



AIR PHOTO MAPPING,
INTERPRETATION AND
ANALYSIS FOR ALL
ARCHAEOLOGICAL APPLICATIONS
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Air Photo Mapping and Interpretation
for
Farley Hall Estate
Shinfield, Berkshire

November 2013
Project number 1314010
Undertaken by Alison Deegan BSc MIFA

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Commissioned by

Lang Hall Archaeology
10 Orchard Close
Woolhampton
Reading
Berkshire RG7 5SD.

Summary

This report concerns the results of interpretation and mapping of archaeological features from existing air photographs for the Farley Hall Estate, Wokingham, Berkshire.

This survey has recorded cropmarks and soilmarks in many of the fields in the Survey Area and some low earthworks in the fields that flank the River Loddon. A small group of cropmarks on the north bank of the river resemble the remains of Bronze Age burial mounds but this interpretation is by no means secure. Other cropmarks suggest an Iron Age or Roman landscape but the evidence is rather fragmentary and ephemeral. There is also evidence of more recent land divisions, drainage ditches and possible water meadows as well as a gravel pit.

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1 Introduction

1.1 Client details

1.1.1 This air photo survey was commissioned by Lang Hall Archaeology, 10 Orchard Close, Woolhampton, Reading, Berkshire RG7 5SD.

1.2 Specification

1.2.1 The client required the mapping of levelled and upstanding archaeological features that are visible on the available air photographs. The mapping is at a nominal scale of 1:2500.

1.3 The Survey Area (see Figure 1)

1.3.1 The air photo survey area (hereon the Survey Area) covers approximately 2km² of land centred at SU740666 (474000,166600).

1.3.2 The Survey Area takes in land on either side of the River Loddon, with Shinfield to the north, Spencers Wood to the west and Arborfield to the north-east. It lies in the district of Wokingham in the county of Berkshire.

1.3.3 The River Loddon meanders gently south-west to north-east through the Survey Area. The flood plain is broad and encompasses most of the Survey Area at approximately 40-45m OD. The lower river terraces rise in the far south-west, and along the eastern edge to just over 50m. The soils are generally loamy and slow to drain (Soilscapes).

1.3.4 A brief overview of the uses of air photographs for archaeological remote sensing is provided in Appendix 1.

2 Methodology

2.1 Data sources

2.1.1 The air photo collections held by the English Heritage Archive (EHA) and Cambridge University Collection of Aerial Photography (CUCAP) were consulted for this survey. The photographic prints were systematically examined, using x2 magnification where necessary and stereoscopically where possible. Selected prints were then photographed with a hand-held digital camera, where permission to do so was granted.

2.1.2 Digital images delivered through the Google Earth and Bing portals were examined on screen and relevant views were captured.

2.1.3 Lists of the individual air photographs and image datasets consulted are provided in Appendix 2.

2.2 **Image capture, rectification and mapping**

2.2.1 The Bing portal delivers seamless georeferenced imagery direct into MAPINFO Professional 11.5, archaeological and control information was digitised directly from this source.

2.2.2 The various digital captures from the air photographs and Google Earth were rectified to ground control points derived from the Ordnance Survey 1:2500 scale map supplied by CEMEX UK Operations Ltd.

2.2.3 Image transformation was undertaken using the Bradford Aerial Photographic Rectification Programme, AERIAL5.33. Archaeological features were mapped to a scale of 1:2500 in detail and accuracy. AERIAL5.33 gives error readings for each control point, where 5 or more control points are used. In all cases errors of within $\pm 3\text{m}$ were achieved for the control points. However this may not reflect the on-the-ground positional accuracy of the features mapped since these tend to lie between rather than at the control points.

2.2.4 All of the georeferenced photographs and images were then collated in MAPINFO Professional 11.5 where the archaeological features were digitised, with reference back to the original source material where possible.

2.2.5 Data pertaining to each feature was recorded in the MapInfo table. The structure and content of the digital map dataset is described in Appendix 3.

3 **Results**

3.1 **The air photographs**

3.1.1 The EHA holds 74 black and white and colour vertical air photographs from 13 different sorties flown between 1946 and 1995. Together these cover the whole of the Survey Area and provide good coverage for most decades except the 1970s. These vertical photographs were taken by or for the Royal Air Force, Ordnance Survey and Environment Agency for military, civil engineering and cartographic purposes rather than to record archaeological sites. However some soilmark and

cropmarked archaeological features are visible on many of these photographs.

- 3.1.2 The EHA also holds 63 black and white and colour oblique air photographs of the Survey Area in its specialist collection. The earliest were taken in 1975 and the latest in 2009.
- 3.1.3 The CUCAP collection holds 3 vertical and 3 oblique air photographs of the Survey Area taken in 1975 and 1976 respectively.
- 3.1.4 Google Earth displays imagery attributed to 2003, 2004, 2005 and 2010. These record the area at various times of year and show some marks in germinating and ripening crops and grass and some low earthworks.
- 3.1.5 The aerial imagery provided on the Bing Maps website is not dated. It was flown when most fields were under bare soils or grass and do not show archaeological cropmarks but do reveal some subtle soilmarks.

3.2 **The archaeological features (Figures 2 and 3)**

- 3.2.1 The mapping is reproduced in Figures 2 and 3. This report is supplied in conjunction with a digital version of the map data, the recommended viewing scale is 1:2500 to 1:5000.
- 3.2.2 Details including type, period and sources for individual archaeological features can be accessed in the digital version of the mapping (see **Appendix 3**) and these are summarised with a description in **Appendix 4**.
- 3.2.3 In the absence of direct archaeological evidence all attributions of date and type are open to re-interpretation.

3.3 **Neolithic and Bronze Age**

- 3.3.1 Neolithic and Bronze activity in this area was established by the presence of surface scatters identified by the Loddon Valley Survey in the early 1990s (Event Record ERM349).
- 3.3.2 The air photos indicate possible Bronze Age monuments within 50m of the River Loddon, south-east of the Burley Lodge Stud (**AP G**). These comprise 7 evenly-sized ring ditches that are visible in 1975 as surprisingly well-defined marks in a hay crop. There is considerable doubt as to the veracity of these marks: the site is likely to be deeply alluviated, which would normally preclude cropmark formation; the rings are similar in size (10-12m) to the horse training circles that are visible next to

the stud in the same year and the marks are graduated in strength which might indicate sequential use of tethering posts.

3.3.3 However, the north-western most of these 'ring ditches' is also visible on an air photograph taken twenty years earlier suggesting that this example at least is more than a transient disturbance. Overall though the current evidence for this group of features is tenuous and it requires ground-truthing or alternative verification.

3.4 **Iron Age and Roman period**

3.4.1 Although many of the fields contain cropmarks that resemble the typical remains of land division and enclosure from the Iron Age and Roman periods in lowland Britain, very few have been attributed to these dates and even fewer with any confidence.

3.4.2 The possible Iron Age or Roman period features that have been identified by this survey are concentrated in four areas: north of Moor Copse, south of Moor Copse, south-east of the Burley Lodge Stud, and west of Rounds Copse.

3.4.3 North of Moors Copse there is a complex network of cropmarked ditches and at least one possible enclosure. Some of these ditches correlate with the position of post medieval boundaries that are marked on historic maps (ie **APs U & T**) but the others do not and for this reason a possible Iron Age or Roman origin is suggested for some (**AP W**). These ditches appear to represent a fairly cohesive system of land division with a rectilinear enclosure or paddock at SU7395 6695.

3.4.4 On the southern side of Moors Copse the cropmarks are more fragmentary and disjointed. Again some of the ditches are likely to be the remains of post medieval field boundaries that feature on the historic maps (**APs O & P**). Of the other features two are double ditched and might be Iron Age or Roman period trackways and it is conceivable that the other fragments are associated field boundaries (**AP M**). The dating of these is lent a little extra credence by the fact that some of the features appear to underlie medieval or post medieval ridge and furrow (**AP N**). Also notable within this group is the large T-shaped pit or hollow at SU7419 6621.

3.4.5 Two groups of indistinct cropmarks on the west side of Rounds Copse have been tentatively identified as evidence of Iron Age or Roman period enclosures. The more northerly cropmarks resemble a D-shaped enclosure (**AP Y**). The others suggest the north-east corner of a double-ditched enclosure adjacent to Milking Barn Lane (**AP Z**). Both examples lie in a field of complex geological cropmarks and their archaeological origin is far from certain.

3.4.6 More ephemeral still are the cropmarks of a possible Iron Age or Roman period enclosure and field boundary on the south-east side of the Burley Lodge Stud (**AP D**).

3.4.7 At some distance from any of these groups, on the eastern side of the Survey Area there is a small circular cropmark that resembles an Iron Age or Roman period hut circle (**AP AE**).

3.5 **Medieval period**

3.5.1 Bundles of parallel linear cropmarks are visible in some of the fields in the Survey Area. These may be the remains of old cultivation earthworks known as ridge and furrow, which were formed by the action of ploughing and the associated movement and accumulation of soil. In these examples the plough ridges have been levelled and only the faint traces of the plough furrows are visible.

3.5.2 Unfortunately the possible ridge and furrow remains recorded here are piecemeal and the reversed S-form that distinguishes medieval ploughing from later cultivation is absent. However it is possible that the ridge and furrow in **APs A, N, R, AA & AF** had its origins in the medieval period and continued in use into the post medieval period.

3.5.3 The ridge and furrow observed by this survey is mostly located on the slightly higher ground above the flood plain.

3.5.4 **Post medieval period**

3.5.5 As mentioned above some of the ridge and furrow observed in the Survey Area may have had its origins in the medieval period but continued in use into the post medieval period (**APs A, N, R, AA & AF**).

3.5.6 However the narrowly spaced ridges that are visible on the banks of the river south-east of the stud are likely to be of post medieval date (**AP H**). This block of narrow ridge and furrow survived as earthworks in 2003 but it is not clear from the more recent images whether it is still upstanding.

3.5.7 Several of the cropmarked ditches that are visible on the air photographs can be reconciled with boundaries that are mapped on the historic map sources. These include the examples noted in Section 3.4 **APs O, P, U & T** as well as **APs AC & AG**.

- 3.5.8 One of the boundaries in **AP AG** also marks the western edge of a former woodland known as Pound Copse. Now reduced to a narrow plantation running alongside Greensward Lane Pound Copse was still extant in 1954
- 3.5.9 Some of the cropmarks are not depicted on the historic maps but their spatial relationship to the current field boundaries and landscape suggests that they are of relatively recently origin (eg **APs C, K & V**).
- 3.5.10 The earthwork ditches that are visible in the fields flanking the River Loddon, particularly **AP X** but also **APs I & B** are more likely to have been associated with water management and land drainage than land division and are likely to be of post medieval date. The arrangement of ditches in **AP X** is quite complex and these may be the remains of a water meadow system. Some of these features are still in use or at least are distinct elements of the landscapes and they are recorded on modern mapping.
- 3.5.11 Also of post medieval origin is the gravel pit on the north side of Milking Bar Lane (**AP AH**). A smaller pit is depicted on the historic Ordnance Survey map of 1871 and labelled as 'Old Gravel Pit' but it was enlarged in subsequent years and again in the 1950s.

3.6 **Undated features**

- 3.6.1 A significant number of the cropmarked features recorded within the Survey Area have not been attributed a specific period or type, mainly because the evidence is too ephemeral or fragmentary and so undiagnostic of date or function.
- 3.6.2 South-west of Game Keepers Cottage there is a fragment of cropmark that resemble the western side of a ring ditch (**AP AD**). As this feature is so incomplete, has no similar features nearby and may actually be of geological rather than archaeological origin it would be imprudent to suggest a date.
- 3.6.3 West of Nutter's Lane there are a number of short straight ditches in a perpendicular arrangement (**AP J**). Whilst these can be distinguished from the coinciding pattern of land drains the origin and function of these cropmarks is not known.
- 3.6.4 Similarly there are quite extensive ditches visible between the old gravel pit (**AP AH**) and Rounds Copse but though they form a perpendicular arrangement they may not be contemporary (**AP AB**).
- 3.6.5 The linear features and pits on the east side of the old gravel pit are defined by

some of the clearest cropmarks seen in the area (**AP AI**). However at least one of the linears marks the line of a recent service trench (marked in blue on Fig 2), the date of the others and the pits is not known.

3.7 **Modern disturbances**

- 3.7.1 Modern features that appear as earthworks, cropmarks or soilmarks have not been catalogued but some have been mapped to avoid confusion with other features. The main modern features to note are a service trench that runs near north to south through the eastern part of the Survey Area and land drains in the vicinity of **APs E, J, P, S & AC**.

4 **Concluding remarks.**

- 4.1.1 This survey has recorded possible evidence of archaeological remains dating from the Bronze Age to the post medieval period but many of these interpretations have a low level of confidence.
- 4.1.2 The fragmentary nature of many of the cropmarks suggests that some linear features may continue unseen across areas of less responsive vegetation, slower draining soils and/or areas of deeper alluvial deposits.
- 4.1.3 Most of the feature that were recorded appear to have been levelled on the most recent air photos though some earthworks survive on the floodplain.

Appendix 1 Archaeology from black and white and colour air photographs

Air photographs taken in appropriate conditions can record crop marks, soilmarks and earthworks of archaeological origin.

Crop marks result from variations in leaf and stalk colour and plant height and vigour. Crop marks occur where there are anomalies below the ground: in-filled hollows, palaeochannels, frost cracks, archaeological pits, ditches, surfaces and banks or modern disturbances such as land drains. Crop marks can also be created by variations in the treatment of the topsoil and ground cover, for example the uneven application of fertilizers, pesticides and herbicides or damage.

Crop marks that delineate buried and levelled archaeological features are the effect of differential growth and ripening between the vegetation on the archaeological deposits and that on surrounding undisturbed ground. Variations in growth and ripening are most visible when there is a significant difference in the water and nutrient availability between the archaeological and natural deposits. Crop marks can form at any stage from germination to ripening but the optimal conditions are during periods when precipitation is exceeded by transpiration. This results in potential soil moisture deficit (SMD) and water-stressed plants (Jones and Evans 1975). Prolonged periods of SMD halt plant growth and then cause wilting of the plant leaves, stem and finally root. Water-stress is exacerbated by free-draining sub-surface deposits such as archaeological walls or road surfaces but mitigated by rich and humic ditch and pit deposits. Even after ripening, differences in crop height and bulk can indicate the presence of buried features where there are no tonal differences. Crop marks can be seen most clearly in large areas of homogenous, fast-growing plants such as cereal crops and, less frequently, in root crops and grass. Crop marks produced in arable and grass at times of significant moisture stress, usually over buried structures or other highly permeable archaeological deposits, are often referred to as parchmarks.

Soilmarks are the colour and tonal differences between archaeological deposits and the plough or subsoil. The action of ploughing, which can penetrate the ground to a depth of 45cm, brings to the surface previously buried material. The rotation of the plough exposes the cut surface uppermost. Where the plough cuts buried and in-filled archaeological features such as banks and ditches it brings to the surface slices of these deposits. If these slices are sufficiently differentiated from the natural plough or subsoil they can be visible from the air.

Archaeological earthworks that are visible on the ground can also be seen from the air. Detection and recording of earthworks from the air is determined by their survival and visibility. The survival of earthworks depends on past and present land use; natural erosion processes, deliberate destruction and ploughing can all reduce upstanding features to ground level. Earthworks can be revealed by the pattern of sunlight and shadow, differential frost or snow cover or the distribution of standing and flood water. Large and subtle variations in ground relief are further accentuated when viewed stereoscopically. Most stereo images are vertical photographs taken in long, regular sorties but stereo-overlapping can also be achieved from correctly set-up oblique views.

Appendix 2 Sources consulted

English Heritage Archive

English Heritage, The Engine House, Fire Fly Avenue, Swindon SN2 2EH. Enquiry reference no. AP 81763. The vertical and oblique air photographs listed below were consulted at the Archives on the 1st and 2nd October 2013. All photographs were black and white prints, except those marked *, which were colour prints and those marked **, which were colour diapositives (film) and examined on a light table.

Vertical air photographs

Sortie no.	Frame no.	Date	Scale 1:
RAF/106G/UK/1646	3145	10 JUL 1946	10000
RAF/106G/UK/1646	3146	10 JUL 1946	10000
RAF/106G/UK/1646	4058	10 JUL 1946	10000
RAF/106G/UK/1646	4059	10 JUL 1946	10000
RAF/58/1472 F21	79	24 JUN 1954	10000
RAF/58/1472 F21	80	24 JUN 1954	10000
RAF/540/1392 F21	37	27 AUG 1954	5000
RAF/540/1392 F21	121	27 AUG 1954	5000
RAF/540/1392 F21	122	27 AUG 1954	5000
RAF/540/1392 F22	47	27 AUG 1954	5000
RAF/540/1392 F22	48	27 AUG 1954	5000
RAF/540/1392 F22	49	27 AUG 1954	5000
RAF/540/1392 F22	109	27 AUG 1954	5000
RAF/540/1392 F22	110	27 AUG 1954	5000
RAF/540/1392 F22	111	27 AUG 1954	5000
RAF/540/1392 F22	112	27 AUG 1954	5000
RAF/540/1392 F22	113	27 AUG 1954	5000
RAF/540/1392 F22	114	27 AUG 1954	5000
RAF/540/1497 F21	54	05 DEC 1954	5000
RAF/540/1497 F21	55	05 DEC 1954	5000
RAF/540/1497 F21	56	05 DEC 1954	5000
RAF/540/1497 F21	57	05 DEC 1954	5000
RAF/540/1497 F21	58	05 DEC 1954	5000
RAF/540/1497 F22	51	05 DEC 1954	5000
RAF/540/1497 F22	52	05 DEC 1954	5000
RAF/540/1497 F22	53	05 DEC 1954	5000
RAF/540/1497 F22	54	05 DEC 1954	5000
RAF/540/1497 F22	55	05 DEC 1954	5000
RAF/540/1497 F22	56	05 DEC 1954	5000
RAF/540/1497 F22	92	05 DEC 1954	5000
RAF/540/1497 F22	93	05 DEC 1954	5000

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Sortie no.	Frame no.	Date	Scale 1:
RAF/540/1497 F22	94	05 DEC 1954	5000
RAF/540/1497 F22	95	05 DEC 1954	5000
RAF/540/1497 F22	96	05 DEC 1954	5000
RAF/540/1497 F22	97	05 DEC 1954	5000
RAF/82/1398 F22	350	23 APR 1956	20000
RAF/82/1398 F22	351	23 APR 1956	20000
RAF/58/2871 F22	134	15 MAY 1959	19500
RAF/58/2871 F22	135	15 MAY 1959	19500
RAF/543/1426 2F42	303	28 AUG 1961	10500
RAF/543/1426 2F42	304	28 AUG 1961	10500
RAF/543/1426 2F43	274	28 AUG 1961	10500
RAF/543/1426 2F43	275	28 AUG 1961	10500
RAF/106G/UK/1233	3042	10 MAR 1946	10000
RAF/106G/UK/1195	3036	28 FEB 1946	10500
OS/63196	12	30 JUL 1963	7500
OS/63196	13	30 JUL 1963	7500
OS/63196	57	30 JUL 1963	7500
OS/63196	58	30 JUL 1963	7500
OS/82184	8	25 AUG 1982	7900
OS/96641	157	16 JUN 1996	8400
OS/96641	158	16 JUN 1996	8400
RAF/543/3859 F22	694	13 JUN 1967	10600
RAF/543/3859 F22	695	13 JUN 1967	10600
*EA/AF/95C/272	7320	23 MAR 1995	3000
*EA/AF/95C/272	7321	23 MAR 1995	3000
*EA/AF/95C/272	7322	23 MAR 1995	3000
*EA/AF/95C/272	7323	23 MAR 1995	3000
*EA/AF/95C/272	7324	23 MAR 1995	3000
*EA/AF/95C/272	7325	23 MAR 1995	3000
*EA/AF/95C/272	7326	23 MAR 1995	3000
**EA/AF/95C/272	7351	23 MAR 1995	3000
**EA/AF/95C/272	7352	23 MAR 1995	3000
**EA/AF/95C/272	7353	23 MAR 1995	3000
**EA/AF/95C/272	7354	23 MAR 1995	3000
**EA/AF/95C/272	7355	23 MAR 1995	3000
**EA/AF/95C/272	7356	23 MAR 1995	3000
**EA/AF/95C/272	7357	23 MAR 1995	3000
**EA/AF/95C/272	7460	23 MAR 1995	3000
**EA/AF/95C/272	7461	23 MAR 1995	3000
**EA/AF/95C/272	7462	23 MAR 1995	3000
**EA/AF/95C/272	7463	23 MAR 1995	3000
**EA/AF/95C/272	7464	23 MAR 1995	3000

Sortie no.	Frame no.	Date	Scale 1:
*EA/AF/95C/272	7465	23 MAR 1995	3000

RAF = Royal Air Force, OS = Ordnance Survey, EA = Environment Agency/Aerofilms

Specialist (oblique) air photographs

EHA reference number	Date
SU 7266 / 2/ 161-165	01 JUL 1975
SU 7365 / 1/ 271-272	18 JUN 1974
SU 7365 / 40	28 OCT 2002
SU 7366 / 1/ 151-153	01 JUL 1975
SU 7366 / 2/ 154-156	01 JUL 1975
SU 7366 / 3/ 157-158	01 JUL 1975
SU 7366 / 4/ 406-409	21 JUL 1977
*SU 7366 / 5	23 JUN 2009
*SU 7366 / 6	23 JUN 2009
*SU 7366 / 7	23 JUN 2009
*SU 7366 / 8	23 JUN 2009
*SU 7366 / 9	23 JUN 2009
*SU 7366 / 10	23 JUN 2009
*SU 7366 / 11	23 JUN 2009
*SU 7366 / 12	23 JUN 2009
SU 7466 / 1/ 410-415	21 JUL 1977
SU 7466 / 2	19 JUL 1983
SU 7466 / 3	21 JUN 1989
SU 7466 / 4	21 JUN 1989
*SU 7466 / 5	21 JUN 1989
SU 7466 / 6	14 JUN 1990
SU 7466 / 7	14 JUN 1990
SU 7466 / 8	19 JUL 1983
SU 7466 / 9	19 JUL 1983
SU 7467 / 1/ 72-81	01 JUL 1975
SU 7467 / 3/ 175-176	17 JUL 1976
SU 7467 / 4	19 JUL 1983
SU 7467 / 5	19 JUL 1983
SU 7467 / 6	20 JUL 1983
SU 7467 / 7	20 JUL 1983
SU 7467 / 8	19 JUL 1983
SU 7467 / 9	19 JUL 1983
SU 7467 / 10	19 JUL 1983
SU 7467 / 11	20 JUL 1983
SU 7467 / 12	20 JUL 1983

Cambridge University Collection of Aerial Photographs (CUCAP) Library

Department of Geography, University of Cambridge, Downing Place, Cambridge, CB2 3EN. The following air photographs were examined at the library on 4th November 2013.

Reference nos	Date	Type
BWX 62	04-JUN-1976	Oblique
BWX 63	04-JUN-1976	
BWX 64	04-JUN-1976	
K17 AI 6	26-JUN-1975	Vertical
K17 AI 7	26-JUN-1975	
K17 AI 8	26-JUN-1975	

Other imagery consulted

The following resources were consulted between 24th September 2013 and 25th October 2013.

Resource	Link/Source	Date	Description and comment
Google Earth	http://earth.google.com/	2003	Full coverage
		05-SEP-2004	Full coverage
		2005	Full coverage
		2010	Full coverage
Bing maps	http://www.bing.com/maps	No date	Full coverage

Appendix 3 Structure and content of digital map dataset

Features in the layers marked with an asterix (*) above are also tagged with the following information

Data field	Description
APUID	Catalogue no.
TYPE	NMR Monument Type Thesaurus term
PERIOD	Period
LAYER	BANK, DITCH, FURROW,RF, EXTENT OF FEATURE, MODERN, NATURAL FEATURE
PHOTO1	Photo reference number
DATE1	Date of PHOTO1
FORM1	Evidence (earthwork, structure, soilmark, parchmark, cropmark)
SOURCE1	Source of PHOTO1
PHOTO2	As above for additional images
DATE2	
FORM2	
SOURCE2	
PHOTO3	As above for additional images
DATE3	
FORM3	
SOURCE3	

Appendix 4 Archaeological features identified on air photos (see Figures 2-3)

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
A	SU7269 6603	RIDGE AND FURROW	MEDIEVAL POST MEDIEVAL	Faint traces of possible medieval or post medieval plough furrows are visible as cropmarks on air photos. The furrows run perpendicular to the banks of the River Loddon. (1) 1 SU 7266/2/163 01-JUL-1975
B	SU7301 6612	DRAINAGE DITCH	POST MEDIEVAL	Post medieval drainage ditches are visible as cropmarks and earthworks on air photos.(1-3) 1 RAF/106G/UK1646 4059 10-JUL-1946 2 SU 7266/2/164 01-JUL-1975 3 Google Earth 2010
C	SU7310 6683	FIELD BOUNDARY	POST MEDIEVAL	Possible post medieval field boundaries are visible as cropmarks on air photos. (1). 1 OS/63196 13 30-JUL-1963
D	SU7331 6674	RECTILINEAR ENCLOSURE FIELD BOUNDARY	IRON AGE ROMAN	Part of a possible Iron Age or Roman rectilinear enclosure and a field boundary are visible as faint cropmarks on one set of historic air photos. (1) 1 RAF/82/1398 F22 351 23-APR-1956
E	SU7346 6670	DITCH	UNCERTAIN	Two ditches of uncertain date are visible as cropmarks on historic air photos.(1) 1 RAF/543/1426 303 28-AUG-1961
F	SU7339 6646	DITCH	UNCERTAIN	Fragments of ditch in a parallel arrangement are visible as cropmarks on air photos. (1-2) 1 SU 7366/1/151 01-JUL-1975 2 RAF/543/1426 303 28-AUG-1961

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
G MWK15684	SU7344 6638	RING DITCH	BRONZE AGE	<p>A group of possible Bronze Age ring ditches is visible as cropmarks on 1975 air photos. The ring ditches are of fairly uniform size, approximately 10-12m diameter. (1)</p> <p>On first examination it was suspected that these were superficial cropmarks similar to the horse training or lungeing circles that are visible close to the Burley Lodge Stud on other photos taken in the same year. (2)</p> <p>However one of the ring ditches (centred at SU7337 6639) is also visible on a 1954 air photo suggesting that this example at least was not a transient disturbance. (3)</p> <p>1 SU 7366/1/151 01-JUL-1975 2 SU 7366/3/158 01-JUL-1975 3 RAF/540/1392 F21 37 27-AUG-1954</p>
H	SU7356 6663	NARROW RIDGE AND FURROW	POST MEDIEVAL	<p>A block of post medieval narrow ridge and furrow is visible as earthworks on recent air photos. (1)</p> <p>1 Google Earth 2003</p>
I	SU7364 6623	DRAINAGE DITCH WATER MEADOW	POST MEDIEVAL	<p>Post medieval drainage ditches are visible as earthworks and cropmarks on historic air photos. These may be part of a water meadow system. (1)</p> <p>1 RAF/540/1497 F21 55 05-DEC-1954</p>
J	SU7381 6609	DITCH	UNCERTAIN	<p>A perpendicular arrangement of short narrow ditches are visible as cropmarks on air photos. The date of these features is not known. They appear in an area that is also crossed by modern land drains but they appear to be distinct from these. (1-2)</p> <p>1 SU 7366/2/155 01-JUL-1975 2 OS/96641 158 16-JUN-1996</p>
K	SU7389 6623	FIELD BOUNADRY	POST MEDIEVAL	<p>A possible post medieval field boundary is visible as a cropmark on air photos. It is not depicted on the historic Ordnance Survey map of 1871 but fits with the overall pattern of post medieval land division. (1-2)</p> <p>1 SU 7466/1/410 21-JUL-1977 2 Ordnance Survey map of 1871</p>

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
L MWK1885	SU7395 6636	ENCLOSURE DITCH	UNCERTAIN	Fragmentary ditches of uncertain date, including one that may be the corner of an enclosure, are visible as cropmarks on air photos. (1) 1 SU 7466/1/410 21-JUL-1977
M MWK1886 MWK1887	SU7412 6616	TRACKWAY FIELD BOUNDARY PIT DITCH	IRON AGE ROMAN UNCERTAIN	Possible Iron Age or Roman trackways, field boundaries, a large T-shaped pit and ditches together with other ditches of uncertain date are visible as faint cropmarks on air photos. Some of these features appear to be cut by medieval or post medieval ridge and furrow (AP N), post medieval field boundaries (AP O) and modern land drains. (1-2) 1 SU 7466/7 14-JUN-1990 2 SU 7466/1/413 21-JUL-1977
N	SU715 6615	RIDGE AND FURROW	MEDIEVAL POST MEDIEVAL	A strip of medieval or post medieval ridge and furrow is visible as cropmarks on historic air photos.(1) 1 RAF/540/1497 F21 55 05-DEC-1954
O	SU7409 6612	FIELD BOUNDARY	POST MEDIEVAL	An arrangement of ditches that are likely to be the remains of post medieval field boundaries are visible as cropmarks on air photos. The main north-west to south-east aligned ditch was still marked by a hedgerow in 1954 but whilst the others appear to articulate with it, they are not depicted on the historic map of 1871. (1-3) 1 SU 7466/7 14-JUN-1990 2 RAF/540/1392 F22 113 27-AUG-1954 3 Ordnance Survey map of 1871
P MWK1886	SU7420 6623	FIELD BOUNDARY	POST MEDIEVAL	A post medieval field boundary is visible as a faint cropmarked ditch on air photos. This feature is depicted on the Ordnance Survey map of 1871. (1-3) 1 SU 7466/1/413 21-JUL-1977 2 SU 7466/3 21-JUN-1989 3 Ordnance Survey map of 1871

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
Q	SU7434 6620	BANK (EARTHWORK)	UNCERTAIN	A curving bank which may indicate a post medieval field boundary is visible as cropmarks on air photos. (1-2) 1 SU 7466/1/413 21-JUL-1977 2 Google Earth 2003
R	SU7419 6646	RIDGE AND FURROW	MEDIEVAL POST MEDIEVAL	Possible medieval or post medieval ridge and furrow is visible as cropmarks on historic air photos. (1) 1 RAF/540/1497 F21 55 05-DEC-1954
S	SU7419 6647	DITCH	UNCERTAIN	Ditches of uncertain date are visible as cropmarks on air photos. (1) 1 SU 7466/1/415 21-JUL-1977
T	SU7391 6648	BOUNDARY WOOD	UNCERTAIN	A former woodland boundary is visible as a cropmark on recent air photos. The area to the south and east of this right-angled ditch was part of Moor Copse on the 1871 Ordnance Survey map and in 1946. This part of the wood was removed by 1954. Other cropmarks of possible earlier date have also been observed in this area (see AP W) (1-4) 1 SU 7366/4/408 21-JUL-1977 2 Ordnance Survey map of 1871 3 RAF/58/1472 F21 79 24-JUN-1954 4 RAF/106G/UK1646 3145 10-JUL-1946
U	SU7374 6684	FIELD BOUNDARY	POST MEDIEVAL	A short section of post medieval field boundary is visible as a cropmarks on air photos. This ditch corresponds with the location of a field boundary depicted on the Ordnance Survey map of 1871. (1-3) 1 SU 7366/4/408 21-JUL-1977 2 SU 7366/8 23-JUN-2009 3 Ordnance Survey map of 1871

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
V MWK1848	SU7421 6700	FIELD BOUNDARY	POST MEDIEVAL	<p>A series of possible post medieval field boundaries are visible as cropmarks on air photos. These ditches appear to be former sub-divisions of the field on the north-east side of Moor Cops, although they are not depicted on the historic Ordnance Survey map or the earlier Tithe Apportionment map. (1-6)</p> <p>1 GOOGLE EARTH 2005 2 SU 7366/8 23-JUN-2009 3 RAF/58/1472 F21 80 24-JUN-1954 4 OS/96641 157 16-JUN-1996 5 Ordnance Survey map of 1871 6 Tithe Apportionment Map 1839</p>
W MWK1848	SU7389 6692	FIELD BOUNDARY RECTILINEAR ENCLOSURE Paddock DITCH	IRON AGE ROMAN UNCERTAIN	<p>A complex arrangement of cropmarks is visible on the north side of Moor Cops. Some of these features may be field boundaries, a rectilinear enclosure or paddock and pits of Iron Age or Roman date but the origin of some of the ditches is uncertain. (1-3)</p> <p>1 SU 7366/8 23-JUN-2009 2 SU 7366/4/408 21-JUL-1977 3 BWX 64 04-JUN-1976</p>
X	SU7400 6727	DRAINAGE DITCH WATER MEADOW DITCH FIELD BOUNDARY	POST MEDIEVAL	<p>A network of ditches are visible as cropmarks and earthworks in the fields adjacent to the River Loddon north of Rounds Copse. Some of these ditches appear to be drainage ditches forming a water meadow system and are likely to be of post medieval date. There are also a small number of short discrete ditches that are of uncertain date. (1-5)</p> <p>1 SU 7467/3/176 17-JUL-1976 2 RAF/540/1392 F22 110 27-AUG-1954 3 RAF/540/1497 F22 55 05-DEC-1954 4 K17 AI 6 26-JUN-1975 5 Google Earth 2003</p>

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
Y	SU7439 6744	ENCLOSURE	IRON AGE ROMAN	Faint cropmarks suggesting a D-shaped enclosure are visible on air photos. These cropmarks are only visible on one occasion but if they are of archaeological origin they may indicate Iron Age or Roman remains. (1) 1 SU 7467/8 19-JUL-1983
Z	SU7445 6720	ENCLOSURE DITCH	IRON AGE ROMAN	Faint cropmarks suggesting the north-east corner of a double-ditched enclosure are visible on air photos. These cropmarks are only visible on one occasion but if they are of archaeological origin they may indicate Iron Age or Roman remains. (1) 1 SU 7467/8 19-JUL-1983
AA	SU7445 6724	RIDGE AND FURROW	MEDIEVAL POST MEDIEVAL	Traces of medieval or post medieval ridge and furrow are visible as cropmarks on historic air photos. (1) 1 RAF/540/1392 F21 122 27-AUG-1954
AB MWK2642	SU7448 6730	DITCH	UNCERTAIN	Ditches of uncertain date are visible as cropmarks on air photos. The ditches appear in an area of complex geological crop patterning and so some are fragmentary and disjointed. (1-3) 1 SU 7467/8 19-JUL-1983 2 Google Earth 2010 3 RAF/543/1426 304 28-AUG-1961
AC	SU7447 6698	FIELD BOUNDARY	POST MEDIEVAL	Two post medieval field boundaries are visible as cropmarks on air photos. Both features are depicted on the Ordnance Survey map of 1871. (1-4) 1 RAF/540/1392 F21 121 27-AUG-1954 2 OS/96641 157 16-JUN-1996 3 RAF/540/1497 F22 52 05-DEC-1954 4 Ordnance Survey map of 1871

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
AD	SU7459 6709	RING DITCH	UNCERTAIN	Part of a possible ring ditch is visible as a cropmark on a 1996 air photo and germination mark in 2005. It is not certain that this feature is of archaeological origin, it appears in an area of complex geological marks. (1-2) 1 OS/96641 157 16-JUN-1996 2 Google Earth 2005
AE MWK1890	SU7479 6698	HUT CIRCLE	IRON AGE ROMAN	A possible Iron Age or Roman period hut circle is visible as a cropmark on air photos. It measures approximately 7m in diameter.(1) 1 SU 7467/1/74 01-JUL-1975
AF	SU7450 6713	RIDGE AND FURROW	MEDIEVAL POST MEDIEVAL	Traces of possible medieval or post medieval ridge and furrow are visible as cropmarks on air photos. 1 SU 7467/1/74 01-JUL-1975
AG	SU7490 6718	WOOD FIELD BOUNDARY	POST MEDIEVAL	Post medieval boundaries and an area of former woodland (Pound Copse) are visible as cropmarks on recent air photos. These features are depicted on the Tithe Apportionment map and most were still extant in 1954. (1-4) 1 Google Earth 2004 2 Ordnance Survey 1871 3 Tithe Apportionment map 1839 4 RAF/540/1392 F21 122 27-AUG-1954

APUID/HER	Central NGR	Type(s)	Period(s)	Description of feature(s)
AH	SU7463 6747	GRAVEL PIT	POST MEDIEVAL MID 20 TH CENTURY	<p>The remains of a gravel pit are visible as cropmarks and earthworks on air photos. The middle section was depicted on the Ordnance Survey map of 1871 and labelled as 'Old Gravel Pit'. Between then and 1946 shallow workings extended the pit to the east and to the west. All workings appear abandoned on the 1946 photos. In 1954 a small area around SU7467 6737, between the gravel pit and Milkingbarn Lane was open. The appearance of the crop around SU7460 6737 suggests there may have been shallow extractions here too. Some of the areas of extraction have now been returned to pasture, the remainder is under scrub and wood. (1-5)</p> <p>1 SU 7467/5 19-JUL-1983 2 Ordnance Survey 1871 3 RAF/106G/UK1646 3145 10-JUL-1946 4 RAF/540/1392 F21 122 27-AUG-1954 5 RAF/58/1472 F21 80 24-JUN-1954</p>
AI MWK2644	SU7481 6747	DITCH PIT	UNCERTAIN	<p>Three near-parallel long ditches, a scatter of pits and shorter fragments of ditch are visible as cropmarks and shallow earthworks on air photos. The date of these features is not known, they may not be directly associated with one another and it is not certain that they are of archaeological origin. One of the fainter linears in this area has been identified as a service trench and it continues to the south of Milkingbarn Lane. (1-3)</p> <p>1 SU 7467/5 19-JUL-1983 2 OS/63196 12 30-JUL-1963 3 Google Earth 2005</p>

References and resources cited

Jones, R J A and Evans, R 1975. 'Soil and crop marks in the recognition of archaeological site by air photography' in Wilson, D (ed) *Aerial Reconnaissance for Archaeology*. CBA Research Report 12. 1-11

Soil Survey of England and Wales 1983 Soils of England and Wales, 1:250 000 scale map and legend. Sheet 3.

Digital resources

<http://www.old-maps.co.uk> for the Ordnance Survey map of 1871 (1:2500 scale). Accessed 23/10/13

Soilscapes <https://www.landis.org.uk/soilscapes/> for soils information Accessed 23/10/2013

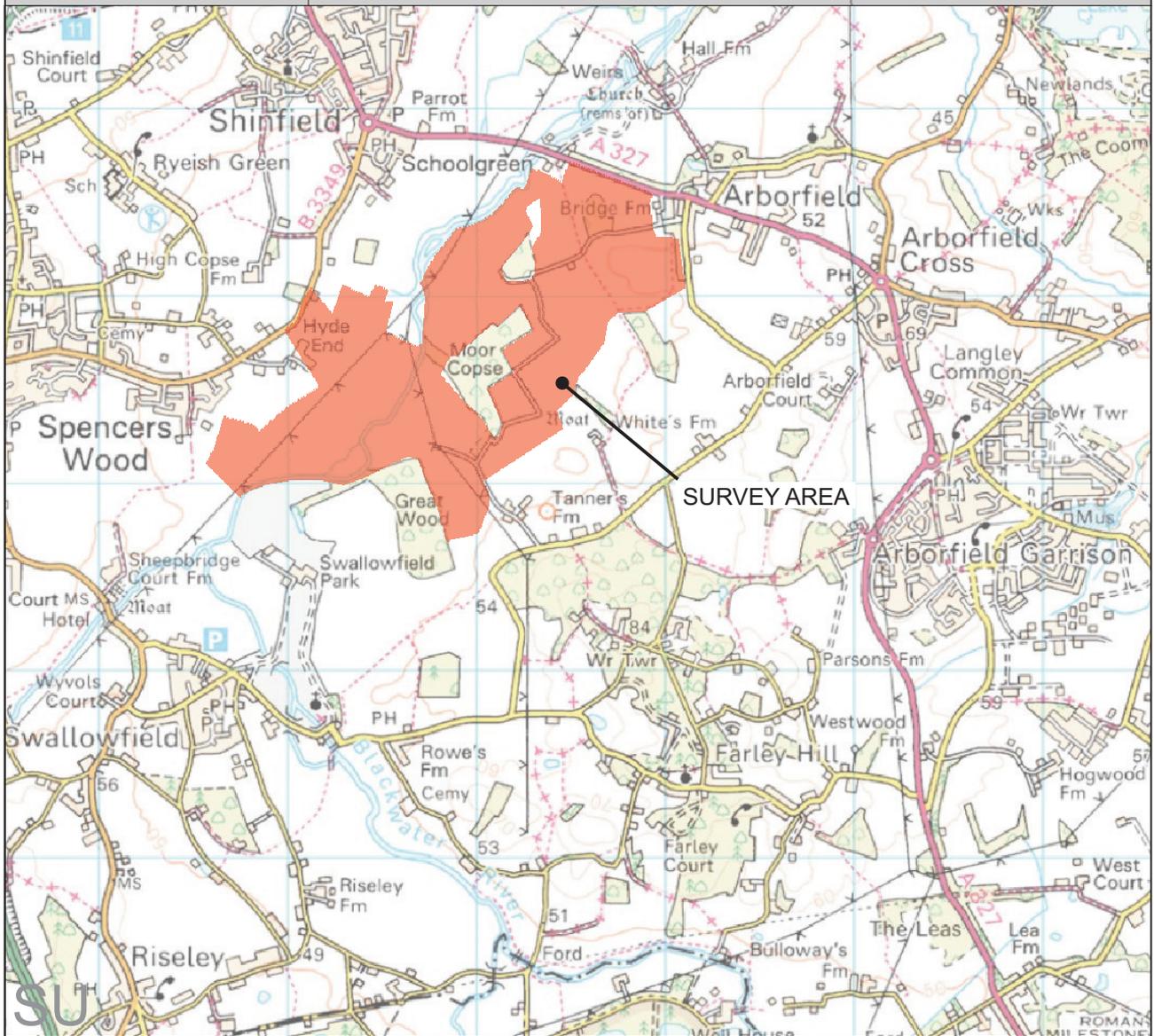


Figure 1. Location plan of the air photo interpretation and mapping for Farley Hall Estate, Shinfield, Berkshire

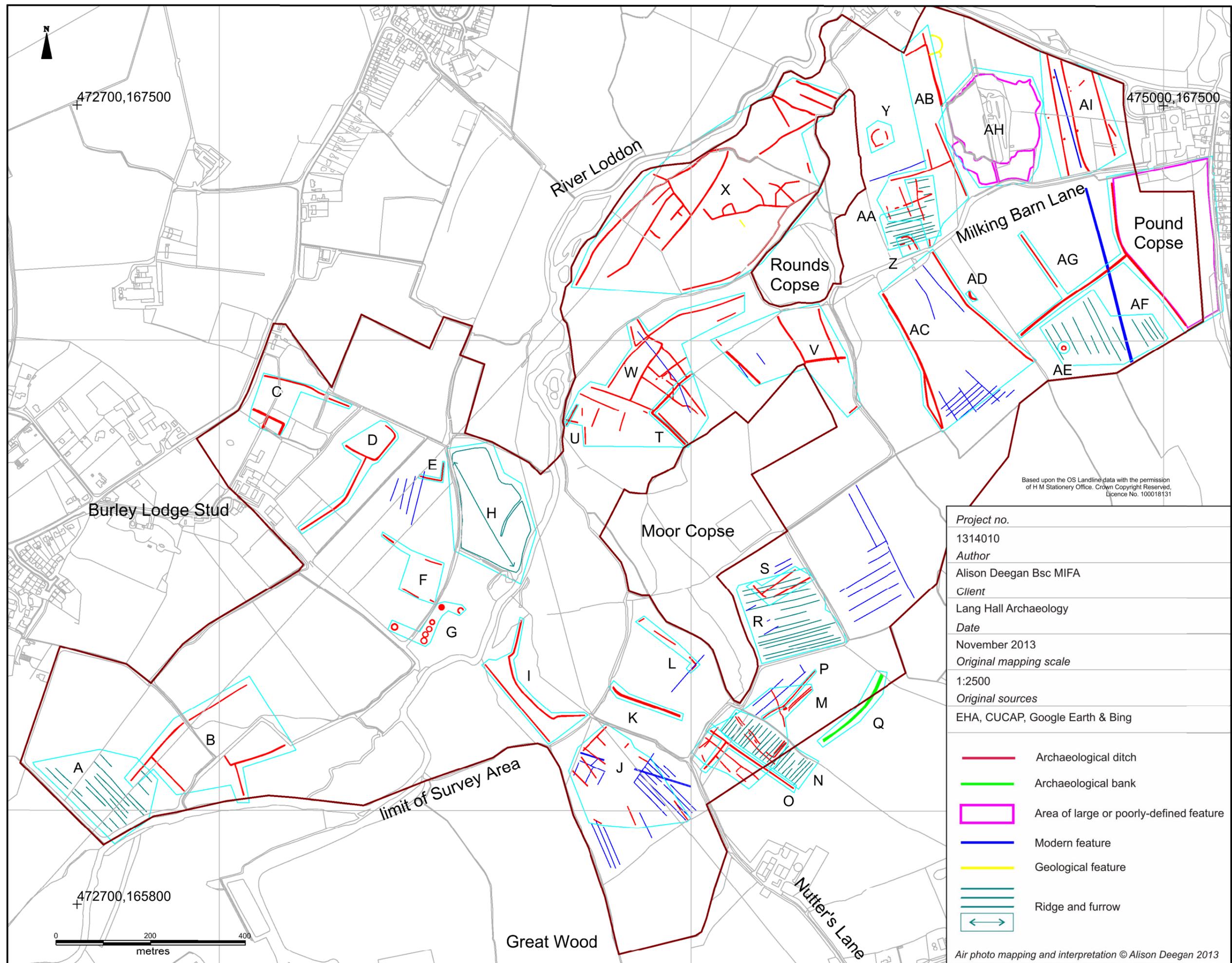


Figure 2. Archaeological features from air photos at Farley Hall Estate, Shinfield, Berkshire (with catalogue numbers)

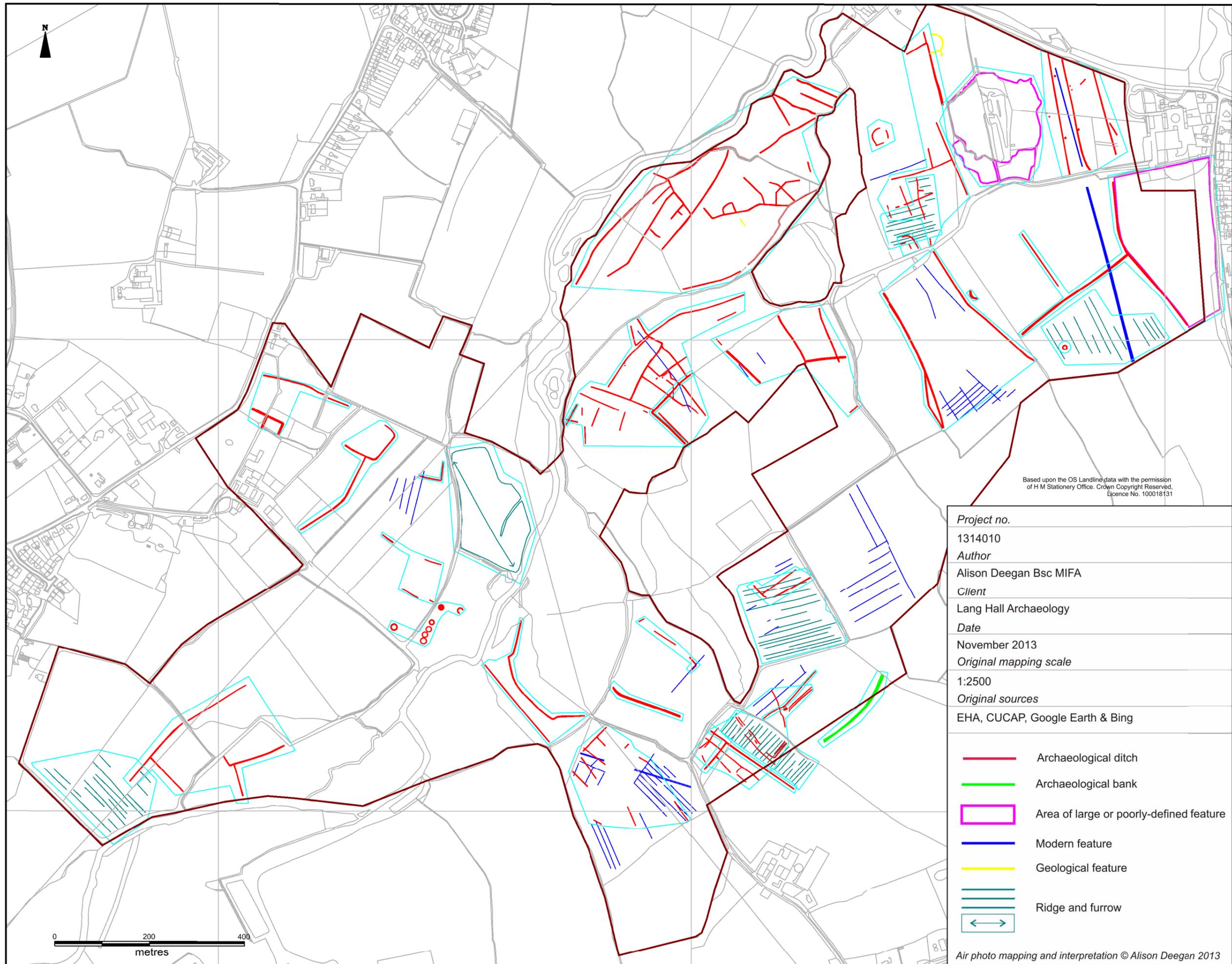


Figure 3. Archaeological features from air photos at Farley Hall Estate, Shinfield, Berkshire (with catalogue numbers)