

Bourn Hall, Bourn – An Archaeological Watching Brief

Judith Roberts, MA

1997

Editor Stephanie Leith, BA, MA, AIFA

Report No B005

Archaeological Field Unit
Cambridgeshire County Council
Fulbourn Community Centre
Haggis Gap, Fulbourn
Cambridgeshire CB1 5HD
Tel (01223) 881614
Fax (01223) 880946

Bourn Hall, Bourn – An Archaeological Watching Brief (TL 3219 5624)

INTRODUCTION

Between the 27th March and 8th April 1997 a member of staff from the Archaeological Field Unit of Cambridgeshire County Council visited the site of the proposed development during groundworks at Bourn Hall, Bourn (Planning Application Nos. S1842/96/F and S1861/96/F). The work was commissioned by Purcell Miller Tritton and Partners.

The development involves construction of a new building with semi-basements and diversion of associated drainage. Work will be carried out in two stages and involves an area of approximately 1200 square metres. The site of the development is some 100m to the north-west of Bourn Hall, situated on the level top and north-west slope of a hill of Boulder Clay at approximately 59mOD.

BACKGROUND

Bourn Hall (SMR 1096) was built around 1602, on the site of a medieval castle (Scheduled Ancient Monument 27106). The castle was constructed towards the end of the 11th century by Picot of Cambridge and comprised a large banked and ditched enclosure of approximately 3 acres with a smaller horseshoe bailey down the slope to the north-east. The castle was destroyed in the 13th century but 1640 records state that the castle 'ruins and monuments' remained until the 17th century. The construction of Bourn Hall and Hall Farm, their outbuildings and gardens severely damaged the remains of the earlier castle. A description of the castle ruins before 1760 describes the castle as about 160 yard in diameter with a parapet walk between the ditch and inner vallum. The existing remains now consist merely of two adjoining banked and ditched enclosures.

METHODOLOGY

An aerial photographic assessment was carried out (see Appendix I) before groundwork started. This failed to reveal archaeological features although medieval ridge and furrow agriculture was noted in the surrounding area. It was clear from the aerial photographs that part of the development site had been occupied by buildings between the 1930s and 1972 and that the tree belt had been more extensive. By 1983 some of these buildings had been demolished and the area converted into hard-standing used as a car park.

A limited documentary search was carried out concentrating on Ordnance Survey maps, Enclosure and Tithe Maps, secondary sources on Bourn Hall, sales catalogues, etc. The 1886/7 OS map (Sheet XLVI.5) shows the tree belt impinging on the development area. The 1901 edition of the OS map records the buildings identified in later aerial photographs. Sales catalogues from the 1920s indicate the buildings were cattle sheds, a piggery, a cart shed, loose boxes and a boiling house. These were of brick and timber construction with galvanised roofs and consequently were not expected to have substantial foundations.

RESULTS

At a meeting on site on 27th March it was noted that initial investigation trenches had located old and existing services (mainly drains and electricity cables) and extensive tree root disturbance. A considerable layer of made up ground with modern tile and brick debris overlay an olive brown mixed clay which in turn overlay a grey boulder clay with large chalk fragments.

A test pit was dug, away from the area disturbed by services and trees, in an area that will be affected by the first phase of building work. This showed a similar stratigraphic sequence with levelling for the present car park, over made-up ground overlying olive brown and grey clays.

Subsequent visits, between 1st April and 8th April showed a similar stratigraphic sequence along the edge of the tree belt where there were substantial tree roots which had disturbed the upper 0.5m of the area.

CONCLUSIONS

After consultation with the Development Control Office of Cambridgeshire County Council it was agreed that the highly disturbed nature of the ground and the absence of any evidence for archaeological remains made it unlikely that a full trenching strategy would produce further archaeological evidence. Careful monitoring of the service trench confirmed this view and no further archaeological work was carried out on site.

ACKNOWLEDGEMENTS

The author would like to thank Dr. H. T. Way who carried out the documentary search; Rog Palmer of Air Photo Services who prepared the aerial photographic assessment; Cambridgeshire County Council Sites and Monument Record Office and the Cambridge Record Office. Thanks also to Stephanie Leith, Project Officer who prepared the project specification and liaised with the client and to Simon Kaner of the Development Control Office of Cambridgeshire County Council who drew up the project brief.

BIBLIOGRAPHY

Stevens, W. G. 1969 Bourn Hall and the de La Warr Family, *Cambridgeshire Local History Council Bulletin* 24

The Victoria History of the County of Cambridge and the Isle of Ely 1973, volume 5

AIR PHOTO SERVICES

21 GUNHILD WAY

CAMBRIDGE

CB1 4QZ

PHONE/FAX 01223 572063

**BOURN HALL, TL32195624,
BOURN,
CAMBRIDGESHIRE:
AERIAL PHOTOGRAPHIC ASSESSMENT**

REPORT No: R114

APRIL 1997

COMMISSIONED BY

ARCHAEOLOGICAL FIELD UNIT
CAMBRIDGESHIRE COUNTY COUNCIL
FULBOURN COMMUNITY CENTRE
HAGGIS GAP
FULBOURN
CAMBRIDGE CB1 5HD

**BOURN HALL, TL32195624, BOURN,
CAMBRIDGESHIRE:
AERIAL PHOTOGRAPHIC ASSESSMENT**

SUMMARY

This assessment of aerial photographs examined an area of some 0.25 hectares (centred TL32195624) in order to identify and accurately map archaeological, non-archaeological or natural features in advance of field evaluation.

Other than ridge and furrow remaining from medieval agriculture, no archaeological features were identified. However, evidence was found of former buildings in the current assessment area.

Mapping is at 1:2500.

**BOURN HALL, TL32195624, BOURN,
CAMBRIDGESHIRE:
AERIAL PHOTOGRAPHIC ASSESSMENT**

Rog Palmer MA MFA

INTRODUCTION

This assessment of aerial photographs was commissioned to examine an area of some 0.25 hectares (centred TL32195624) in order to identify and accurately map archaeological and natural features and thus provide a guide for field evaluation. Mapping was to be at 1:2500.

ARCHAEOLOGICAL AND NATURAL FEATURES FROM AERIAL PHOTOGRAPHS

In suitable 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 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 rarely shows such marks but instead may reveal sub-surface features through the withering of the plants above them. These may occur towards the end of very dry summers and usually indicate 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. Other grass fields may contain upstanding remains – either as standing buildings or turf-covered earthworks – which can mask earlier features that may lie beneath them.

The most 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 record of such investigation and can be expected to show features noticed by the observer 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), Cambridgeshire Record Office (CRO) and the National Library of Air Photographs (NLAP), Swindon. 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 and printed plans at a scale of 1:2500 were provided by the client.

Photo interpretation and mapping

All photographs were examined by eye and under slight (1.5x) magnification, viewing them as stereoscopic pairs when possible. Vertical photographs were also examined stereoscopically using a 1.5x magnification stereoscope. Ridge and furrow thus identified was added to the 1:2500 plan in schematic form to show direction and present-day survival of the furlongs. Those former structures that are within, or closely adjacent to, the assessment area were transferred to the 1:2500 plan by direct measurement from identified fixed points. Since the photographs used for this were at 1:6000 scale the accuracy of location is likely to be good and is estimated to be within $\pm 2.5\text{m}$. Use of computer rectification would have been handicapped by lack of control information to the west of the area.

COMMENTARY

Soils

The Soil Survey of England and Wales shows the area to be on slowly permeable calcareous clayey soils (series 411d: SSEW 1983).

Archaeological features

The assessment area is located in the grounds of Bourn Hall which, throughout the dates of photography, has been parkland. Such an area of managed grass, especially when covered by medieval fields, would not be expected to reveal traces of earlier features unless it had been photographed on suitable dates in dry summers (Palmer 1996). As far as can be determined, the 1949 verticals were taken towards the end of such a dry summer but record no pre-medieval features within the Bourn Hall grounds.

Other than ridge and furrow and associated remains of medieval agriculture, this assessment has identified no archaeological features in the vicinity of Bourn Hall. Some of the medieval furlongs remained as slight earthworks at the last date of photography (1988) but even those will probably have been smoothed by parkland mowing.

Non-archaeological features

Of relevance to the present assessment is the identification of former structures in the area to be developed. These comprised two buildings: one, clear of the assessment area, which abutted the present hedge line between Bourn Hall and houses to the north; the other adjoining buildings which remain standing. This latter structure formed one side (north) of a probable yard which was 'closed' by a wall (west) which contained an entrance. The remaining two sides (east and south) are still standing. Both former buildings were recorded on photographs from the 1930s until 1972. By 1983 that forming the north side of the yard, together with the west wall, had been demolished and the area converted to what is presumably a hard-standing car park. The structure against the northern hedge line was standing in 1983 but was not identified on 1985 photographs.

One other point of note, although not of relevance to this present assessment, is a recently (by 1985) added hard standing parking area between the access road to Bourn Hall and the bailey of the former earthwork (at TL32305627). It is possible that this may impinge on the remaining earthwork ditch and cause erosion to its edge.

REFERENCES

- Bewley, R. H., 1994. *Prehistoric Settlements*. Batsford/English Heritage, London.
- Palmer, R., 1996. A further case for the preservation of earthwork ridge and furrow. *Antiquity* 70, 436-440
- SSEW, 1983. *Soils of England and Wales: sheet 4: Eastern England (1:250,000)*. Soil Survey of England and Wales, Harpenden.

Figure 1. Bourn Hall: features identified from aerial photographs



APPENDIX

*Aerial photographs examined**Source: Cambridge University Collection of Aerial Photographs*

Oblique photographs

None

Vertical photographs

RC8-FG 8-9	29 April 1983	1:10000
RC8-HV 184-185	10 July 1985	1:10000
RC8-JM 96-97	30 June 1987	1:10000
RC8-JQ 17-19	20 August 1987	1:10000
RC8-KnBF 98-99	12 June 1988	1:10000

Source: Cambridgeshire Record Office

Vertical photographs

106G/UK/1490: 3020-3022	9 May 1946	1:10000
106G/UK/1490: 4020-4022	9 May 1946	1:10000
Fairey: 201169-201171	late summer 1949	1:6000
F21.58/RAF/1983: 0012-13	20 April 1956	1:10000
BKS: Run 13: 565411-13	late summer 1962	1:10000
MAL/53/69: 137-138	8 June 1969	1:10500
MAL/53/69: 152-153	8 June 1969	1:10500

Source: National Library of Air Photographs

Specialist collection

TL3256/1	undated ?1930s
TL3256/2-3	26 November 1980

Vertical collection

106G/UK/969: 3133-3134	1 November 1945	1:10200
OS/72233: 70-72	16 July 1972	1:7000
OS/72233: 99-101	16 July 1972	1:7000

Most informative photographs

Fairey: 201169-201171 (for buildings in current area)