (2502) contained two residual post-medieval pottery sherds.

Trenches 34-36 contained modern hard standing and levelling up, associated with the present depot and yard area. These deposits directly overlay undisturbed geological strata.

3.3.3 Archaeological Features

The only negative, or cut, feature encountered was a pit [911] in Trench 9 (see Figure 4). This was at least 7m long and up to 1.4m deep. It was found to contain waste products including modern ceramic building material and iron objects, which were not retained.

3.3.4 Geological Strata

The underlying geological strata generally consisted of a light, reddish brown, clay which overlay beds of orange-brown sand and gravel.

3.3.5 Confidence Rating

No factors are thought to have hindered the recognition of archaeological deposits or features.

3.3.6 Deposit Model

The preservation of any potential archaeology was good with little modern truncation to the subsoil and underlying geological strata. The only areas where significant modern truncation had occurred were in the areas to the south and south-west of the site, just to the north of the Ellington Brook and in the north of the development area in the present depot site. No archaeological deposits or features were revealed during the trial trench excavation to date earlier than the 20th century. Therefore, it is unlikely that the proposed development will impact on any significant archaeological remains.

3.4 Artefact Assemblage

3.4.1 Introduction

The evaluation produced an artefact assemblage comprising mainly pottery and ceramic building material (Table 3). The material was scanned to ascertain the nature, condition and, where possible, date range of the artefact types present. Modern finds were recovered from trenches 1-5, 7, 8, 10, 13-16, 19-24, 26, 27, 29-36, but were not retained.

Tr.	Feature	Type	Context	Spotdate*	Pottery	CBM	Other Finds
6	600	Topsoil	600	Modern		1:21	
9	900	Topsoil	900	Modern		1:13	
11	1101	Subsoil	1101	-			Animal bone (18g)
12	1201	Subsoil	1201	Late medieval	1:6		
17	1701	Subsoil	1701	Late medieval	1:16		
18	1800	Topsoil	1800	Modern		2:18	
25	2502	Make up layer	2502	Modern	1:3	2:278	Clinker (3g), fe nail (22g), mortar (413g), stone building material (184g)
	2504	Natural	2504	Modern		1:29	
	2508	Make up layer	2508	Modern	2:30	1:33	
28	2810	Make up layer	2810	Modern		2:3500	
				Total	**5:55**	**10:3892**	

*** - spotdate based on date of latest artefact in context** **CBM** – ceramic building material

Table 3: Artefact Assemblage by Trench and Context

(sherd number/frag count: wgt in grammes)

3.4.2 Pottery

Five pottery sherds, weighing 55g were recovered from trenches 12, 17 and 25. The pottery was examined by context and quantified using minimum sherd count and weight. Four fabric types were identified using common names and type codes in accordance with the Bedfordshire Ceramic Type Series (held by Albion Archaeology). Fabrics are listed below (Table 4) in chronological order.

Fabric type	Common name	Sherd No.	Context/Sherd No.
Late medieval			
Type E02	Oxidised sandy	**2**	(1201):1, (1701):1
Post-medieval			
Type P	Miscellaneous post-medieval	**1**	(2502):1
Type P01	Fine glazed red earthenware	**1**	(2508):1
Type P39	Mocha Ware	**1**	(2508):1

Table 4: Pottery Type Series

Subsoil (1201) and (1701) respectively yielded an undiagnostic sherd and bowl rim in a locally manufactured, oxidised sand tempered fabric, datable to the 14th-15th centuries. Two sherds of 17th-18th century earthenware and a sherd of mid 18th-19th century Mocha ware were recovered from make-up layers (2502) and (2508).

3.4.3 Ceramic building material

Ten sand tempered fragments of flat roof tile, brick and land drain, weighing 3.8kg, were recovered from trenches 6, 9, 18, 25 and 28. All are post-medieval/modern in date.

3.5 Ecofactual Evidence

3.5.1 Animal Bone

A single long bone fragment (18g) was recovered from subsoil (1101), trench 11.

4. SYNTHESIS

4.1 Introduction

The evaluation consisted of three stages of work including a desk-based assessment, a reappraisal of aerial photographic evidence and finally a trial trench excavation consisting of 36 trenches.

4.2 Former Land Use within the Development Area

The trial trench excavation revealed exclusively modern deposits, probably post-dating WWII and probably associated with stabilising the land against flooding. One modern rubbish pit was also recorded to the west of the development area. To the south of the Ellington Brook the ground surface had been raised with material dredged from the brook itself, possibly when the A14 was constructed. To the north of the plot modern make-up layers associated with the construction of the works and depot directly overlay undisturbed geological strata.

4.3 Significance of Results

The desk-based assessment and intrusive evaluation produced no evidence for significant archaeological deposits within the development area. The only direct evidence for former human activity relates to the construction and use of the works and depot, together with post-war ground improvement works (in the form of dredging) to the south of the brook. It seems probable that the development area has 'always' been an open area, susceptible to flooding, and probably used as for grazing livestock.

4.4 Summary

Notwithstanding the presence of the nearby medieval village of Ellington and of medieval field systems in the vicinity, the evaluation through all the stages of work, has revealed no evidence of archaeological deposits prior to the modern era within the development area. An obvious ford crosses Ellington Brook in the east of the development area, presumably to allow direct access into fields from the village. However, trenching demonstrated an absence of made surfaces in the area and found no evidence, whatsoever, that this ford may have had a medieval or earlier predecessor.

5. APPENDIX 1: TRENCH SUMMARIES

Trench: 1

Max Dimensions: **Length:** 50.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.3 m. **Max:** 0.31 m.

OS Co-ordinates: **Ref. 1:** TL1653972141 **Ref. 2:** TL1654172091

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
100	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
101	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
102	Natural	Firm light red brown silty clay .	☑	☐
103	Natural	Friable mid yellow brown sandy gravel .	☐	☐

Trench: 2

Max Dimensions: **Length:** 50.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.29 m. **Max:** 0.3 m.

OS Co-ordinates: **Ref. 1:** TL1652472098 **Ref. 2:** TL1647472098

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
200	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
201	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
202	Natural	Firm light red brown silty clay .	☐	☐

Trench: 3

Max Dimensions: **Length:** 20.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.27 m. **Max:** 0.32 m.

OS Co-ordinates: **Ref. 1:** TL1649472133 **Ref. 2:** TL1649572113

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
300	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
301	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
302	Natural	Firm light red brown silty clay .	☐	☐

Trench: 4

Max Dimensions: **Length:** 20.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.29 m. **Max:** 0.32 m.

OS Co-ordinates: **Ref. 1:** TL1650572086 **Ref. 2:** TL1650772066

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
400	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
401	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
402	Natural	Firm light red brown silty clay .	☐	☐

Trench: 6

Max Dimensions: **Length:** 50.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.28 m. **Max:** 0.29 m.

OS Co-ordinates: **Ref. 1:** TL1649272027 **Ref. 2:** TL1654272028

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
600	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☑
601	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
602	Natural	Firm light red brown silty clay .	☐	☐

Trench: 7

Max Dimensions: **Length:** 50.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.3 m. **Max:** 0.3 m.

OS Co-ordinates: **Ref. 1:** TL1647972083 **Ref. 2:** TL1647972033

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
700	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
701	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
702	Natural	Firm light red brown silty clay .	☐	☐

Trench: 8

Max Dimensions: **Length:** 20.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.36 m. **Max:** 0.45 m.

OS Co-ordinates: **Ref. 1:** TL1647172054 **Ref. 2:** TL1645272055

Reason for trench: General coverage and investigate the area near the ford across the Ellington Brook.

Context:	Type:	Description:	Excavated:	Finds Present:
800	Topsoil	Friable mid grey brown clay silt occasional small stones.	☑	☐
801	Subsoil	Firm light grey brown silty clay occasional small stones.	☑	☐
802	Make up layer	Friable dark grey brown silty clay .	☑	☐
803	Make up layer	Firm mid brown yellow silty clay occasional small-medium ceramic building material, frequent small stones.	☑	☐
804	Make up layer	Friable dark grey yellow silty clay occasional small-medium ceramic building material, occasional small stones.	☑	☐
805	Make up layer	Friable dark yellow brown silty clay frequent small-medium ceramic building material, frequent small stones. Contained frequent modern waste material.	☐	☐
806	Natural	Firm light brown yellow silty clay .	☑	☐

Trench: 9

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.5 m. Max: 0.5 m.

OS Co-ordinates: Ref. 1: TL1639872074 Ref. 2: TL1644872074

Reason for trench: General coverage and investigate the area near the ford across the Ellington Brook.

Context:	Type:	Description:	Excavated:	Finds Present:
900	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☑
901	Subsoil	Firm light grey brown silty clay occasional small stones.	☑	☐
902	Natural	Firm light grey yellow silty clay .	☐	☐
903	Natural	Friable mid orange brown sandy gravel .	☐	☐
910	Topsoil	Friable dark grey brown clay silt . Layer of topsoil overlying modern pit .	☑	☐
911	**Pit**	**Irregular profile: concave base: uneven dimensions: min breadth 1.8m, min depth 1.4m, min length 7.m. Modern refuse pit.**	☑	☐
904	Dump material	Friable light orange yellow silty sand frequent small stones. Contained occasional modern metal waste.	☑	☐
905	Dump material	Friable dark grey brown silty clay occasional small-medium ceramic building material, frequent flecks charcoal. Contained occasional modern CBM material and frequent small - large modern waste metal objects.	☑	☐
906	Dump material	Friable light orange red silty sand .	☑	☐
907	Dump material	Friable mid grey brown silty sand occasional small-medium ceramic building material, occasional small stones. Contained occasional modern CBM and frequent modern metal waste.	☑	☐
908	Dump material	Friable mid yellow brown silty sand occasional small-medium ceramic building material, frequent small stones. Contained general modern waste material including CBM and iron objects.	☑	☐
909	Dump material	Friable dark grey brown sandy silt frequent small-medium ceramic building material, occasional small stones. Contained frequent modern CBM.	☑	☐

Trench: 10

Max Dimensions: Length: 20.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.4 m. Max: 0.4 m.

OS Co-ordinates: Ref. 1: TL1644472086 Ref. 2: TL1644372106

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1000	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
1001	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
1002	Natural	Firm light grey brown silty clay occasional small stones.	☐	☐

Trench: 11

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.29 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1646272119 Ref. 2: TL1641272119

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1100	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
1101	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☑
1102	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 12

Max Dimensions: Length: 20.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.33 m. Max: 0.35 m.

OS Co-ordinates: Ref. 1: TL1644972125 Ref. 2: TL1644872144

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1200	Topsoil	Friable dark grey brown clay silt .	☑	☐
1201	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☑
1202	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 5

Max Dimensions: **Length:** 20.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.3 m. **Max:** 0.32 m.

OS Co-ordinates: **Ref. 1:** TL1652172057 **Ref. 2:** TL1652372037

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
500	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
501	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 13

Max Dimensions: Length: 20.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.3 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1644072164 Ref. 2: TL1644072184

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1300	Topsoil	Friable dark grey brown clay silt .	☑	☐
1301	Subsoil	Firm mid grey brown silty clay .	☑	☐
1302	Natural	Firm light red brown silty clay .	☐	☐

Trench: 14

Max Dimensions: Length: 20.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.35 m. Max: 0.4 m.

OS Co-ordinates: Ref. 1: TL1642172204 Ref. 2: TL1644172203

Reason for trench: general coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1400	Topsoil	Friable dark grey brown clay silt .	☑	☐
1401	Subsoil	Firm mid yellow brown silty clay .	☑	☐
1402	Natural	Firm dark yellow brown silty clay .	☐	☐

Trench: 15

Max Dimensions: Length: 20.00 m. Width: 1.95 m. Depth to Archaeology Min: 0.35 m. Max: 0.4 m.

OS Co-ordinates: Ref. 1: TL1639972178 Ref. 2: TL1640072198

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1500	Topsoil	Friable dark grey brown clay silt .	☑	☐
1501	Subsoil	Firm mid grey brown silty clay .	☑	☐
1502	Natural	Firm mid orange brown silty clay occasional small stones.	☐	☐

Trench: 16

Max Dimensions: Length: 50.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.32 m. Max: 0.32 m.

OS Co-ordinates: Ref. 1: TL1643772147 Ref. 2: TL1638772147

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1600	Topsoil	Friable mid grey brown clay silt .	☑	☐
1601	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
1602	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 17

Max Dimensions: Length: 50.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.3 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1637672195 Ref. 2: TL1637872145

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1700	Topsoil	Friable dark grey brown clay silt .	☑	☐
1701	Subsoil	Firm dark yellow brown silty clay .	☑	☑
1702	Natural	Firm mid orange brown silty clay occasional small stones.	☐	☐

Trench: 18

Max Dimensions: Length: 50.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.25 m. Max: 0.25 m.

OS Co-ordinates: Ref. 1: TL1638672078 Ref. 2: TL1638572128

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1800	Topsoil	Friable dark grey brown clay silt .	☑	☑
1801	Natural	Firm mid grey brown silty clay .	☐	☐

Trench: 19

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.3 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1636472135 Ref. 2: TL1636472115

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
1900	Topsoil	Friable dark grey brown clay silt .	☑	☐
1901	Subsoil	Firm mid yellow brown silty clay .	☑	☐
1902	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 20

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.28 m. Max: 0.32 m.

OS Co-ordinates: Ref. 1: TL1636172148 Ref. 2: TL1634172148

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2000	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
2001	Subsoil	Firm mid yellow brown silty clay occasional small stones.	☑	☐
2002	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 21

Max Dimensions: Length: 50.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.3 m. Max: 0.32 m.

OS Co-ordinates: Ref. 1: TL1631072172 Ref. 2: TL1636572172

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2100	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
2101	Subsoil	Firm mid yellow brown silty clay occasional small stones.	☑	☐
2102	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 22

Max Dimensions: **Length:** 20.00 m. **Width:** 1.80 m. **Depth to Archaeology** **Min:** 0.3 m. **Max:** 0.35 m.

OS Co-ordinates: **Ref. 1:** TL1633172188 **Ref. 2:** TL1635172188

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2200	Topsoil	Friable dark grey brown clay silt .	☑	☐
2201	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
2202	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 23

Max Dimensions: Length: 20.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.3 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1630372181 Ref. 2: TL1630472161

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2300	Topsoil	Friable dark grey brown clay silt occasional small stones.	☑	☐
2301	Natural	Firm mid orange brown silty clay occasional small stones.	☐	☐

Trench: 24

Max Dimensions: Length: 20.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.16 m. Max: 0.18 m.

OS Co-ordinates: Ref. 1: TL1634772101 Ref. 2: TL1634972081

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2400	Topsoil	Friable dark grey brown clay silt .	☑	☐
2401	Natural	Firm mid grey brown silty clay .	☐	☐

Trench: 25

Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.45 m. Max: 0.6 m.

OS Co-ordinates: Ref. 1: TL1635072111 Ref. 2: TL1629072111

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2500	Topsoil	Friable dark grey brown clay silt .	☑	☐
2501	Subsoil	Firm mid yellow brown silty clay occasional small stones.	☑	☐
2502	Make up layer	Loose mid yellow brown silty sand frequent small-medium ceramic building material, occasional small stones. Contained frequent modern CBM and other waste material.	☑	☑
2503	Make up layer	Firm light blue yellow silty clay occasional small-medium ceramic building material. An imported clay make-up layer containing occasional modern CBM.	☑	☐
2504	Natural	Firm light grey brown silty clay occasional small stones.	☑	☑
2505	Natural	Firm light yellow brown silty clay .	☐	☐
2506	Natural	Friable mid orange brown sandy gravel .	☐	☐
2508	Make up layer	Firm mid grey brown silty clay frequent small-medium ceramic building material, occasiona small stones. Contained frequent modern CBM material.	☑	☑

Trench: 26

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.23 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL1632272140 Ref. 2: TL1632272120

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2600	Topsoil	Friable dark grey brown clay silt .	☑	☐
2601	Natural	Firm mid orange brown silty clay .	☐	☐

Trench: 27

Max Dimensions: **Length:** 25.00 m. **Width:** 2.00 m. **Depth to Archaeology** **Min:** 0.3 m. **Max:** 0.3 m.

OS Co-ordinates: **Ref. 1:** TL1628172128 **Ref. 2:** TL1627872103

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2700	Topsoil	Friable dark grey brown clay silt .	☑	☐
2701	Subsoil	Firm dark grey brown silty clay occasional small stones.	☑	☐
2702	Make up layer	Loose mid red brown silty sand frequent small-medium ceramic building material, occasional small stones. Contained frequent modern CBM and other waste material (glass, metal etc.).	☑	☐
2703	Make up layer	Firm mid blue grey silty clay .	☑	☐
2704	Natural	Firm mid orange brown silty clay .	☐	☐
2706	Make up layer	Firm mid yellow blue silty clay .	☑	☐

Trench: 28

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.13 m. Max: 0.17 m.

OS Co-ordinates: Ref. 1: TL1630472142 Ref. 2: TL1628472142

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2800	Topsoil	Friable dark grey brown clay silt .	☑	☐
2801	Make up layer	Loose mid orange brown silty sand .	☑	☐
2802	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
2803	Natural	Firm mid orange brown silty clay occasional small stones.	☐	☐
2805	Alluvium	Loose dark grey brown clay silt .	☑	☐
2806	Make up layer	Firm mid orange brown silty clay . Contained occasional lumps of tarmac.	☑	☐
2807	Alluvium	Loose mid grey brown clay silt occasional small stones.	☑	☐
2808	Make up layer	Firm mid orange blue silty clay .	☑	☐
2809	Make up layer	Friable mid orange brown clay gravel occasional small-medium ceramic building material, occasional small stones. Contained occasional modern CBM.	☑	☐
2810	Make up layer	Loose mid grey brown silty sand .	☑	☑
2811	Make up layer	Friable dark grey brown silty clay moderate small-large ceramic building material, frequent flecks charcoal. Contained a high proportion of charcoal and a moderate amount of CBM including modern bricks.	☑	☐

Trench: 29

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.1 m. Max: 0.32 m.

OS Co-ordinates: Ref. 1: TL1639772034 Ref. 2: TL1641772040

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
2900	Topsoil	Friable dark grey brown clay silt .	☑	☐
2901	Make up layer	Firm dark grey brown silty clay frequent small-medium stones. Contained lenses of light yellow-brown silty clay and was well mixed with small-medium sub-angular stones.	☑	☐
2902	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
2903	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 30

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.3 m. Max: 0.36 m.

OS Co-ordinates: Ref. 1: TL1637072048 Ref. 2: TL1638972041

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3000	Topsoil	Friable dark grey brown clay silt .	☑	☐
3001	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
3002	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 31

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.1 m. Max: 0.46 m.

OS Co-ordinates: Ref. 1: TL1635172061 Ref. 2: TL1633672045

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3100	Topsoil	Friable dark grey brown clay silt .	☑	☐
3101	Make up layer	Firm mid grey brown silty clay moderate small-medium stones. Contained pockets of light yellow-brown clay and was well mixed with small-medium sub-angular gravels.	☑	☐
3102	Subsoil	Firm mid grey brown silty clay occasional small stones.	☑	☐
3103	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 32

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.1 m. Max: 0.1 m.

OS Co-ordinates: Ref. 1: TL1630872066 Ref. 2: TL1632772061

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3200	Topsoil	Friable dark grey brown clay silt .	☑	☐
3201	Make up layer	Firm mid grey brown silty clay moderate small stones. Contained lenses of light yellow-brown clay and lenses of well mixed small sub-angular stones.	☑	☐
3202	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 33

Max Dimensions: Length: 20.00 m. Width: 1.90 m. Depth to Archaeology Min: 0.1 m. Max: 0.1 m.

OS Co-ordinates: Ref. 1: TL1628272079 Ref. 2: TL1629172061

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3300	Topsoil	Friable dark grey brown clay silt .	☑	☐
3301	Make up layer	Firm dark grey brown silty clay occasional small stones. Contained patches of light yellow-brown clay and occasional small sub-angular stones.	☑	☐
3302	Make up layer	Firm light red brown silty clay moderate small-medium ceramic building material, moderate small-medium stones. Contained modern general rubbish.	☑	☐
3303	Natural	Firm light red brown silty clay occasional small stones.	☐	☐

Trench: 34

Max Dimensions: Length: 20.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.5 m. Max: 0.55 m.

OS Co-ordinates: Ref. 1: TL1631372244 Ref. 2: TL1631272224

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3400	Concrete	Hard . A concrete and tarmac hardstanding for a modern yard.	☑	☐
3401	Brick Rubble	Compact . A make-up layer for modern hardstanding consisting of hardcore, brick rubbl etc.	☑	☐
3402	Natural	Firm mid green grey silty clay . The natural clay has been stained by modern contamination	☑	☐
3403	Natural	Friable mid orange brown sandy gravel .	☐	☐

Trench: 35

Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.6 m. Max: 0.65 m.

OS Co-ordinates: Ref. 1: TL1635272255 Ref. 2: TL1632272256

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3500	Tarmac	Hard . Modern tarmac hardstanding for yard.	☑	☐
3501	Brick Rubble	Compact . Modern make-up for yard consisting of CBM and other modern rubbish.	☑	☐
3502	Natural	Firm mid green grey silty clay . Stained by modern contamination.	☐	☐

Trench: 36

Max Dimensions: Length: 10.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.42 m. Max: 0.46 m.

OS Co-ordinates: Ref. 1: TL1636072264 Ref. 2: TL1635972254

Reason for trench: General coverage

Context:	Type:	Description:	Excavated:	Finds Present:
3600	Concrete	Hard . Modern hardstanding for yard.	☑	☐
3601	Brick Rubble	Compact . Modern make-up for yard consisting of CBM and hardcore.	☑	☐
3602	Natural	Firm mid green grey silty clay . Stained by modern contamination.	☐	☐

6. APPENDIX 2 AERIAL PHOTOGRAPHIC ASSESSMENT

GROVE LANE, ELLINGTON, TL164721,

CAMBRIDGESHIRE:

AERIAL PHOTOGRAPHIC ASSESSMENT

SUMMARY

This assessment of aerial photographs examined an area of some 5.45 hectares (centred TL164721) and its environs in order to identify and accurately map archaeological and natural features.

No pre-medieval features were identified in the Study Area during examination of aerial photographs.

Nothing of archaeological origin was apparent at the SMR sites north of the A14.

Low scarps remain from former land division immediately south of the Development Area. These may remain from recent (post-medieval) changes or indicate earlier settlement traces.

Ridge and furrow has been recorded in many fields in the Study Area. Much was earthwork-in-pasture in 1945 but has been levelled as fields have been converted to arable use. Two small patches of ridge and furrow were identified in the northern part of the Development Area.

Areas of hand-dug quarrying have been identified and mapped and one may account for a site in the SMR.

It has been noted that crops on clay soils, as in the Development Area, are poor respondents to sub surface features such as archaeological ditches. Ridge and furrow also has the ability to mask any such features. Thus the air photo evidence may be incomplete for the Ellington area.

The Development Area was flooded on photographs taken in 1981.

Photo interpretation and mapping was at 1:2500 level in one area only with the remainder being mapped/sketched at 1:10000 level.

GROVE LANE, ELLINGTON, TL164721,
CAMBRIDGESHIRE:
AERIAL PHOTOGRAPHIC ASSESSMENT

Rog Palmer MA MIFA

INTRODUCTION

This assessment of aerial photographs was commissioned to examine an area of some 5.45 hectares (centred TL164721) in order to identify and accurately map archaeological and natural features and thus provide a guide for field evaluation. The level of interpretation and mapping was to be at 1:2500 for features other than ridge and furrow.

ARCHAEOLOGICAL AND NATURAL FEATURES FROM AERIAL PHOTOGRAPHS

In suitable cultivated soils, sub-surface archaeological features – including 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 ripe 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.

Grass sometimes shows sub-surface features through the withering of the plants above them. This may occur towards the end of very dry summers and usually indicates the presence of buried walls or foundations. Such dry summers occurred in Britain in 1949, 1959, 1975, 1976, 1984, 1989 and 1990 (Bewley 1994, 25) and more recently in 1995 and 1996. This does not imply that every grass field will reveal its buried remains on these dates as local variations in weather and field management will affect parching. However, it does provide a list of years in which photographs taken from, say, mid July to the end of August may prove informative.

Clay soils such as cover the Assessment Area, have been notoriously reluctant to indicate buried features via different crop growth. Observation over the last few decades has shown that if crop-marked information will develop on clay soils it will do so late in the growing season of extreme drought years. Glenn Foard pioneered this research in Northamptonshire and it is possible that his flights reached into this part of Cambridgeshire at suitable times and conditions. However, those photographs will be held at NMRC Swindon, a collection not examined for this assessment. More recently,

research by Jessica Mills has indicated that different amounts of information are being recorded on different types of clay with Oxford clay giving fewer sites per area than boulder clay (Mills 2003). It is unknown whether this reflects preferences in antiquity or the abilities of variations in those clays to affect crop growth.

Natural faults and deposits can cause similar differences in crop growth and may also appear as colour differences in bare winter soils. On the clays natural information may be limited to deeper soils resulting from colluvial or alluvial deposits. These can affect the growth of crops and become visible at the same times as archaeological features but are unlikely to be mistaken as such. The visible edges and extents of deep soil areas tend to vary from year to year with the amount of ground moisture content.

The most immediately informative aerial photographs of archaeological subjects tend to be those resulting from specialist reconnaissance. 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 product 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.

Vertical photographs cover the whole of Britain and can provide scenes on a series of dates between (usually) 1946-7 and the present. Unfortunately these vertical surveys are not necessarily flown at times of year that are best to record the crop and soil responses that may be seen above sub-surface features. Vertical photographs are taken by a camera fixed inside an aircraft and adjusted 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.

PHOTO INTERPRETATION AND MAPPING

Photographs examined

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and Cambridgeshire (Huntingdon) Record Office. If results were good, or seemed promising, photographs at the National Monuments Record: Air Photographs (NMRAP) were to be examined. This was considered unnecessary. Photographs included those resulting from specialist archaeological reconnaissance and routine vertical surveys.

Photographs consulted are listed in the Appendix to this report.

Base maps
Digital data from a survey scale of 1:2500 were provided by the client.

Study area
Photographs were examined in detail for the four kilometre squares, centred TL1672, covered by the digital data.

Photo interpretation and mapping
All photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. One interpretation, made at 1:2500 level, was marked on an overlay to a print following procedures described by Palmer and Cox (1993). This overlay was then scanned and transformed to match the digital data using Irwin Scollar's AirPhoto program (Scollar 2002). The transformed file was set as a background layer in AutoCAD Map, where features were overdrawn using standard conventions. Ridge and furrow and other features were sketched on a 1:10000 copy of the digital data and is schematically shown in this report. Layers from this final drawing have been used to prepare the fit-to-page figure in this report and have been supplied to the client in digital form.

Accuracy
AirPhoto computes values for mismatches of control points on the photograph and map. In the transformation prepared for this assessment the mean mismatches were less than ±1.50m. 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 (OS 2003). Mapping originally undertaken at 1:10000 does not have the inherent accuracy to be used to locate features on the ground with precision.

COMMENTARY

Soils

The Soil Survey of England and Wales (SSEW 1983) shows the area to be situated on a large deposit of Jurassic and Cretaceous clay (Oxford clay: soil association 411c). Crops on this soil are usually poor respondents to sub-surface differences (Mills 2003).

Archaeological features

No pre-medieval features were identified during examination of the listed aerial photographs. Nor was anything archaeological identified in the areas noted as 'crop marks' on the Cambridgeshire SMR (10807[?]: TL155723, 10809: TL158723) or at the record north-east of the Development Area (07609: TL166727). However, in the case/s where these sites originated from aerial photographs the source photograph/s are not known and they may be among those at NMRC, Swindon that were not examined for this Assessment.

Ridge and furrow, probably remaining from medieval cultivation, was the only archaeological feature identified within the Development Area. This is part of a once-extensive system that has been mapped as it was visible in 1945. Most of the furlongs illustrated were levelled in the 1960s when land was converted to arable. Ridge and furrow, even when plough-levelled, can have a masking effect on earlier features (Palmer 1996) and evaluations elsewhere in Cambridgeshire have identified iron age and Romano-British features in areas where air photographs have shown only medieval fields.

To the immediate south and south-west of the Development Area are scarps that remain from former land division but it is unknown whether these remain from recent (post-medieval) changes or indicate earlier settlement traces. This information was computer-transformed from a vertical photograph. Oblique photographs taken in 1981 recorded flooding in the Ellington area (see map). This and the topography visible from stereoscopic viewing of air photographs suggests the scarps are unlikely to remain from occupation features as the area is low-lying and – unless modern changes have seriously affected drainage – liable to flood. Settlement, as it is now, was more likely to have been on the higher ground.

Non-archaeological features

A shallow rectangular depression was apparent at TL154723 when viewing the 1945 verticals stereoscopically. This cuts through ridge and furrow and is likely to remain from hand-extraction and may be the cause of the features identified on the SMR map (SMR 10807[?]). A smaller pit was open in 1945 immediately north of the rectangle. Another shallow depression remaining from post-medieval quarrying has been mapped to the south (TL154721).

Among the scarps north of the village at TL162720 is an area of probable quarrying. This is visible as a slight depression on all photographs that could be viewed stereoscopically and its curved east side reflects the course of a stream before it was diverted when the new A14 was constructed after 1988.

Land use

The mapped distribution of medieval fields is a good indication of the extent of pasture fields in 1945 as most ridge and furrow then was recorded in earthwork condition. Much conversion to arable had taken place by 1969 and the most recent photographs (1988) show only a few fields – most lying close to the modern village – remaining as pasture.

The Development Area appeared to be in arable cultivation in 1945 but has been recorded as pasture since then. Pasture on clay is very unlikely to show and indications of levelled sub-surface archaeological features.

Within the Development Area the building marked ‘depot’ was constructed by 1971, ‘works’ by 1988.

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APPENDIX

Aerial photographs examined

Source: Cambridge University Collection of Aerial Photographs

Oblique photographs

AEV 58	31 May 1962
AUA 92-99	12 April 1968
COD 75-77	27 April 1981

Vertical photographs

RC8-KnBO 144-146	30 August 1988	1:10000

Source: Cambridgeshire Record Office (Huntingdon)

Vertical photographs

106G/UK/635: 3272-3274	10 August 1945	1:10000
106G/UK/635: 4354-4356	10 August 1945	1:10000
HSL/UK/69876: 096-097	13 May 1969	1:12000
BKS: 647274	Spring 1971	1:12000
BKS: 647185-647187	Spring 1971	1:12000

Most informative photographs

106G/UK/635: 3272-3274
106G/UK/635: 4354-4356
Rc8-KnBO 145
AEV 58
COD 75-77

TERMS AND CONDITIONS

Air Photo Services have produced this assessment for their clients, Albion Archaeology, subject to the following conditions:

Air Photo Services will be answerable only for those transcriptions, plans, documentary records and written reports that it submits to the clients, and not for the accuracy of any edited or re-drawn versions of that material that may subsequently be produced by the clients or any other of their agents.

That transcriptions, documentation, and textual reports presented within this assessment report shall be explicitly identified as the work of Air Photo Services.

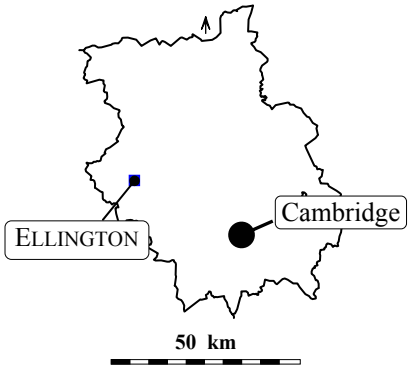
Air Photo Services has consulted only those aerial photographs specified. It cannot guarantee that further aerial photographs of archaeological significance do not exist in collections that were not examined.

Due to the nature of aerial photographic evidence, Air Photo Services cannot guarantee that there may not be further archaeological features found during ground survey which are not visible on aerial photographs or that apparently 'blank' areas will not contain masked archaeological evidence.

We suggest that if a period of 6 months or more elapses between compilation of this report and field evaluation new searches are made in appropriate photo libraries. Examination of any newly acquired photographs is recommended.

That the original working documents (being interpretation overlays, control information, and digital data files) will remain the property of Air Photo Services and be securely retained by it for a period of three years from the completion date of this assessment after which only the digital files may be retained.

It is requested that a copy of this report be lodged with the relevant Sites and Monuments Record within six months of the completion of the archaeological evaluation.



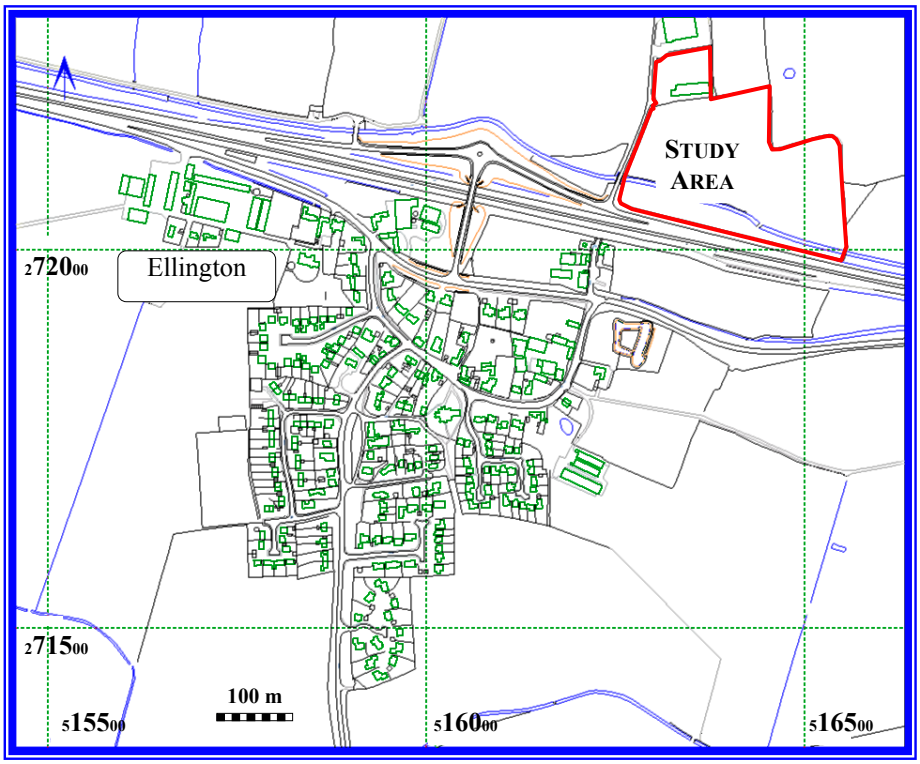


Figure 1: Site location

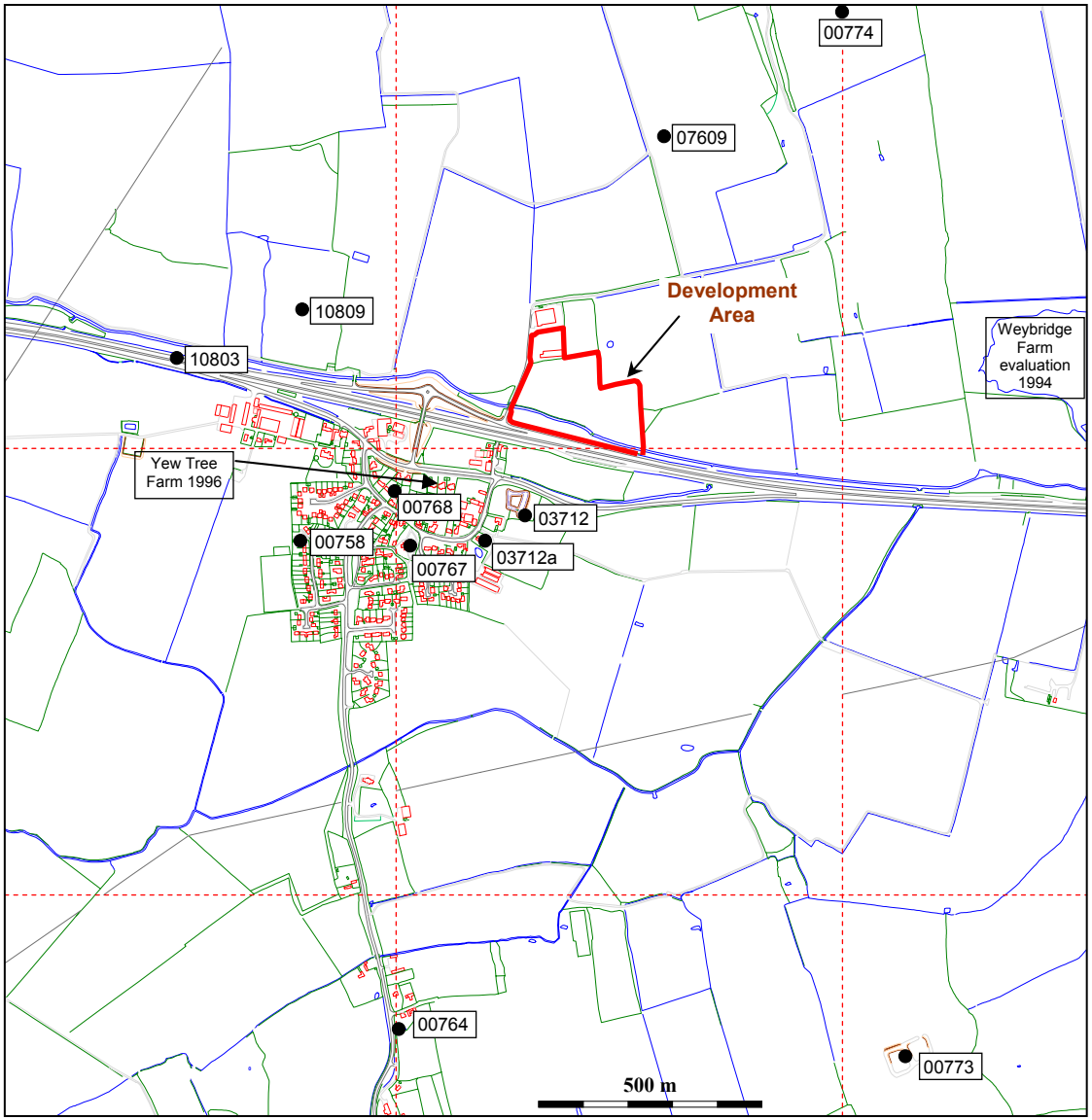


Figure 2: SMR information

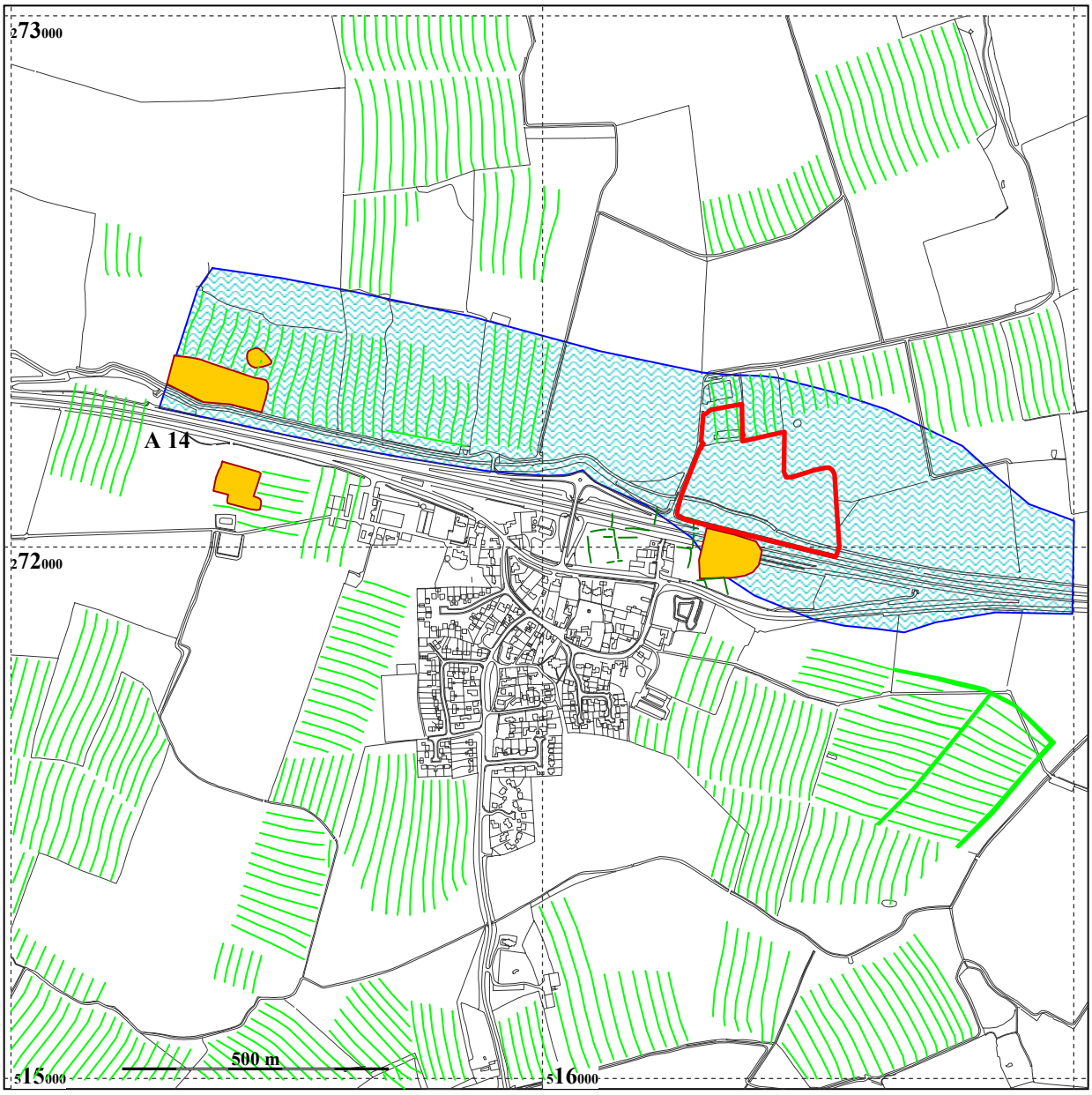


Figure 3: Features identified from aerial photographs (based on original photographic interpretation and mapping from Air Photo Services, Cambridge)

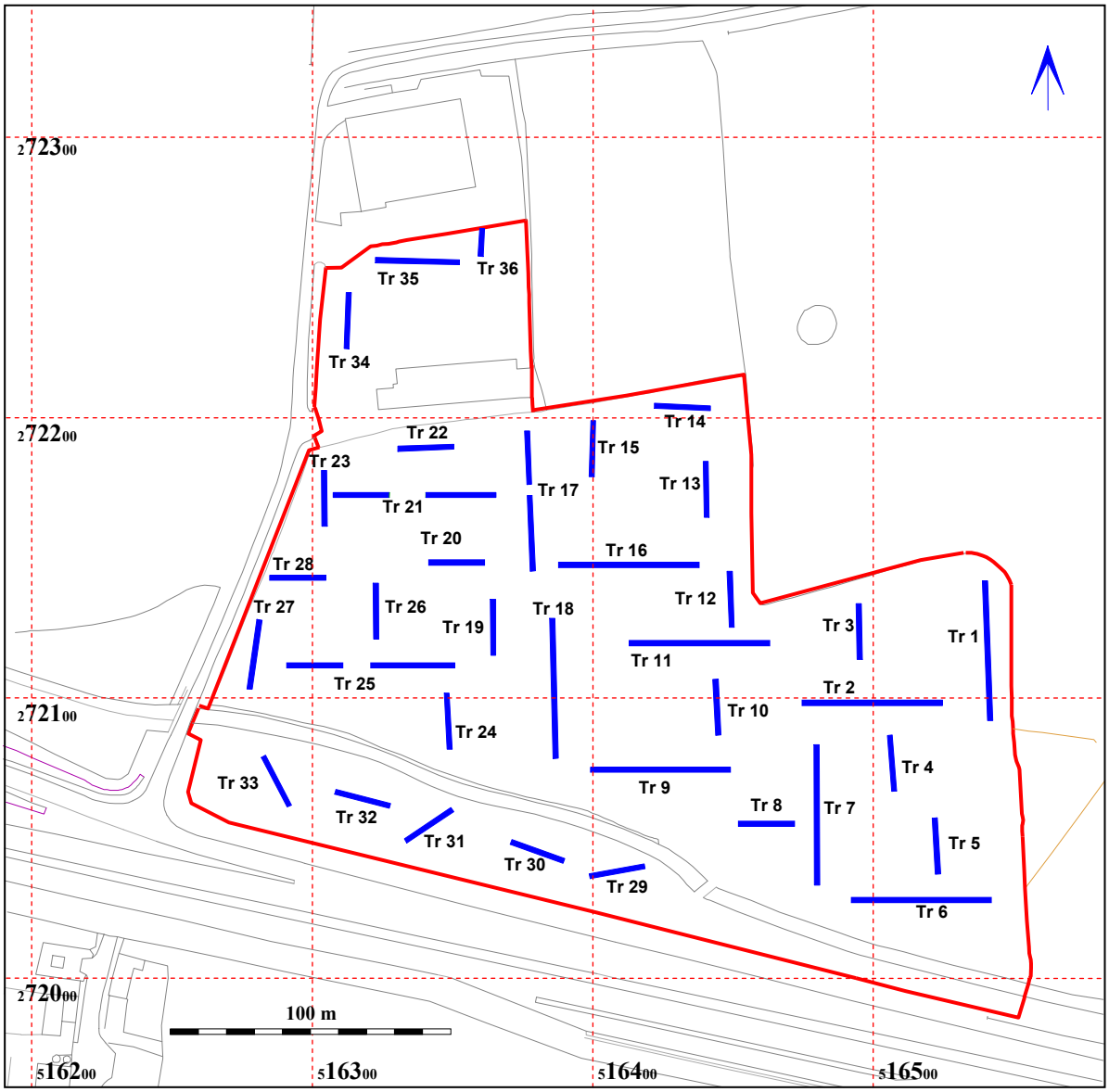


Figure 4: Trench location plan