



**INDUSTRY AND ENCLOSURE IN THE NEOLITHIC:
UFFINGTON, LINCOLNSHIRE
CAUSEWAYED ENCLOSURE
AIR PHOTOGRAPH INTERPRETATION**

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**HELEN WINTON
AIR PHOTOGRAPHY UNIT
ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND
SHELLEY HOUSE, ACOMB ROAD, YORK, YO2 4HB
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Summary

This report concerns the interpretation and transcription from air photographs of cropmark features at Uffington, Lincolnshire (TF 0540 0800). Cropmarks of an arc consisting of two concentric interrupted ditches which are thought to represent the remains of a causewayed enclosure were transcribed. About 200 m to the south, a linear feature of a similar interrupted nature, was also recorded. All available photography held by NMR Air Photographs and Cambridge University Committee for Aerial Photography (CUCAP) was examined but the cropmarks features were only visible on a very limited number of photographs.

1. Introduction

The work was completed between December 1995 and January 1996 by the RCHME Air Photography Unit in York, as part of the Industry and Enclosure in the Neolithic Project. The photograph interpretation, transcription and report were produced by H. Winton with assistance from A. Carter.

2. The 1:2500 Air Photograph Transcription

2.1 Objectives

The aim was to produce a 1:2500 pencil plan, of all archaeological features, as an overlay to the Ordnance Survey map, using computer-aided rectification. The area surveyed covers approximately 8 hectares straddling a north south oriented track to the north east of West Hall Farm on the outskirts of the village of Uffington.

The archaeological features have been input to the LINC'S MORPH2 database. The MONARCH record has been enhanced and an event record created. The plan and report for this survey will be deposited with the NMR archive.

2.2 Definitions

For the purposes of the present survey, plough-levelled features are defined as those which have been recorded by aerial photography as differentially coloured or textured marks in bare plough soil, arable crops, grass or any other form of vegetation, i.e. cropmarks or soilmarks.

2.3 Photographic Sources Consulted

All available photography held by NMR Air Photographs and Cambridge University Committee for Aerial Photography (CUCAP) was consulted. Specialist oblique and vertical photographs of scales greater than 1:15,000 were examined. Vertical cover (Hunting Surveys Limited) held by Lincolnshire County Council Planning Department was also seen. Details of the photographs consulted are listed in Appendix 1.

2.4 Survey Methods and Techniques

The transcription was produced with the aid of the AERIAL 4.20 Air Photograph Rectification Program. Points of detail were digitised from photocopies of the 1975 edition of the OS 1:2500 plans TF 0407-0507 and TF 0408-0508 to obtain two-dimensional co-ordinates for use as control. An error no greater than 1.7 m at the control points was obtained in transformation. Overall accuracy of the transcription should be plus or minus 2 m at 1:2500 scale.

Only three oblique photographs contain cropmark information and these were used to produce rectified plots of the features within the defined survey area. The digital files are listed with their maximum residual errors in Appendix 2.

2.5 Cartographic Presentation

Conventions in the RCHME Archaeology Division Cartographic Specification were used. On the pencil drawing solid lines were used to denote ditches.

3. Physical Landscape

3.1 Location and Topography

The cropmark features are about 200 m north east of the village of Uffington and about 500 m north of the River Welland. The site lies at 35 m OD where the ground begins to slope gently down to the south west towards the river Welland. The River Gwash joins the Welland about 1 kilometre to the east. An extensive cropmark complex, the main feature of which is a cursus monument, lies about two and a half kilometres to the west near Bainton. The causewayed enclosure at Barholm is 4 km to the north east of Uffington.

3.2 Geology and soils

The underlying geology is Jurassic Cornbrash and Oolitic series. The overlying soils are well drained brashy calcareous fine loamy soils, associated with slowly permeable calcareous clayey soils (soil survey 343d, Sherborne), utilised for cereal and pasture.

4 Previous Archaeological Survey

4.1 Aerial Survey and Research

The only oblique photographs of the site are three consecutive frames taken in 1962. The site also appears at the edge of the frame of a single photograph taken of another site in 1986. No archaeological features were visible in the survey area on the vertical photography.

Although the River Welland gravels generally have a dense concentration of cropmarks, they are relatively sparse in the area around the causewayed enclosure. Attention has tended to concentrate on the area of dense cropmarks further east near Bainton (RCHME, 1960, fig 8). Wilson has argued that the cropmarks of interrupted ditch systems found on lowland river gravels are the equivalent of the causewayed enclosures, known from excavation and fieldwork, found in upland regions in the south of England. Wilson (1975, 183, Fig. 2) categorises the site at Uffington as a complex form of these cropmark interrupted ditch systems because it appears to have outworks. Palmer (1976, 180, Fig. 14.7, Ref No. 7) transcribed the site at 1:10,560 as part of his study of interrupted ditched enclosures in England.

The features transcribed have also been sketch plotted at 1:10,000 scale as part of the National Mapping Programme: Lincolnshire Project.

MONARCH (NMR TF 00 NE 37) and SMR (00336) records for the area were consulted and the site is a Scheduled Ancient Monument (LINCOLSHIRE 336). Monarch and SMR records indicated that there were no small finds in the immediate area but a flint axe was found in a gravel pit about 1 km to the north east (NMR TF 00 NE 25).

5. INTERPRETATION OF ARCHAEOLOGICAL FEATURES

5.1 The Causewayed Enclosure

An arc consisting of two concentric interrupted ditches probably forms the northern portion of an oval enclosure. The arc is about 120 m long and the two ditches are 8 m apart. The gaps in the ditches and the lengths of ditch themselves vary greatly in size and shape. On the two photographs taken from the south (AGB 95-6) a possible stretch of ditch about 22 m long is visible at TF 0531 0799. This may be a southern circuit of the enclosure. However, the cropmarks in this area are confused by the background geology and so this length of ditch is by no means certain; it may represent no more than the distinction between different soil bands. If this short section of ditch does form part of the feature possible dimensions can be estimated as 150 m by 130 m. This would give an enclosed area of just over 1 hectare.

In the area one would expect the southern portion of the enclosure, the background geology shows very clearly as cropmarks in the form of linears, pitting and various amorphous features so it is surprising that the enclosure ditches are not also visible. This suggests that the southern part of the enclosure has either been destroyed or severely reduced, if the enclosure does in fact have the expected plan.

About 180 m south of the proposed enclosure a linear feature, also defined by interrupted ditches similar in form to those defining the proposed enclosure, runs north-south for about 90 m before turning sharply to the west for 8 m. The sharp turn the feature takes and the fact it appears to have no accompanying second ditch means it almost certainly does not form part of the enclosure. Its similar nature, however, could indicate a possible relationship to the proposed enclosure.

On the 1965 and 1973 vertical photography, although no archaeological features are visible, the cropmarks left by the impact of the construction of a large pipeline can be seen passing east-west through what would be the estimated centre of the enclosure were it complete. This means the area cleared for the pipeline passes through about 15 m of the southernmost sections of the ditches defining the enclosure visible on the 1962 CUCAP photography.

5.2 Other Archaeological Features

Various other linear features were transcribed to the south of the enclosure some sinuous and defined by broad ditches, others narrower and more angular. None of these can with confidence be said to relate to the enclosure and their function or date is by no means clear.

The linear features described above only appear on the three photographs taken in 1962 making it difficult to positively interpret them as archaeology or to dismiss them as non-archaeological.

5.3 Features Not Drawn

A linear feature considered to be a non-archaeological mark runs north south along the ploughlines in the field and stops short of the enclosure. The fact that it follows the plough pattern exactly, and does not show on any other photography, makes it very doubtful. Further linear features also run past the eastern side of the enclosure and continue northwards. These are almost certainly geological and are very similar to those visible further to the north which tie in more closely to other geological markings (visible on AGB 96).

Several possible extraction pits were visible about 200 m north east of the enclosure but these have well defined rectilinear shapes and are probably post medieval in date. The background geology shows extremely well as cropmarks and numerous pits and patterns of thin linear features were visible in the background.

APPENDIX 1: LIST OF PHOTOGRAPHS CONSULTED

SPECIALIST OBLIQUE PHOTOGRAPHS

NGR INDEX NUMBER	ACCESSION NUMBER AGB	FRAME NUMBER 94-96	DATE FLOWN 11/07/62	ARCHIVE CUCAP
TF0508/1	NMR SF118	268	24/07/86	NMR

VERTICAL PHOTOGRAPHS

SORTIE NUMBER	FRAME	SCALE	DATE FLOWN	ARCHIVE
CPE UK 1932	3065-6		17/01/47	MOD
MAL 92 65	164-5	15000	29/09/65	NMR
MAL 93 65	57-8	15000	03/11/65	NMR
MAL 04 73	94	15000	09/02/73	NMR
OS 73 036	398-9	7500	22/03/73	NMR

APPENDIX 2: LIST OF DIGITAL FILES

FILE NAME	PHOTO REF NO	MAX RESIDUAL ERROR
TF0507A.DIG	AGB 95	1.0 m
TF0507B.DIG	AGB 94	1.0 m
TF0507C.DIG	AGB 96	1.7 m

BIBLIOGRAPHY

- RCHME 1960 *A Matter of Time: An Archaeological Survey*. HMSO, London.
- Palmer, R 1976 Interrupted ditch enclosures in Britain: the use of aerial photography for comparative studies. *Proceedings of the Prehistoric Society* 42, 161-185, Fig. 14.7.
- Wilson, DR 1975 'Causewayed camps' and 'interrupted ditch' systems. *Antiquity* 49, 178-186.

FIGURE 1

DIAGRAM SHOWING THE EXTENT OF THE SURVEY AREA



FIGURE 2

TRANSCRIPTION PLAN, SCALE 1:2500

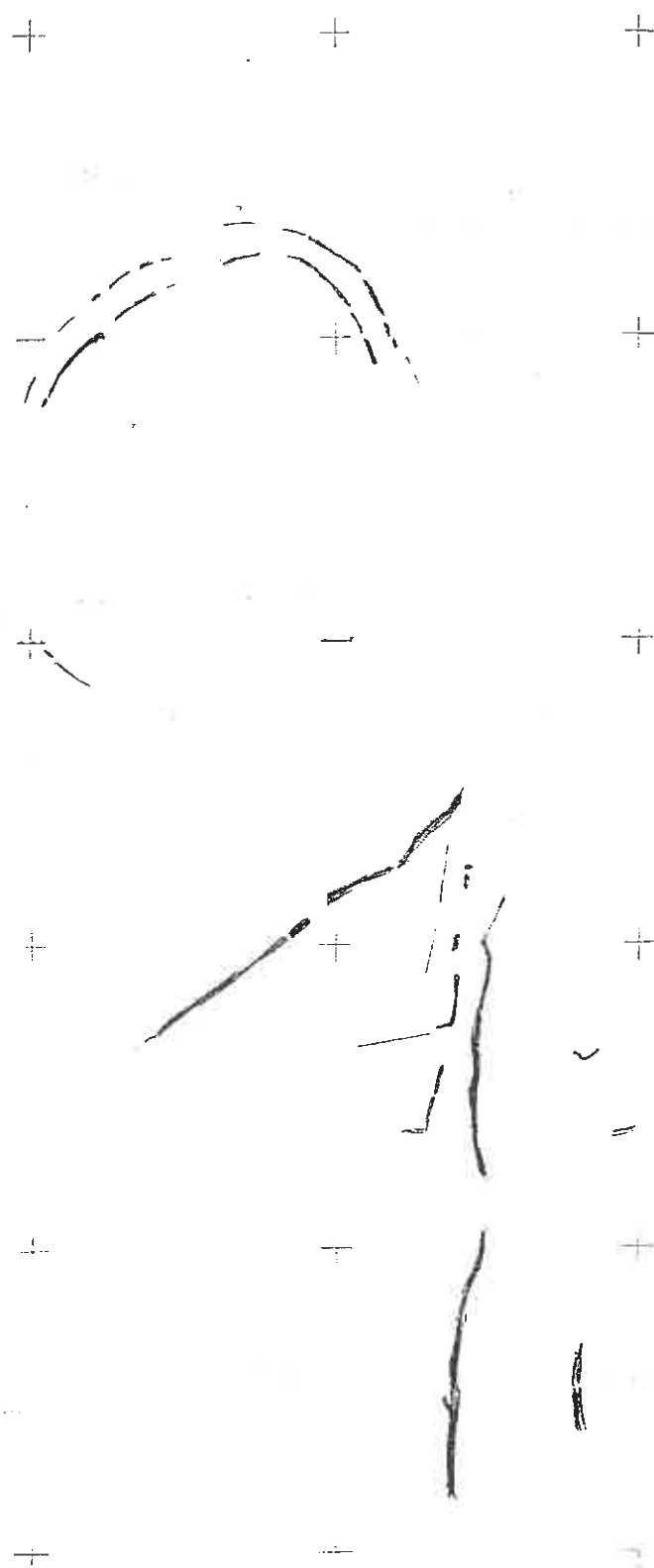


FIGURE 3

EXTRACT FROM LINC'S NMP 1:10000 OVERLAY TO TF 00 NE

