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**A43 IMPROVEMENT:  
MOULTON TO BROUGHTON,  
NORTHAMPTONSHIRE**

**REVISED AERIAL PHOTOGRAPHIC ENHANCEMENT**

**DECEMBER 1994**

**COMMISSIONED BY**

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*Archaeological consultants for aerial photographic interpretation, accurate mapping and oblique aerial photography*

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Rog Palmer MA MIFA

**INTRODUCTION**

This enhancement was requested to provide information on archaeological features that had been recorded on aerial photographs and which might be directly affected by the proposed improvements to the A43. Interpretation and mapping was to cover a corridor 100m either side of the proposed route but extended beyond this band in case any features that may continue into the corridor had been recorded there. The medieval landscape as recorded in recent *Inventories of the Royal Commission on the Historical Monuments of England (RCHME)* was thought to be adequate and this enhancement was to concentrate on levelled features recorded as soil marks or through crop marks. Mapping was to be at a scale of 1:10000.

This revision incorporates information from photographs held at Northamptonshire Heritage which were unavailable at the time of the initial aerial photographic enhancement.

**AVAILABILITY OF AERIAL PHOTOGRAPHS**

It was intended to examine all aerial photographs held at the Cambridge University Collection of Aerial Photographs (CUCAP) and the specialist obliques at the National Library of Air Photographs (NLAP), Swindon. CUCAP had no photographs of direct relevance to the A43 improvements although three sites had been recorded within 1km of the road. These were examined for evidence of extension towards the road corridor.

The short time-scale available for the initial study led to problems with NLAP material as there was not time to request a cover search from them before visiting the library. It was clear from the desk top assessment that there were sites close to the route of the road which were known only as a result of aerial reconnaissance. With CUCAP satisfactorily searched, these could have originated from two sources: RCHME reconnaissance or that undertaken by Glenn Foard (Northamptonshire Heritage). A phone call to Christine Addison (Northamptonshire Heritage, Sites and Monuments Record) confirmed that copies of all Glenn Foard's photographs (except for those taken in 1994) were held by NLAP as well as by Northamptonshire Heritage, but that all RCHME photographs were not necessarily held at Northampton. Consequently a visit to NLAP was made to examine the relevant oblique prints.

Search through the oblique collection at NLAP with reference to the desk top report showed that there were prints missing from that collection. Without a full listing it is not possible to identify which, or how many, have not been examined. On request, NLAP staff queried their loan database for one selected kilometre square. This showed that the relevant photographs

were out on loan to Northamptonshire Heritage and it may be assumed that other 'missing' photographs were also there at the time.

To aid the initial assessment of aerial photographs one print was sent to me on short-term loan from Northamptonshire Heritage (for which I am grateful to the rapid response of Glenn Foard). This print showed detail in the area of site 24 and has proved of considerable importance in assessing the archaeological potential within the A43 corridor.

After submission of the initial aerial photographic enhancement a visit was made to examine photographs held at Northamptonshire Heritage. These included previously unseen photographs of sites whose interpreted plans have now been included in this amended document.

A list of photographs examined is appended to this report.

### PHOTO INTERPRETATION AND MAPPING

Photographs were examined in a south to north direction so as to follow the structure of the desk top report. Prints were examined at 1.5x magnification and interpretative overlays made when necessary to aid comparison between photographs of different dates. Very few of the available photographs showed features that are likely to be affected directly by the road improvements. In cases where these were within 300m of the corridor they were sketched at 1:10000 so that proximity and alignment may be assessed. Most of the available prints did not record clear archaeology *and* sufficient control points to allow any form of rectification other than approximate sketching. Therefore Figures 1 and 3 in this report offer only a visual impression of the archaeology interpreted from those photographs. Interpretations of photographs showing features at other sites were computer rectified using AERIAL 4.2 software (Haigh 1993) and have been added to schematic modern base maps as Figures 2 and 4. All figures in this report have been generated from digital input at 1:10000 scale.

### COMMENTARY

The list below follows the desk top notation and identifies and comments on sites for which aerial photographs were examined or which are thought likely to have potential from aerial photography. There were some cases of incorrect grid references in the SMR although those identified referred to adjacent sites and could be corrected by reference to the map and the aerial photographs and were not particularly misleading. An example is the apparent mislocation and crossed descriptions of sites 10, 11. The list below corrects such minor errors.

More detailed comments, with special reference to the presence of crop-marked features on clay, follow the list.

- Site 5      SP79256519      Photographs not available. The SMR indicates that photographs of this site were taken by Hollowell in the 1960s and their further identification was based on a published note in *Northants Archaeol*, 1971 and RCHME *Northamptonshire*, 1984. The description recorded identifies an enclosure, probably rectangular, but is unclear as to whether more than one was photographed.
- Site 6      SP797657      Figure 1. Possible archaeological ditches suggested on photographs recording crop-marked features. The area is confused by crop-marked frost cracks but a number of finer lines may be isolated which tend to have a common alignment. Any features similarly aligned within the corridor may indicate archaeological ditches.
- The route of the road lay in the background of two photographs and crosses an area of shallow soil (possibly a low local knoll) on which crop-marked features were recorded. From the evidence available it would appear more likely that these are natural than of archaeological origin.
- APs: SP7965/1-3.
- Site 10      SP800667      Figure 2. Possible area of slightly higher ground (probably natural) near the desk-top report's site 10.
- APs: NCC 8066/009-011.
- Site 11      SP801668      Figure 2. Double ring ditch. Adjacent area of high ground with a possible small ring ditch plus pits and ditched arcs. Frost cracks plus channels of deeper soil in area.
- APs: NCC 8066/009-011.
- Site 12      SP803670      Figure 2. Two ditched enclosures, approximating to D-shaped, that appear to be linked by a ditched 'avenue' comprising a parallel ditch/pit structure. Adjacent crop-marked features include possible annex enclosures and suggestions of slighter ditches (?natural cracks) in eastern parts of the modern field.
- APs: NCC 8067/002-006. [SMR also identifies other photographs taken by Hollowell in 1963. These were not seen.]
- Site 13      SP80316702      Figure 2. This site is covered by the features described under site 12, above and may offer a date for some of the mapped features..
- Site 14      SP802672      Figure 2. Nothing visible on aerial photographs examined in the area of site 14 as identified in the desk-top report as 14.
- APs: NCC 8067/002-006.

- Site 15      SP795674      Figure 3. Possible irregular enclosures, partly recorded (or incomplete) but appearing as an enclosure-plus annexe form (see Site 24). Ring ditch, near SMR location, plus a faint suggestion of two others to the west.  
APs: SP7967/1-6.
- Site 16      SP797676      Figure 3. A pair of broad-spaced parallel ditches recorded as crop marks in the background of one photograph may be archaeological. Fragments of three linear ditches are possibly remnant traces of recent field divisions. They lie perpendicular, or nearly so, to existing modern boundaries.  
APs: SP7967/3-4.
- Site 20      SP809686      Figure 4. A large curvilinear ditched enclosure with adjacent linear features (probably recent boundaries). A possible headland crosses the field and appears to be respected by some of the recent boundaries.  
AP: NCC 8068/002
- Site 24      SP812690      Figure 4. A dispersed complex of small ditched enclosures. Some are of an enclosure-plus-annexe form (see also Site 15), some possibly double (or broad?) ditched, and others with, or adjacent to probable hut circles. The whole complex was covered by now-levelled ridge and furrow. Only one photograph of these features was examined.  
AP: NCC 8169/002-005
- Site 25      SP81706938      Photograph cited in the SMR as source for this site was a vertical (F21/540/RAF/1312: 02462). This print was examined in the recent revision of the county and no features were identified at this location (Phil Markham, pers com: 16 December 1994).
- Site 31      SP82477339      SMR reference is to secondary sources. No photographs cover this site at Northamptonshire Heritage.

The crucial site, or area, to emerge from this present examination of aerial photographs is that identified as Site 24 in the desk top report (Figure 3 in this report). The comments that follow are based on examination of one print only which, although providing a good record of the archaeological features, has not allowed any correlation with photographs taken from different viewpoints or on different dates. The one photograph contained sufficient control information to enable my interpretation of its archaeological features to be rectified by computer to within a mean error, as calculated, of  $\pm 2.0$  metres. At a scale of 1:10000 it is sufficient to say that location and size of those features will match the accuracy of the base map.

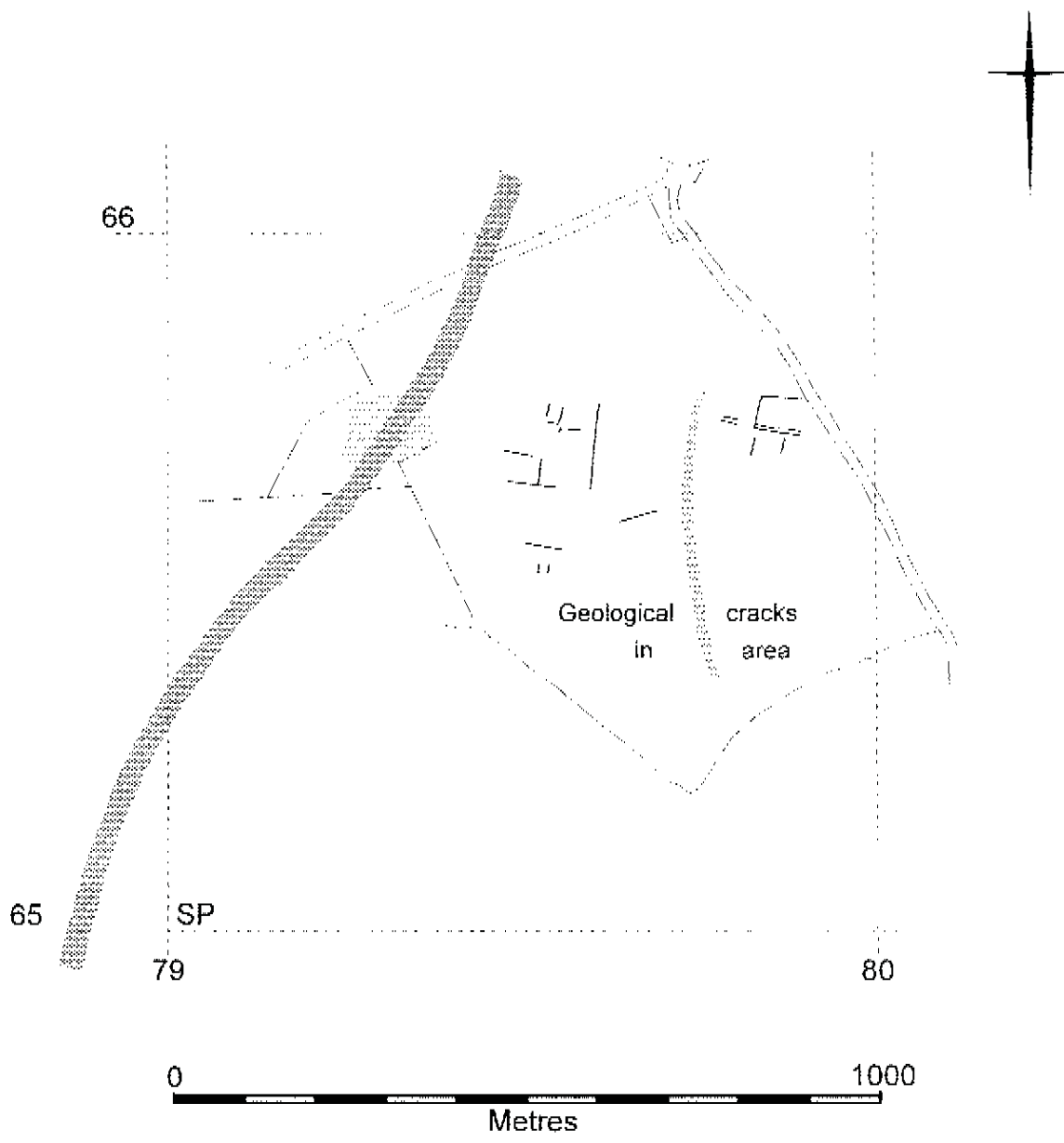
The photograph shows that the complete area of the modern field was once covered by ridge and furrow cultivation. This is now levelled and it is likely to be this levelling of the field surface that has allowed earlier cut features to affect cereal growth above them and cause growth differences (crop marks). Such levelling of ridge and furrow is one of the results of modern intensive agriculture on clay lands. It has led to a low, but increasing, number of earlier (pre-medieval) crop-marked sites being discovered during aerial reconnaissance and the features at Site 24 are an example of this. Crop-marked sites on clay rarely show with the clarity of such sites on, for example, the river gravels, they are more difficult to see from the air and may offer a narrow angle of view for recording. From my own knowledge of such sites it may be said that the photograph of Site 24 shows exceptionally clear crop marks for clay. Despite this clarity, or perhaps because of it, there are strong hints that there is considerably more in that field that is almost producing crop marks than has been recorded. There are faint suggestions of smaller enclosures (possibly hut circles), linear features and possible larger enclosures attached to, or associated with, the well-recorded curvilinear features. Figure 3 identifies equally all features - the definite and those hinted at - that were interpreted from that single print.

The increasing number of crop-marked sites recorded on clay allows some comment as to their 'usual' form of which my personal knowledge is based on the clays of west Cambridgeshire (where, for example, flying in 1994 by Air Photo Services led to the recording of some ten such sites, all previously unknown). In that area the clay sites tend to have been recorded as single, isolated enclosures, sometimes of the enclosure-plus-annexe form as can be identified at Sites 24 and 15 along the A43. The importance of Site 24 may come from the fact that it appears to be a dispersed complex of enclosures which may represent a series of differently dated sites or a settlement of unusually large size. In addition, there has been virtually no field investigation of early sites on clay so that at Site 24 we are dealing with a significant case of 'unknown' as to date, function and status.

#### REFERENCE

Haigh, J G B, 1993. A new issue of AERIAL - Version 4.20. *AARGnews* 7, 22-25.

[Revised: 21 December 1994]



- Possible archaeological ditch
- ..... Local high area with geological cracks
- ..... Dry valley
- ██████████ Proposed A43
- Modern boundary

Figure 1. Possible archaeological ditched features in the vicinity of site 6



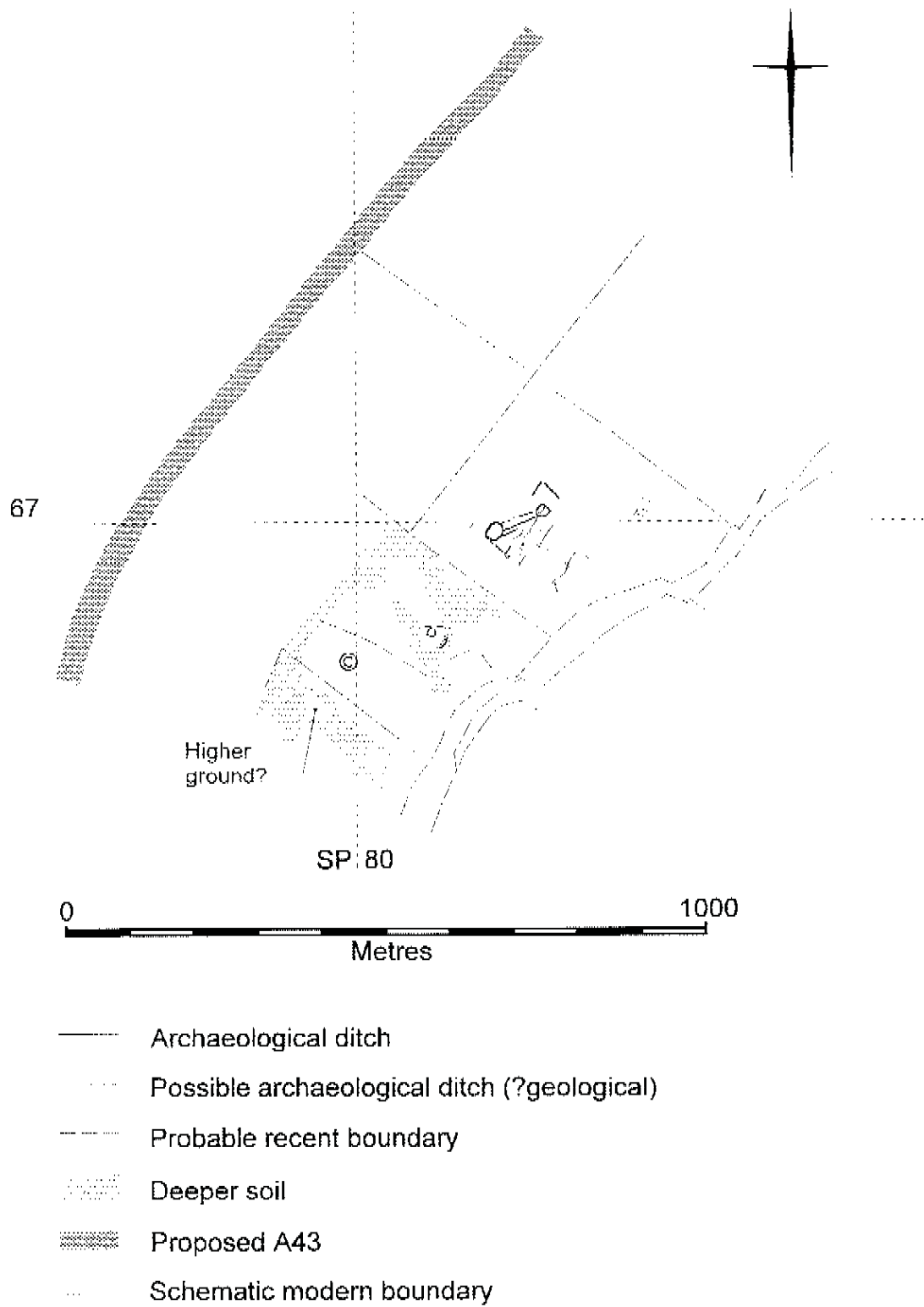
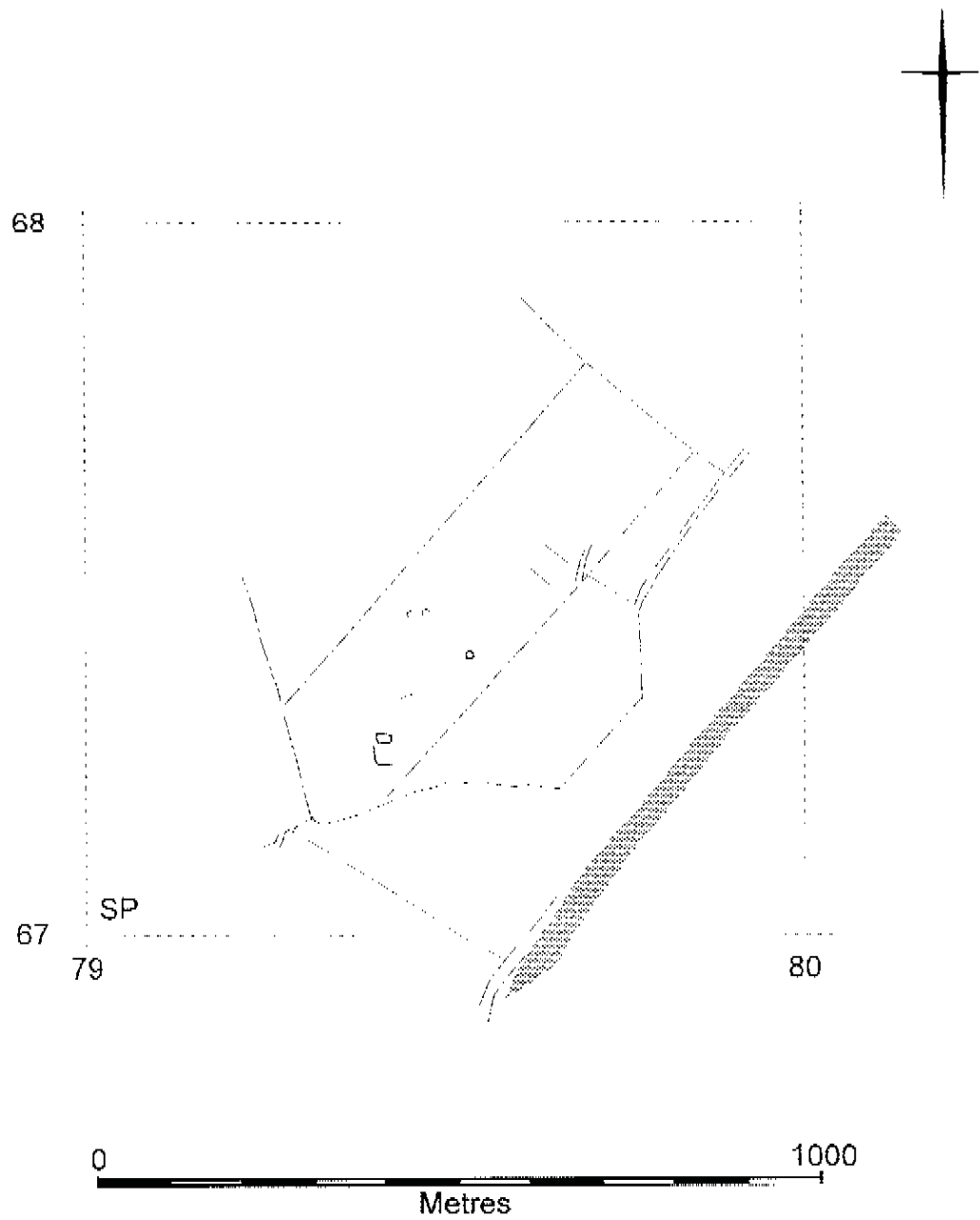


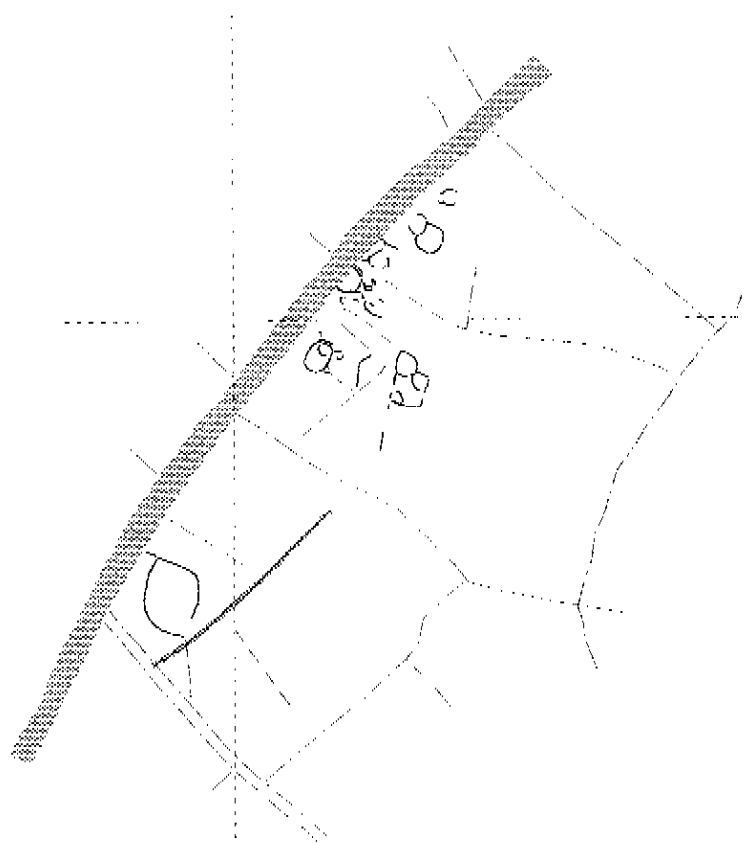
Figure 2. Archaeological ditched features in the vicinity of sites 10, 11, 12, 13 and 14



- Archaeological ditch
- ..... Possible archaeological ditch
- ▨ Proposed A43
- Modern boundary

Figure 3. Archaeological ditched features in the vicinity of sites 15 and 16

69



SP: 81



Metres

- Archaeological ditch
- ..... Possible headland(?)
- Probable recent boundary
- ▨ Proposed A43
- - - - Schematic modern boundary

Figure 4. Archaeological ditched features in the vicinity of sites 20 and 24

## APPENDIX

### *Aerial photographs examined*

*Source: Cambridge University Collection of Aerial Photographs*

#### Oblique photographs

SP812713	YX 92-95	24 June 1959
SP813726	BAP 95-96	3 February 1970
SP813726	BSA 10-13	24 January 1975
SP832730	SD 83-84	6 April 1956
SP832730	AWU 104	3 February 1969
SP832730	BJM 76	11 July 1972

#### Vertical photographs

There were no vertical photographs covering this part of the A43.

*Source: National Library of Air Photographs*

#### Oblique photographs (all originating from Glenn Foard, Northamptonshire Heritage)

SP794656	SP7965/1-2	14 July 1981
SP797657	SP7965/3	30 June 1980
SP798667	SP7966/1	9 June 1982
SP794673	SP7967/1	14 July 1984
SP792673	SP7967/2	27 July 1984
SP794673	SP7967/3	13 July 1984
SP795674	SP7967/4	undated summer
SP794673	SP7967/5-6	26 June 1983
SP792679	SP7967/7	26 June 1983
SP824754	SP8275/5	6 January 1984

#### Vertical photographs

These were not inspected from this collection.

*Source: Northamptonshire Heritage*

#### Oblique photograph

SP800667	NCC 8066/009-011	16 June 1982
SP803670	NCC 8067/002-003	13 July 1984
SP803670	NCC 8067/004-004	20 June 1990
SP803670	NCC 8067/006	1 August 1990
SP809686	NCC 8068/002	19 July 1990
SP812690	NCC 8169/002-005	19 July 1990