



INDEX DATA	RPS INFORMATION
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Contractor Rog Palmer Chris Cox	
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**A14 SEVEN HILLS TO TRIMLEY IMPROVEMENT,
SUFFOLK:**

AERIAL PHOTOGRAPHIC ASSESSMENT

REPORT No: R80

NOVEMBER 1995

COMMISSIONED BY

SUFFOLK COUNTY COUNCIL (PLANNING)
ST EDMUND HOUSE
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Archaeological consultants for aerial photographic interpretation, accurate mapping and oblique aerial photography

**A14 SEVEN HILLS TO TRIMLEY IMPROVEMENT,
SUFFOLK:
AERIAL PHOTOGRAPHIC ASSESSMENT**

Rog Palmer MA MIFA

INTRODUCTION

This assessment of aerial photographs was commissioned to examine an area extending some 200m each side of the present A14 between TM251394 and TM269383 in order to identify and accurately map archaeological and natural features and thus provide a guide for field evaluation. The assessment area also includes a small extension at its west end and is indicated in Figure 1. Mapping was to be at 1:2500.

ARCHAEOLOGICAL AND NATURAL FEATURES FROM AERIAL PHOTOGRAPHS

Sub-surface archaeological features – including ditches, pits, walls or foundations, and banks – may be recorded from the air in different ways in different seasons. In spring and summer features of natural and anthropogenic origin may show through their effect on crops growing above them. Such indications tend to be at their most visible in ripe cereal crops, generally 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.

Within this assessment area no archaeological features survived as earthworks nor was any soil-marked information recorded. All archaeological features mapped for this assessment are the sub-surface remains of former pits and ditches which have been identified as differences in crop growth. Interpretation and mapping has translated this crop-marked evidence back into its archaeological reality. A small number of natural frost cracks have also been mapped but, in general, the soils and bedrock in this area appear free from major crop-marked periglacial features.

There was some crop-marked evidence for bands of deeper soil which almost certainly show former water courses. These show as darker bands (ie of advanced crop growth) which indicate deeper soil in natural hollows. Within these their edges and extents can vary from year to year with the amount of ground moisture content. Only one of these may affect the archaeological record in the assessment area where it runs almost parallel to the modern field boundary between TM26553810 and TM26753825 (Figure 3: area L). To avoid confusion it has not been shown on the map: it lies in a dry valley which will easily be located on the ground. Smaller patches of deeper soil, or differences in soil content, have not been shown.

PHOTO INTERPRETATION AND MAPPING

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and the National Library of Air Photographs (NLAP), Swindon and included photographs resulting from specialist archaeological reconnaissance and routine vertical surveys. All photographs held by CUCAP were examined as were all specialist obliques listed by NLAP (in cover search 9510995EFG). Obliques span dates between 1959 and 1989, although most of the photographs were taken in the 1970s, and show the area to have been visited for specialist archaeological reconnaissance in 12 different years. This cumulative record suggests that the photographs should offer a reasonably comprehensive picture of the surviving archaeological features. A selection was made of the listed NLAP verticals to eliminate those of poor quality and post-harvest winter sorties. Those examined record the area on dates between July 1944 and 1971.

All photographs consulted are listed in the Appendix to this report.

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 to 4x magnification stereoscope. Interpretations were marked on transparent overlays to individual prints following procedures described by Palmer and Cox (1993). All rectification was computer assisted and carried out using AERIAL 4.2 software set for plane surface transformation (Haigh 1993). Available contour information suggested that terrain modelling rectification was unnecessary in the assessment area.

AERIAL computes values for error of control point match between the photograph and map. In all rectifications prepared for this assessment the mean error values were less than $\pm 2.0\text{m}$. Rectified and plotted output was combined to form the basis of the hand-drawn finished plan that accompanies this assessment. The same data have been reduced to provide three digitally-generated figures to which the archaeological commentary (below) refers.

COMMENTARY

Figure 1 shows the area examined and includes features that are outside the assessment area but which may have some relevance to past activity within it. Most of the features recorded would seem likely to be of prehistoric or Romano-British origin although, as will be noted, some more recent activity may be intermixed. As is frequently the case with crop-marked information, the Trimley assessment area shows discrete concentrations of past ditched activity with no definite connecting features between them. Whether such links did once exist is open to question and in this area it is uncertain if the east-west track *ABC* (Figure 2) can be traced as far as, and east of, point *D*. Figure 1 suggests two alternative routes east of *D*: that which extends between the A14 and the railway to *K* (Figure 3), or the broad ditch in area *M* (Figure 3). Neither of these reflect the character of the track at *ABC* which has irregular width plus internal hollowing and/or ditches – features which continue to distinguish the track for several hundred metres west of the assessment area – although track appears to have become a single ditch east of *C* and is thus more closely matched by the feature in *M*.

For ease of any further discussion the assessment area will be considered in terms of its western and eastern parts. The division between these parts being made where the A1093 and A14 meet – a line which does not obviously cut any archaeological features. Commentary on these two parts refers to the annotated digital maps (Figures 2 and 3). These have been derived from, and show identical archaeological information to, Figure 1. Several of the features mapped, or parts of them, are recorded in the Suffolk Sites and Monuments Record but without a clear indication of what precisely the SMR numbers identify their use is restricted.

The western area (Figure 2)

Most of the archaeological features in this area are ditches which appear to have been cut with respect to the tracks *ABC* and *BE* – the two forming a closed T-junction at point *B*. Most of these ditched features are more likely to be fields than occupation areas although the small enclosure [SNH 3] in the south-west angle of junction *B* (TM25193918) may identify a settlement. Similarly aligned features extend north and south of track *ABC* although those to the north may be masked by the crop trial acreage in the area of Walk Farm. The east-west track, *ABC*, is formed by a series of ditches delineating its edges rather than the more continuous ditches that define the course of *BE*. Because of this means of creating a track, the length *AB* appears in part to have three roughly parallel ditches, elsewhere it shows what may be hollowing (recorded as a broad, roughly central, crop mark – eg at point *A* and further to the west). These features may suggest the track was a long-lived route that was periodically ‘improved’. It may also be significant that the course of *ABC* is closely matched by the present parish boundary. Other hollows have been mapped adjacent to junction *B* although one of these cuts across track *BE* suggesting either that it is not a hollow (perhaps a spread of burnt or highly organic material) or that it is not contemporary with the use of the track.

Elsewhere in the western area there are suggestions of discontinuity of land use shown by superimposition of features. South of the assessment area at TM25153890 [SNH 5] two of the field ditches slightly misjoin track *BE* although it is unclear which features predate the others (this information has been mapped at 1:2500 only). North of those junctions a single linear ditch crosses, or is crossed by, track *BE* at an angle that does not conform to the close perpendicular layout of the bulk of the local features. In area *F* two closely-spaced parallel ditches cut, or are overlain by, features which appear integral with the track-related ditched system. Other superimposed ditches occur in area *H* where the presence of adjacent ring ditches serves as a reminder that past use of this area spanned many centuries and unrelated features must be expected.

At *F*, north of track *ABC* and conforming to its alignment and the axis of the neighbouring ditched features, is a rectangular enclosure containing a sub-circular structure [TYN 9]. Photographs suggest this to be a walled structure with an external ditch – the walls, or their foundations, showing via extremely stunted cereal growth. The interior of the structure produces a very dark crop-marked area which extends beyond the encircling ditch especially on the south side. This dark area is likely to be caused by a rich organic or burnt deposit or and may indicate an area of uncharacteristic activity. The presence of the sub-circular walled structure and its related activity area make it probable that these features indicate the site of a Romano-British religious site. It appears to be centrally located within larger ditched enclosures one of which abuts the northern ditch of track *ABC*. Small-scale quarrying cuts close to the

west side of the sub-circular feature but has caused it no obvious structural damage. North and east of *F* are a number of distinct crop-marked pits some of which are elongated and may identify graves. The fact that several these are similarly aligned adds conviction to this suggestion although the orientation of their long axes (north-south-ish) is unusual. These pits are close to the parish boundary whose course is reflected by track *ABC*.

All features described above are south of the railway and lie in an area of slightly uneven soil depth (which shows as diffuse areas of differential crop growth) which is also marked by an irregular scatter of soil-filled ?natural pits. These features rarely create similar patterns of crop marks in different years and no attempt has been made to map them.

In the vicinity of *H* are two definite ring ditches [SNH 6], although the northern one has not been recorded since 1959 and may be either ploughed away or covered by an accumulation of deeper soil at the field edge. Interpretation for this assessment has identified what may be arcs of four other ring ditches in the same area. These have been mapped as 'possible' features since their crop-marked evidence is very weak although their similarity in size (in the 16 to 18m diameter range) to the two definite ring ditches adds to their credibility. They occur in an area of minor soil differences and ?natural pitting and they could be due to the eye joining adjacent features and making arcs rather than indicating the presence of genuine archaeological ditches. Confirmation of their origin and form is likely to require field investigation.

A single ring ditch of larger diameter (27m) is to the north-east at *G* [TYN 29]. It contains, and is adjacent to, a number of distinct crop-marked pits some of which may indicate the location of related burials. Immediately south of the ring ditch are three near-parallel features, one of which is over, or below, the ring ditch. These are of unknown origin. Some 75m east of the ring ditch is part of an apparent pit-defined oval with a smaller but similarly pit-defined feature between the two. These have been identified only on photographs taken on 9 July 1959 and their recording may be due to a combination of angle of view and crop development. They are not visible on photographs taken six days earlier (from a different direction) or on any taken in later years and thus may be suspect. Attention is drawn to these features due to their proximity to the present A14 and the possibility of damage during road improvement.

The course of track *ABC* appears to be continued to *D* by a single ditch. It has been mapped as archaeological although its slightly irregular width and its sinuous plan make it possible that this is a periglacial feature. It was partly affected by previous widening of the A14 (then the A45) and will again be threatened if the new road improvement extends further south.

Just intruding into the north-west corner of the assessment area is the straight double ditched feature identified at *J* in Figure 2 [TYN 30 and TYN55]. This has been recorded patchily where it crosses the area of crop trials but sufficient can be identified to note that it makes a very slight change in alignment where the track running north from Walk Farm crosses it and that it extends as far east as the A1093. Ditches meet it at near-perpendicular angles and are similarly aligned to those associated with track *ABC* although it is not certain whether these once combined to form part of a single large cohesive field system. The double ditch and its perpendicular features extend west of the assessment area.

The eastern area (Figure 3)

Features mapped in this area are less easy to classify and discuss than those to the west. It is possible that the linear feature extending from track *ABC* to *D* continues to *N* and *K* as a broad-spaced parallel-ditched feature. However, it is not at all certain whether the crop-marked features between the A14 and the railway in the *NK* area are archaeological in origin or are remnants of a more recent system of ditched land division. The fact that the alignment of many of the features in this area conforms to the present-day pattern of tracks and boundaries makes them suspect although it is not possible to date this crop-marked evidence without reference to other sources. In this case examination of earlier editions of large- or medium-scale maps may provide relevant information.

East of *K* the alignment changes slightly (area *L*) and the photographs record features of more usual archaeological character. These tend to form a series of near-parallel boundaries which may show parts of a larger field system. Traces of crop-marked ditches appear to sub-divide these parallel divisions among which are other features which show a different alignment. More than one phase of activity may be indicated. Within this possible field system, immediately north of the railway, a single ring ditch [TYN 54] has been recorded. Features at TM267382, shown as possible archaeological ditches, were recorded on only one date in a crop which was very ripe and had suffered a degree of lodging. They tend to conform to the general alignment in the area although they are dubious as of archaeological origin. The western part of area *L* is crossed by a hollow containing deeper soil which may reduce the visibility of crop-marked archaeological evidence.

Two single ditches continue the main alignment of area *L* and can be traced north of the A14 and beyond the assessment area until one meets ditched tracks (see Figure 1). This alignment may also be continued by other features north of the A14 in area *M* where lengths of thin crop-marked ditches may show archaeological or more recent boundaries. Little more can be noted other than to indicate that these appear to form part of a regular system of ditched features. A broader and more sinuous feature crosses area *M*. It is uncertain whether this is a natural feature or an archaeological ditch although the dog-leg turn at TM26493881 hints against a natural origin.

Features at *P* show parts of a second world war communications (or radar) station. On photographs taken in 1944 freshly-cut trenches linked three pylons to buildings. Other square or rectangular structures in the vicinity are likely to be related to this military activity and may include pill boxes or other defensive features. The complex continued in use after the war and had reached its maximum expansion by 1951 when metalled roads fed the establishment. Part of these survive as the looped track at TM263389. By 1963 most of the buildings had been demolished and the masts removed. Mapping for this assessment shows the traces remaining in 1969.

Potential 'blank' areas

Specialist aerial reconnaissance in the area has enabled a map to be compiled that is likely to indicate the main archaeological features therein. Virtually all the information mapped for this assessment has been interpreted from oblique aerial photographs. These, it must be emphasised,

are usually taken only when an aerial observer has noticed features thought likely to be archaeological. This high-cost and high-speed activity means that much observation from the air tends to focus on features that are easily recognisable as archaeological or on those producing the most distinct crop marks. However, the photographs covering the assessment area are mainly the work of experienced aerial observers and, as such, could be expected to provide a good record of features visible on the dates of reconnaissance. Examination of all photographs suggests there to be areas in which the evidence is likely to under-represent past activity and these are as follows:

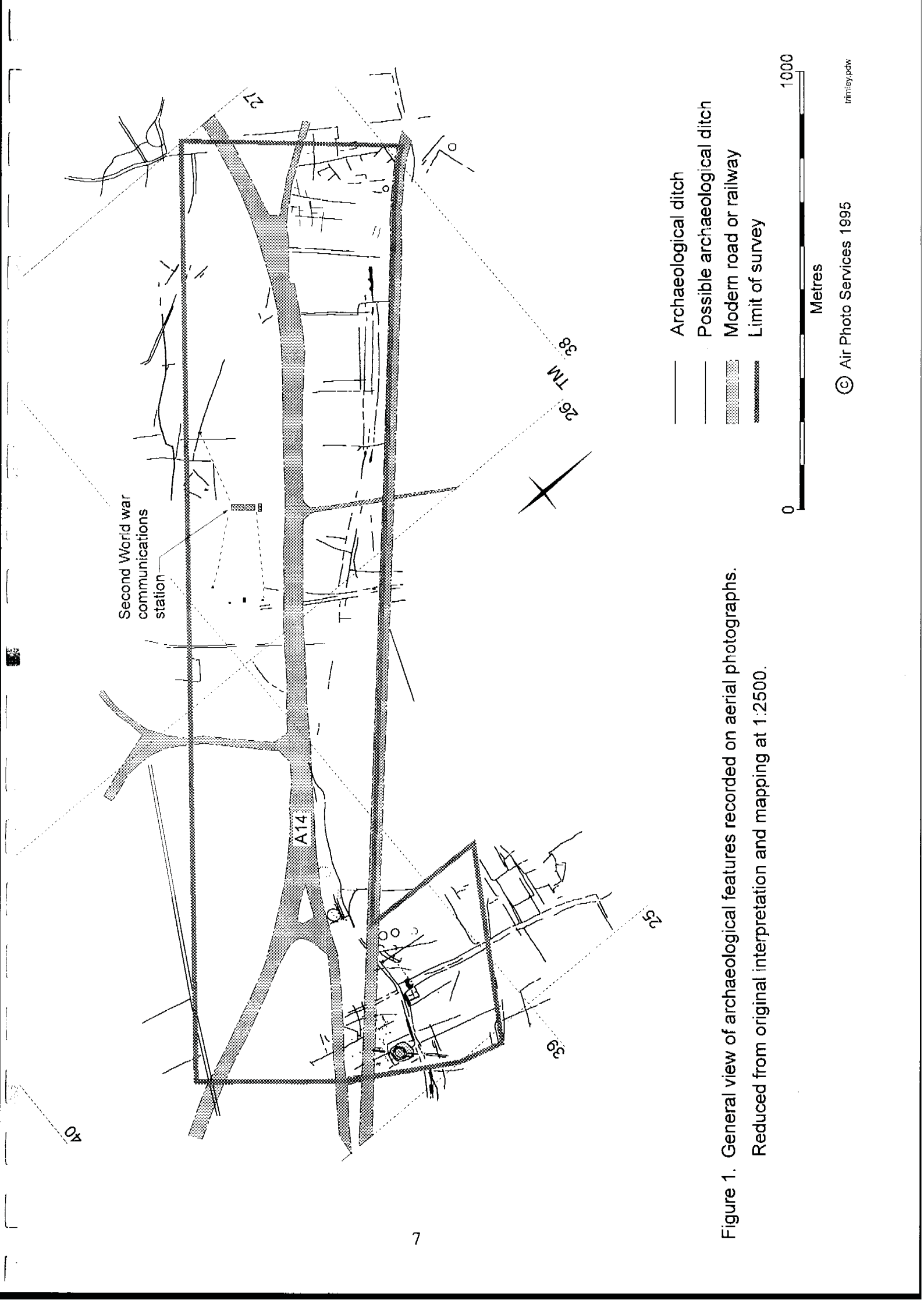
Figure 2: between *D* and *G*. Information for this area comes from the background of photographs. Crop-marked features appear weak, a response which may be due to a local pocket of slightly deeper soil restricting differential growth above any sub-surface ditches. This poorly-responsive area may continue between *D* and *N* in Figure 3.

Figure 2: area *J*. Land in this area (north of the old A45 and bounded in the east by the A1093) has been extensively used for agricultural trials resulting in small units of varyingly productive crops. This has hindered the observation of archaeological features and may mean that only the more major elements – such as the linear ditches at *J* – have been observed and photographed.

Figure 3: area *M* and *P*. Very few oblique photographs have been taken of the area north of the A14 and features identified there do not produce strong crop marks.

REFERENCES

- Haigh, J.G.B., 1993. A new issue of AERIAL – Version 4.20. *AARGnews* 7, 22-25.
- Palmer, R. and Cox, C., 1993. *Uses of aerial photography in archaeological evaluations*. IFA Technical Paper 12.



Second World war
communications
station

A14

26 TM 38

25

39

40

- Archaeological ditch
- - - Possible archaeological ditch
- ▬ Modern road or railway
- ⋯ Limit of survey



Metres

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trim:ay,pdw

Figure 1. General view of archaeological features recorded on aerial photographs.
Reduced from original interpretation and mapping at 1:2500.

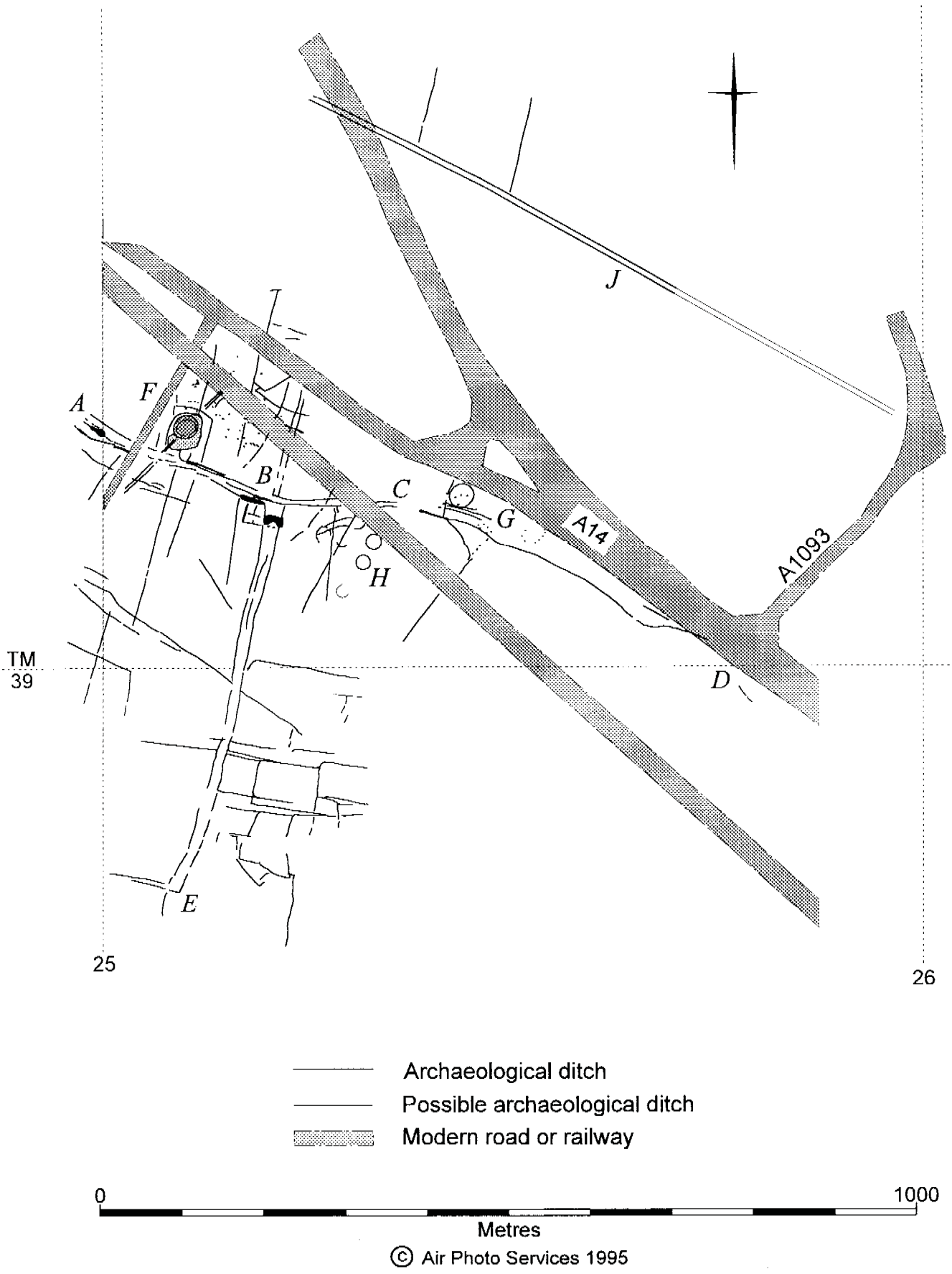


Figure 2. Annotated map showing western part of assessment area.

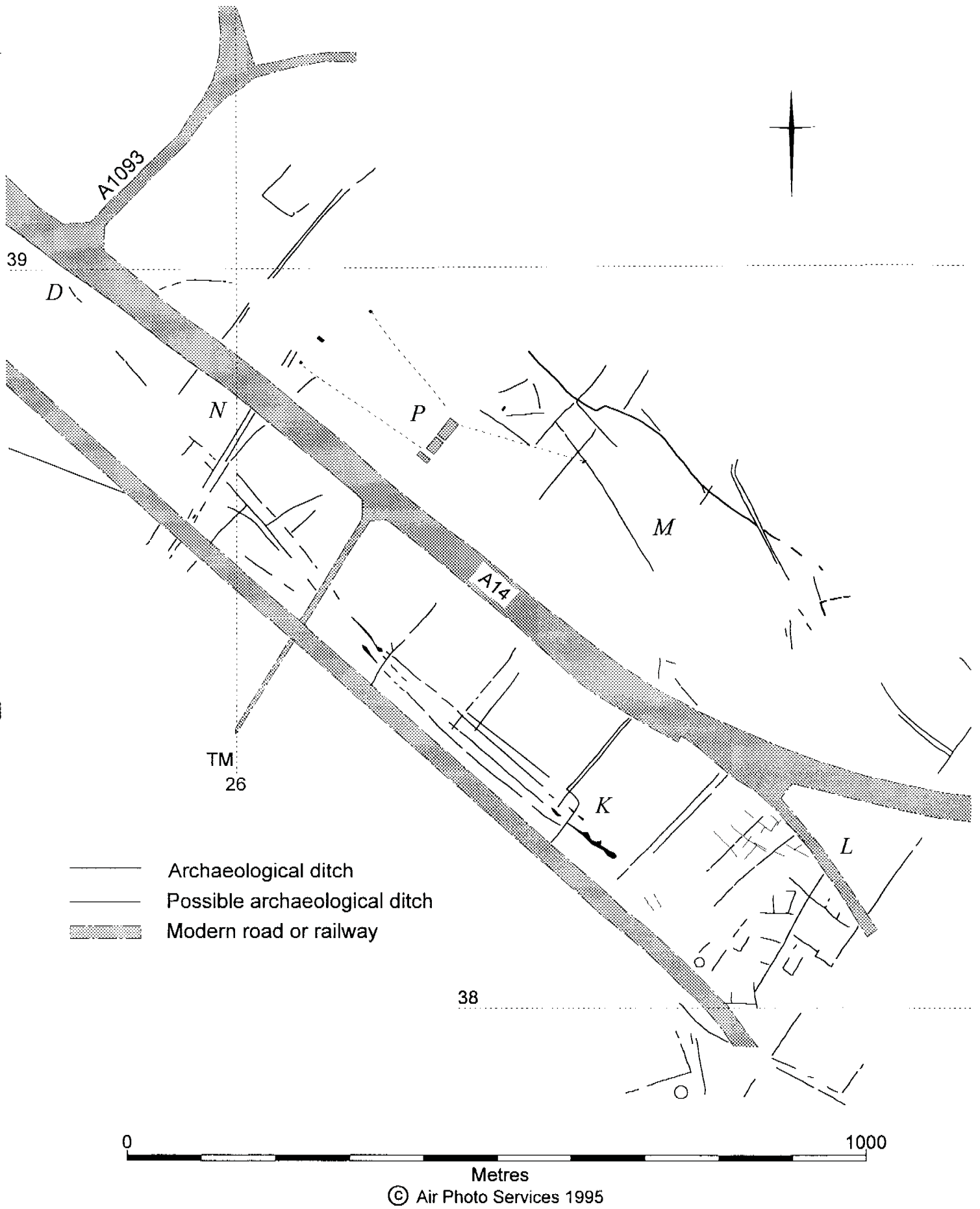


Figure 3. Annotated map showing eastern part of assessment area.

APPENDIX

Aerial photographs examined

Photographs are listed by site (as identified in the CUCAP index) rather than in overall chronological order. Some of the photographs are outside the assessment area but were examined in case any features appeared likely to extend into the area. Only those sites with such links were mapped.

This list combines CUCAP and NLAP oblique photographs which are flagged by a C or N respectively. Vertical photographs are separately listed and show their approximate scale.

TM252385

C	BNL 56-64	22 June 1973
C	CJB 80, 83	2 July 1979
C	CJF 74	10 July 1979

TM253389

C	CJF 67, 73	10 July 1979
C	CME 72-73	8 June 1980

TM257386

C	BNL 70-71	22 June 1973
C	CJB 84-87	2 July 1979
C	CME 71	18 June 1980

TM259388

N	TM2538/1/307-308	7 June 1976
N	TM2738/2/294-299	7 June 1976
N	TM2538/10, 12, 16	17 July 1989

TM251393, TM252392, TM254392

C	ZL 47-49	3 July 1959
C	ZZ 85-86	9 July 1959
C	ASK 21	3 July 1967
C	BUZ 51-54	24 July 1975
C	BXI 5-6	15 June 1976
N	TM2539/2	15 July 1977
N	TM2539/1/313-314	7 June 1979
C	CJF 68-72	10 July 1979
N	TM2538/2/107-110	12 July 1979
N	TM2538/3/112-113	12 July 1979
N	TM2539/5/97-110	12 July 1979
N	TM2539/7/104-106	12 July 1979
N	TM2539/8/116-120	12 July 1979
N	TM2539/10/170-173	12 July 1979

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C	CME 72-73	18 June 1980
N	TM2538/14,15	17 July 1989
N	TM2539/15, 16	17 July 1989
TM255395		
C	BNL 72-74	22 June 1973
N	TM2539/4/95-96	12 July 1979
N	TM2539/8/116-120	12 July 1979
N	TM2539/9/121-127	12 July 1979
N	TM2539/13	4 June 1980
N	TM2539/18	4 June 1980
N	TM2539/24-25	31 July 1980
TM265378		
C	ZL 43-45	3 July 1959
C	BIQ 29-30	16 June 1972
C	BNL 67-69	22 June 1973
C	CJG 1-3	10 July 1979
C	CKW 23-24	14 September 1979
C	CME 66-68	18 June 1980
C	CMP 15-18	11 July 1980
TM267381		
N	TM2638/3/320-321	7 June 1976
N	TM2637/4/217-218	6 August 1979
N	TM2637/5/219-221	6 August 1979
N	TM2637/6/222-226	6 August 1979
N	TM2637/7/227-231	6 August 1979
TM266386		
N	TM2638/1/286-287	7 June 1976
N	TM2638/2/290-293	7 June 1976
N	TM2738/2/294-299	7 June 1976
N	TM2738/12-14	22 June 1976
N	TM2638/4	1 July 1977
N	TM2738/6	1 July 1977
N	TM2638/6	18 June 1980
TM260390		
N	TM2639/10-12	17 July 1989
TM265391		
C	BNL 65-66	22 June 1973

Vertical photographs

Source: CUCAP

RC8-L 160-163	10 June 1969	1:10000
RC8-L 176-178	10 June 1969	1:10000

Source: NLAP

106G/LA17: 4106-4111	28 May 1944	1:10300
106G/LA22: 4063-4065	6 July 1944	1:11000
106G/LA23: 3034-3038	6 July 1944	1:11000
106G/LA23: 3041-3043	6 July 1944	1:11000
106G/LA23: 4023-4027	6 July 1944	1:11000
106G/UK/1635: 2008-2013	9 July 1946	1:10000
106G/UK/1635: 5008-5012	9 July 1946	1:10000
CPE/UK/1937: 2245-2246	18 January 1947	1:10000
CPE/UK/1937: 3216-3217	18 January 1947	1:10000
58/80: 5286-5290	28 July 1948	1:7500
58/699: 5093-5097	31 May 1951	1:7900
F21/543/2326: 387-392	23 July 1963	1:10000
OS/71156: 28-31	2 May 1971	1:7500

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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.

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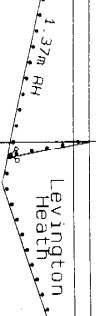
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240100

240200

625000 625100 625200 625300 625400 625500 625600 625700 625800 625900

A 14 TRIMLEY IMPROVEMENT



A14 A14

Lay-by

Track

Track

Track

25.9m

26.2m

25.05m

Ward Bldg

