

**CAM ARC Report Number 952**

# **Winwick to Old Weston Pipeline**

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## **Desktop Assessment**

Tom Phillips

May 2007

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### **Desktop Assessment**

Tom Phillips BA

With contributions by Rog Palmer MA MIFA

Site Code: WIN AWP 07

Date of works: 23rd April-26th April

Grid Ref: TL 105 808 to 099 773

Status			
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## CAM ARC OASIS Report Form

OASIS Number: 26557

PROJECT DETAILS				
Project name	Winwick to Old Weston pipeline			
Short description	A desktop Assessment was carried out for a water pipeline running between the villages of Winwick and Old Weston in west Cambridgeshire. The historic village of Winwick contains a moated site and DMV. Old Weston has limited evidence of former settlement through the results of a survey. Between the two villages the pipeline runs through land currently under cultivation and the only definite archaeology it passes through is a Roman Road north of Old Weston.			
Project dates	Start	23/04/07	End	26/04/07
Previous work	Various HER entries along the route		Future work	unknown
Associated project reference codes	Site Code: WINAWP 07, HER Event No: TBC, Planning Application: n/a			
Type of project	DBA, AP, visual inspection			
Site status	Area of Archaeological potential			
Current land use (list all that apply)	Residential (in the villages), cultivation (between the villages)			
Planned development	Pipeline, sewer, pumping stations, sewage treatment works			
Monument types / period (list all that apply and use <a href="#">thesaurus of monument types</a> )	Moated site, deserted medieval village, cropmarks, Roman road			
Significant finds: Artefact type / period (list all that apply and use <a href="#">MDA object thesaurus</a> )				
PROJECT LOCATION				
County	Cambridgeshire	Parish	Winwick & Old Weston	
HER for region	Cambridgeshire			
Site address (including postcode)	N/a			
Study area (sq.m or ha)	3 km of pipeline			
National grid reference	Easting (6 figure)	TL 510	Northing (6 figure)	TL 280
Height OD	Max OD	71.49m	Min OD	51.8m
PROJECT ORIGINATORS				
Organisation	Cambridgeshire County Council, CAM ARC			
Project brief originator	Andy Thomas			
Project design originator	Stephen Macauley			
Director/supervisor	Tom Phillips			
Project manager	Toby Gane			
Sponsor or funding body	Anglian Water			
ARCHIVES	Location and accession number		Content (e.g. pottery, animal bone, database, context sheets etc)	
Physical	Cambridgeshire County Store			
Paper	Cambridgeshire County Store		Photos, background info, HER records	
Digital	CAMARC		photos	
BIBLIOGRAPHY				
Full title	Winwick to Old Weston pipeline			
Report number	952			
Series title and volume				
Page numbers	?			
Author(s)	Tom Phillips			
Date	May 2007			

## **Summary**

In April 2007 CAM ARC, Cambridgeshire County Council (formerly Archaeological Field Unit) undertook a desktop assessment to examine the available historical and archaeological resources in the villages of Winwick and Old Weston and land lying between them, in West Cambridgeshire (centred at TL 510311 279144). Anglian Water commissioned the work. The aim of the assessment was to define the archaeological potential of the subject areas, in advance of the proposed construction of a water pipeline between the two villages, a pumping station in Winwick, sewers running through the villages, and a sewage treatment works in Old Weston.

The village of Winwick has high archaeological potential, due to the presence of a moated site, deserted medieval village and associated earthworks. The proposed pipeline begins close to some of these earthworks. Archaeological work in the village of Old Weston has yielded only limited evidence of occupation, despite its pre-Norman origins. Along the route of the pipeline, between the two villages, the only known archaeological remains to be affected will be a Roman road, north of Old Weston. The land between the villages is currently under cultivation, and probably has been since the medieval period. However, the presence of medieval and post-medieval ridge and furrow and modern cultivation soil, could be masking earlier archaeological remains.

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## **List of Abbreviations**

- CHER Cambridgeshire County Council Historic Environment Record  
HRO Huntingdon Record Office  
OD Ordnance Datum  
VCH Victoria County History

## **1 Introduction**

### **1.1 Planning Background**

Anglian Water commissioned a desktop study from Cambridgeshire County Council, CAM ARC (formerly Archaeological Field Unit). The aim of this assessment is to determine the archaeological potential of the two villages of Winwick and Old Weston and land between them, prior to the construction of a water pipeline and associated works.

The work contained in this document is entirely produced from a desk-based assessment and does not include any data from physical investigation at the proposed development site.

### **1.2 Location, Topography and Geology**

The study area includes the two villages of Winwick and Old Weston and the route of a pipeline running between them, approximately 3km long (Fig. 1). The village of Winwick is mostly clustered around the church of All Saints. The Alconbury Brook forms the north-east parish boundary. The pipeline itself begins in Winwick, at the south of the village (TL 105 808), which is on higher ground at approximately 51.8m (Figs. 4 and 5). It runs south-south-west to the lower part of the valley at 44.83m OD where a tributary of the Alconbury Brook passes through. It then climbs again gradually before reaching its southern end, at the north of Old Weston, at approximately 71m OD. The village of Old Weston has a more scattered form. Many buildings are concentrated along Main Street and a loop in the road from Leighton Bromswold. The church of St Swithins is isolated in the south-west of the village. A stream flows south-east just to the south of the village.

The pipeline route crosses predominantly Boulder Clay geology, with patches of Oxford Clay to the south of Winwick. Alluvial deposits are also likely to be encountered at Old Weston (British Geological Survey 2002).

## **2 Archaeological and Historical Sources**

### **2.1 Historical Sources**

General outlines of the history of the county and accounts of individual parishes based on documentary sources can be found in the Victoria History of the County of Huntingdon (VCH), 3 volumes. Background histories for Winwick and Old Weston are outlined in section 4.

## 2.2 The Historic Environment Record (formerly SMR)

All HER entries are listed in Appendix 2. The HER record search examined an area of 0.5km radius around the route of the pipeline to provide a comprehensive overview of the area (Fig. 2).

Cambridgeshire County Council Historic Environment Record (CHER) database contains several references to Winwick. Most significant is a moated site and shrunken medieval village (SAM 211, HER 01493) in the east of Winwick, comprising a well preserved sub-rectangular moat, with causeway and earthworks in the surrounding field. Trial excavations in the 1970s within the moated enclosure produced 13th century pottery and stone foundations for the corner of a building.

Earthworks mostly to the east and south-east of the moated site represent the deserted village. Eleven paddocks were identified, the largest of which contained four platforms, possibly for buildings (Brown and Taylor 1987, 79-80). The HER also mentions earthworks approximately 100m to the south (HER 01493a) in the field where the pipeline begins, which is currently under pasture. These are less obvious but include a hollow way running east to west, which is still a trackway bounding the north of the field. The 1795 Enclosure Map shows two buildings standing in this field, both of unknown function and date.

To the south of the village the pipeline passes through an area of ridge and furrow, orientated north to south. Approximately 200m to the east of this, a coin hoard was discovered by a metal detector. It consisted of five gold coins dating from the reigns of Henry V (AD 1413-1422) and from Henry VI's first 'Annulet' issue (AD 1422-1427). Further to the east is another set of ridge and furrow, oriented north-west to south-east.

Approximately half way along and 0.5km to the east of the route of the pipeline lies a site excavated by Field Archaeology Specialists of York. It consisted of Iron Age and Roman settlement remains (CB 14663) and is described fully in section 2.6. 200m to the south are a set of possible cropmarks (HER 10051) consisting of a ditch, linear feature and possible enclosure that may be associated with the excavated site.

To the north of Old Weston the pipeline passes through the route of a Roman Road (HER 05368), roughly on the alignment of a minor road, which joins the B662 at this point. Images from Google Earth show this road continuing in fields to the west.

In the village of Old Weston the Cambridgeshire Earthworks Survey (Brown and Taylor 1987, 79-80) discovered evidence for settlement on land currently under arable use. Most notably, from the field south of the church, came a large number of early-mid Saxon pottery sherds (HER 00348a). Also, on the south side of Leighton Road, large



quantities of 13th to 14th century pottery were found, indicating medieval settlement here. This is about 300m to the north-west of the proposed site of the sewage treatment works.

A deserted settlement has also been identified at Old Weston, to the west of the centre (HER 00348), consisting of a hollow way and four possible building platforms. To the south of the village five sherds of badly abraded Roman pottery were discovered (HER 07877).

### **2.3 Cartographic Evidence**

The earliest cartographic evidence for the two parishes come from Enclosure maps. The Enclosure map for Winwick dates to 1795. It shows that the layout of the village has changed little, although there do appear to be more buildings on the 1795 map, along the western side of the village, south and east of the church, and those mentioned above in the field where the pipeline begins.

The Enclosure map for Old Weston dates to 1843. It shows that the size and layout of the village has not really changed, except for a new road linking Main Street with the road south of the church. The church is just as isolated today as it is on the 1843 map.

Other cartographic evidence includes the Ordnance Survey series dating to the late 19th century (Fig. 3).

### **2.4 Aerial Photographs**

An aerial photographic survey by Rog Palmer of Air Photo Services has been carried out for this assessment (Appendix 3). The survey confirmed the presence of earthworks in Winwick, including those in the field where the pipeline begins, described as rectangular features that may indicate the sites of former houses. Along the pipeline route remains of medieval ridge and furrow were observed.

### **2.5 Earthworks**

Earthworks along the route of the scheme have been described above in section 2.2. These consist of a moated site and deserted medieval village in Winwick and a deserted settlement site in Old Weston.

### **2.6 Archaeological Excavations and Surveys**

In Winwick a small evaluation carried out on the south side of the minor road to the south of the moated site revealed no evidence of early land use (Hatton 1999).

An excavation carried out along the route of a gas pipeline between Lutton and Huntingdon included a small site 0.5km to the east of the proposed pipeline at Grove Farm (Copp 1998, 25-33). An open area of approximately 30m x 180m revealed a mid to late Iron Age roundhouse and boundary ditches and 2nd century Roman linear features, orientated predominantly north-west to south-east, possibly an arrangement of small enclosures. The report also states that the results of aerial photography and limited geophysics indicate the site to be extensive (Copp 1998, 25). A site further south along the same pipeline, at Mill House (Copp 1998, 34-39) lies to the south-east of Old Weston, approximately 350m to the east of the proposed sewage treatment works. Linear features, the corner of an enclosure and the lower footing of a wall were found, along with a small but rich late Roman finds assemblage, suggesting a settlement of high status nearby.

Within the village of Old Weston itself archaeological recording along the High Street (Kemp 1998) and an evaluation at Model Farm (Hatton 2002) revealed no archaeological features.

### **3 Official Designations**

Only one Scheduled Ancient Monument (SAM) is located within the study area, the moated site and shrunken village in Winwick (SAM 211). The designated scheduled area does not include the earthworks to the south where the pipeline begins.

Several listed buildings are located within both villages. There are only two in Winwick, the church of All Saints (DCB 3092, HER 54804) with parts dating to the 12th and 13th centuries and a 17th century farmhouse in the west of the village (DCB 3373, HER 54805).

There are eight listed buildings in Old Weston. The church of St Swithins (DCB 3607, HER 54795) has elements dating back to the 13th century. There are several listed buildings on Main Street. The older ones are located along the south-east side of the road and include a Hospital Farmhouse (17th century, HER 54797), Dobbins Cottage which may have formerly been a farmhouse (17th century, HER 54798), The Swan Public House (early to mid 17th century, HER 54799) and a cottage dated 1622 on a plaster plaque above the entrance (HER 54800). Further north along Main Street are two 19th century cottages (HER 54801 and 54802). Finally there is Model Farmhouse, in the core of the village, with parts dating to the 17th and 19th centuries (HER 54796).

## **4 Archaeological and Historical Background**

Prehistoric and Roman remains are limited in the study area to the small amount of fieldwork carried out on the Lutton to Huntingdon pipeline, stray finds of Roman pottery found in and south of Old Weston, and the Roman road north of Old Weston. All have been described above.

Similarly, the only Saxon evidence comes from the large amount of pottery found during field walking south of the church in Old Weston (Brown and Taylor 1987).

The first substantive documentary evidence comes from the Norman period. Both Winwick and Old Weston are mentioned in the Domesday survey of 1086, the latter held by Ramsey Abbey. The Victoria County History contains detailed manorial histories for the two parishes, particularly for Winwick (Page *et al* 1974). In fact much of the entry deals with the history of land ownership since Norman times.

The village of Old Weston is said to have extended south of the church but was burnt down. A record of the fire on 28 February 1701 exists at Leighton Bromswold (Page *et al* 1974, 116). This explains why the church seems so isolated now. It is also stated that the Model Farm, built within a distinctive loop in the road is probably on the site of the manor house.

## **5 Confidence Rating**

### **5.1 Historical Sources**

Only secondary historical documents in the form of the VCH were consulted. The VCH tends to be biased towards the following:

- the medieval ecclesiastical and manorial history;
- the medieval origin and development of the villages with emphasis on extant monuments and earthwork remains;
- social history.

As a whole, the available documentary sources provide useful and reliable information on the historic, economic and social development of the villages.

### **5.2 The Historic Environment Record (formerly SMR)**

The CHER collection represents a variable source of information that has been influenced by the amount of archaeological fieldwork

undertaken in a particular area, the recording of stray finds, antiquarian observations, local and professional interests. The degree of accuracy of the entries is therefore variable.

### **5.3 Cartographic Evidence**

Bearing in mind the varying degree of accuracy and detailing of the Enclosure maps and early Ordnance Survey maps, as a whole, the available cartographic evidence provides useful information for the later post-medieval and more recent development of the villages and surrounding area.

### **5.4 Aerial Photographs**

Aerial photographic assessment is affected by the coverage available and the quality of the cropmarks at the time of being photographed. This in turn is dependent upon weather and soil conditions for many months, even years beforehand. Taking these factors into account, the specialist (Rog Palmer, Air Photo Services) selects only those images that show relevant detail and replots them.

In this instance, the degree of confidence in the results is good.

### **5.5 Earthworks**

Earthworks are open to interpretation but when coupled with documentary evidence, associated activity and known examples elsewhere the reliability is good. In the case of the current study area all the earthworks are within historic villages and have been the subject of an earthwork survey (Brown and Taylor 1987).

### **5.6 Archaeological Excavations and Surveys**

Only a limited amount of archaeological excavations have been carried out in the study area. Archaeological work has been prompted by development mainly within the villages themselves. As a consequence, the distribution of known finds reflects these interventions and offers only a partial representation of the archaeological potential of the area.

## **6 Deposit Mapping of Archaeological Remains**

In this section, an attempt has been made to map all known monuments and events and, based on this mapping, to predict the

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existence of further remains along the proposed pipeline route. These predictions should not be used to produce 'constraint maps'.

### **6.1 Prehistoric**

The only prehistoric remains within the current study area come from the Grove Farm site 0.5km to the east of the pipeline. This site was only partially exposed making it difficult to determine whether it is part of a large settlement or just an isolated farmstead. Importantly, it does provide evidence of prehistoric occupation in the vicinity and the potential of prehistoric remains.

### **6.2 Roman**

As with the prehistoric, definite Roman settlements are limited to the small sites found on the Lutton to Huntingdon gas pipeline, at Grove Farm and Mill House. The stray sherds found south of Old Weston may also indicate occupation activity. The Roman road, which cuts across the route of the pipeline, is significant. It is likely that settlements of some kind are located near to it. Again, evidence of Roman activity in the area does exist and so there is the potential for further survival.

### **6.3 Saxon**

Saxon evidence is limited to pottery found south of the church in Old Weston and as such, is unlikely to be affected by the proposed pipeline route.

### **6.4 Medieval and post-medieval**

The most substantial amount of archaeological evidence comes from the medieval period or later, although virtually all is from within the villages themselves. There is the potential for medieval remains at the northern end of the proposed pipeline, close to earthworks in the south of Winwick. The proposed sewer route through the two villages may also disturb sealed archaeology relating to medieval land use, particularly in Winwick near to the moated site. However, as these will be along the roads any archaeology may have been truncated away by modern road construction and the laying of services.

## 7 Degree of Survival of Archaeological Remains

This section broadly assesses the degree of survival of archaeological remains in the areas defined by deposit mapping. The assessment takes the form of a prediction model based on probability and not certainty. It is intended as a guide only.

The degree of preservation of potential buried remains within the study area is likely to have been affected by agricultural activity since prehistoric times and by the development of the villages.

The majority of the study area is presently arable land and probably has been since medieval times or earlier. While earlier activity (particularly prehistoric and Roman features) may have been affected by intensive ploughing since the medieval period, it is unlikely they have been completely destroyed. In fact the build up of modern plough soils can be helpful in protecting buried remains.

In the villages of Winwick and Old Weston it is possible that medieval and post-medieval remains will be well preserved due to a lack of significant modern development but any pre-medieval remains may have been destroyed.

## 8 Rating

Based on the distribution of known finds and their degree of survival in the study area, as defined in the previous sections, rating can be summarised as follows:

<i>Period</i>	<i>Distribution</i>	<i>Survival</i>
Prehistoric	low/unknown	unknown
Roman	low/unknown	unknown
Saxon	low/unknown	unknown
Medieval/Post medieval	high	good

## 9 Conclusions

The objective of this study was to assess the archaeological potential of an area between and including the villages of Winwick and Old Weston for the proposed route of an Anglia Water pipeline and associated works.

The village of Winwick has high archaeological potential, due to the presence of a moated site, deserted medieval village and associated earthworks. Archaeological work in the village of Old Weston (predominantly field walking) has yielded limited evidence of occupation, despite its pre-Norman origins. In terms of potential impact, the northern end of the pipeline begins in a field containing

earthworks in the south of Winwick village. Otherwise it is difficult to determine whether the sewers, which will run along roads in the villages, will affect any buried remains.

The route of the pipeline between the villages, approximately 3km long, accounts for most of the study area. This area is an unknown quantity due to the lack of archaeological work undertaken. The only known archaeological remains to be affected will be a Roman road, north of Old Weston. Scattered Iron Age and Roman settlements nearby provide evidence that this land was occupied in the past and show potential for the survival of further sites. The majority of this land is currently under cultivation and probably has been since the medieval period. The presence of medieval and post-medieval ridge and furrow and modern cultivation soil could be masking earlier archaeological remains.

## Acknowledgements

The author would like to thank Anglian Water who commissioned and funded the archaeological work. Toby Gane managed the project. The report was edited by Mo Muldowney. Illustrations were by Crane Begg and the aerial photographic assessment was by Rog Palmer of Air Photo Services.

## Bibliography

- |                                       |      |  |
|---------------------------------------|------|--|
| Brown, A.E. & Taylor, C.C.            | 1987 | 'Cambridgeshire Earthworks Surveys V', <i>Proceedings of Cambridge Antiquarian Society</i> 74, 71-80   |
| Copp, A.                              | 1998 | <i>Archaeological Investigation. Stage 4 Intervention 5. Watching Brief, Luton to Huntingdon Gas Pipeline</i> Field Archaeology Specialists Report |
| Hatton, A.                            | 1999 | <i>Veazey Land, Winwick: An Archaeological Evaluation</i> , Cambridgeshire County Council, Archaeological Field Unit Report B044                   |
| Hatton, A.                            | 2002 | <i>Land at Model Farm, Old Weston: An Archaeological Evaluation</i> Cambridgeshire County Council, Archaeological Field Unit Report B101           |
| Kemp, S.                              | 1998 | <i>Archaeological Recording at Main Street, Old Weston</i> Cambridgeshire County Council, Archaeological Field Unit Report                         |
| Page, W., Proby, G. & Ladds, I. (eds) | 1974 | <i>A History of the County of Huntingdon, Vol III</i> (Folkestone & London: Dawsons)   |

## Maps Consulted

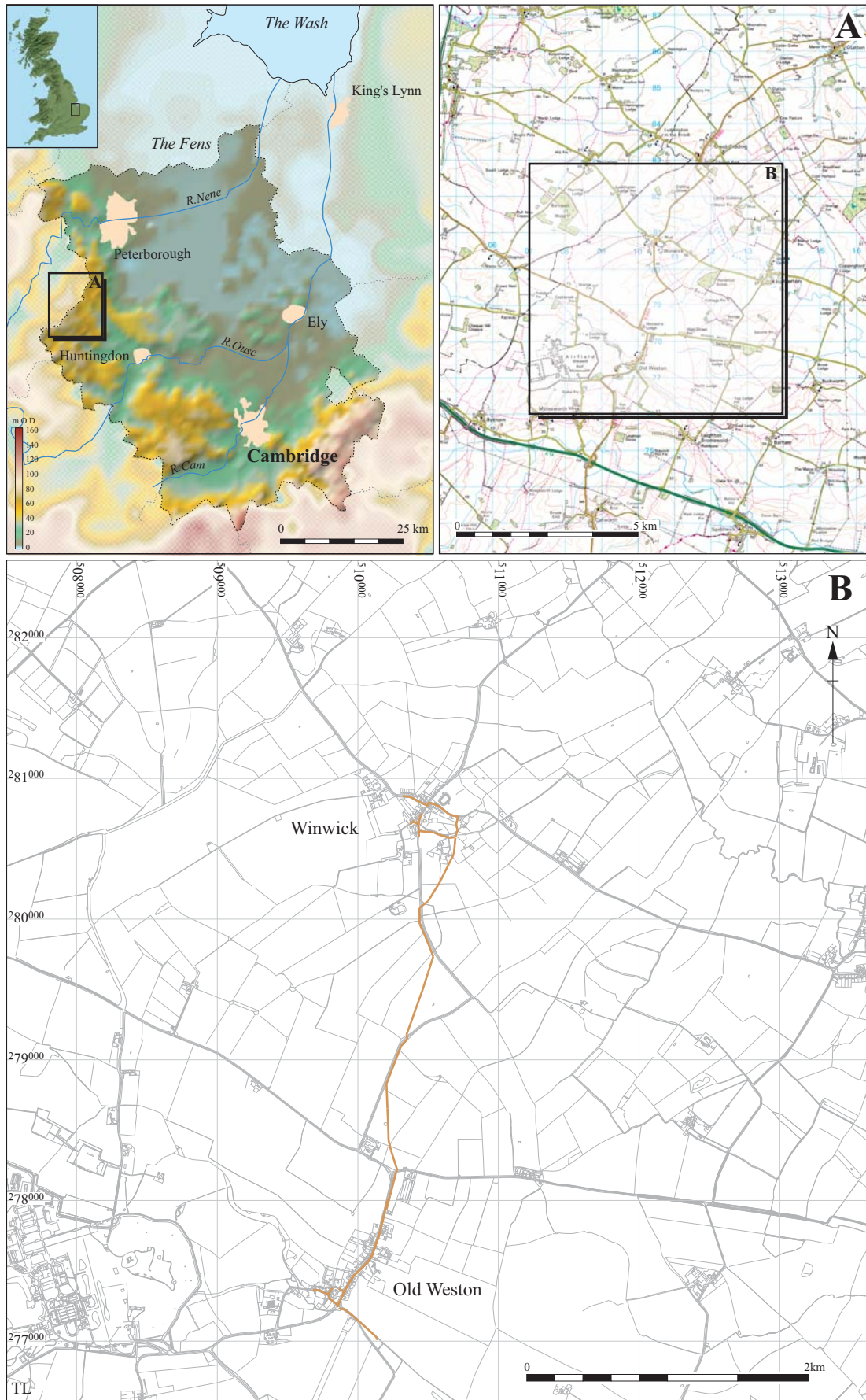
British Geological Survey 2002 *Geological Maps of England and Wales. Solid and Drift Edition Sheet 171*

Old Weston Enclosure map of HRO  
1843

Winwick Enclosure Map of HRO  
1796

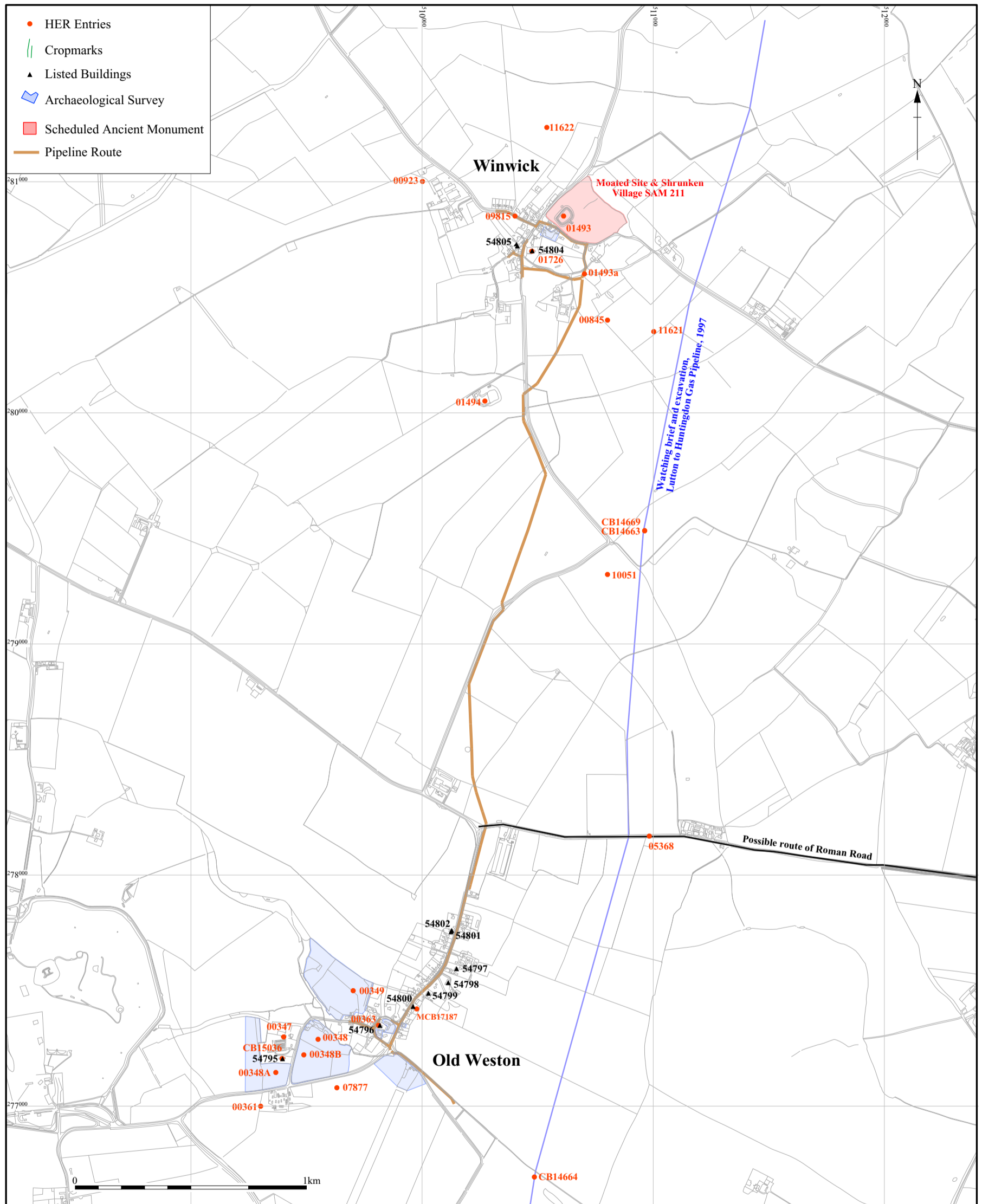
Ordnance Survey First Edition [www.old-maps.co.uk](http://www.old-maps.co.uk)  
1891-92





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Figure 1 Location of the proposed pipeline route



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Figure 2: Distribution of CHER entries

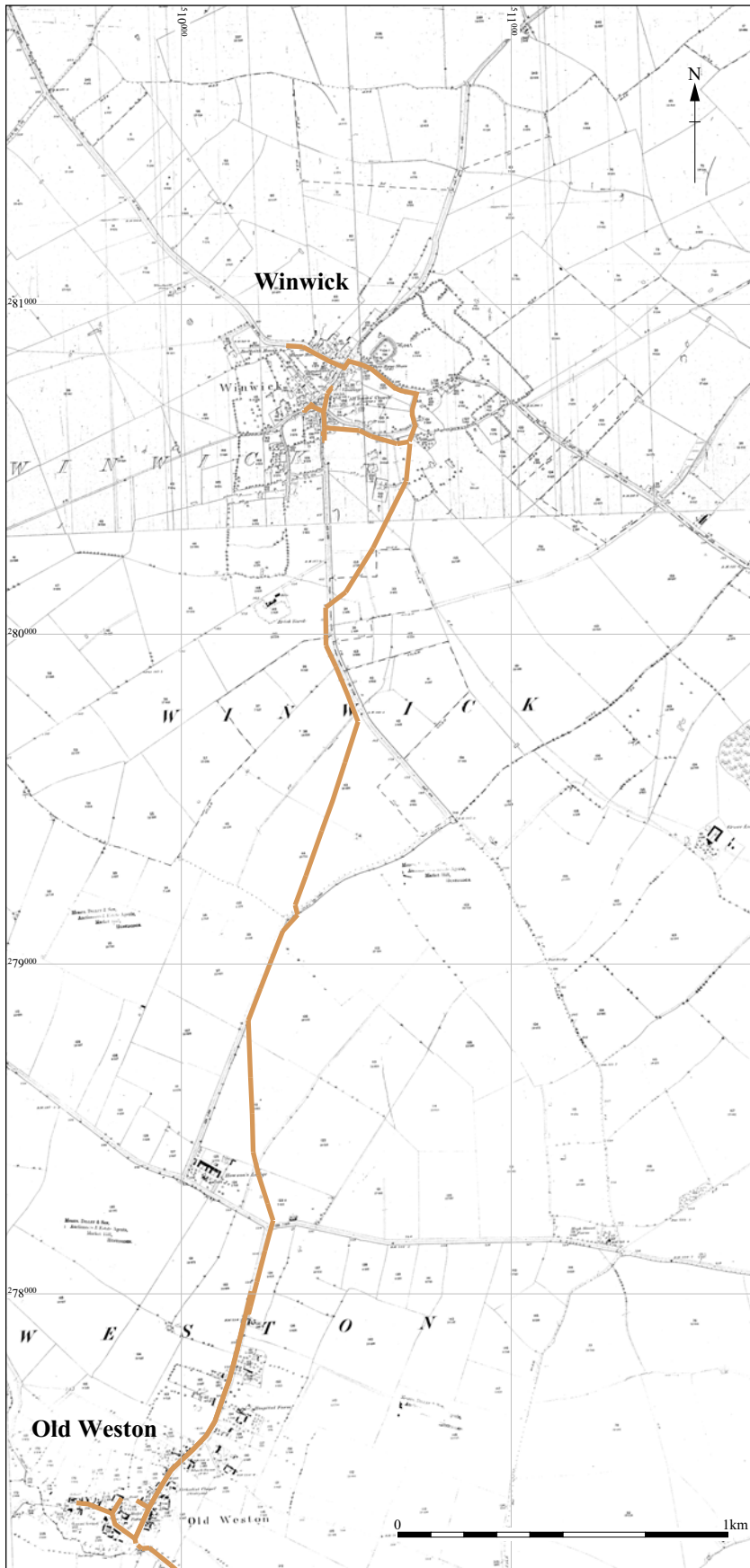


Figure 3: 1st Edition Ordnance Survey

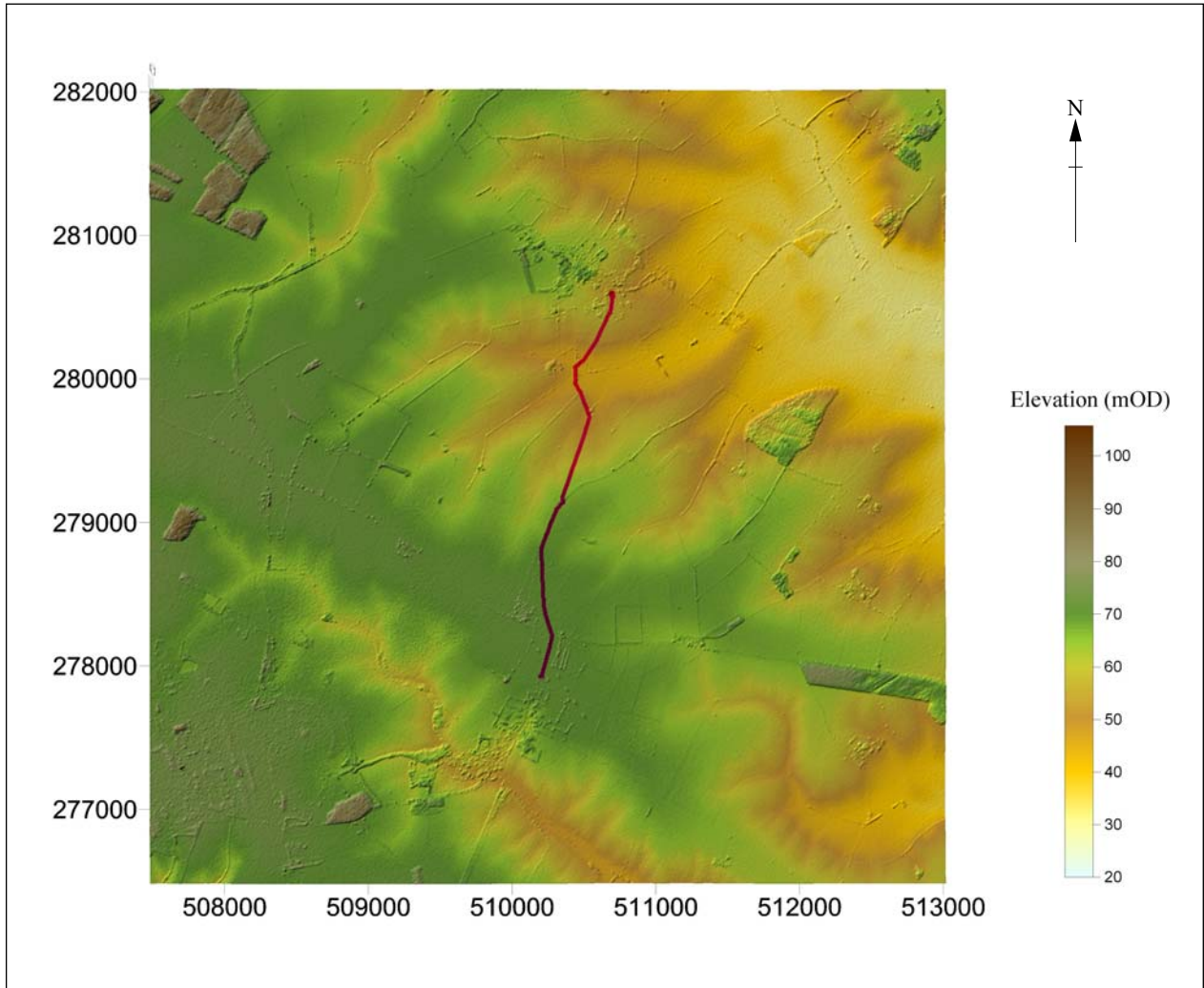


Figure 4: Proposed pipeline route overlain on a 3-dimensional surface model created from 5m interval DSM radar survey

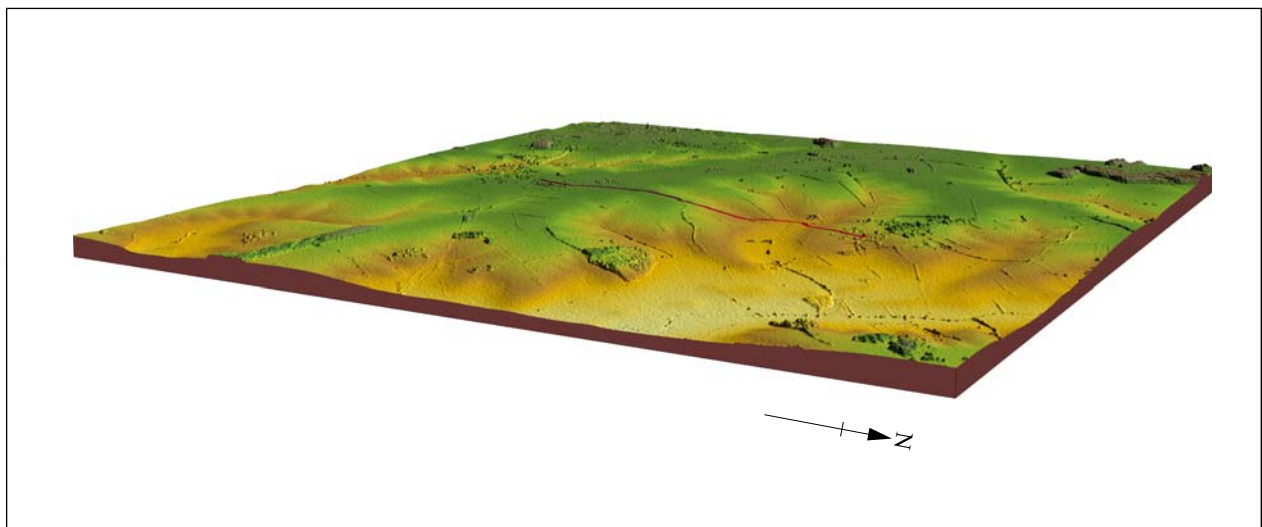


Figure 5: 3-Dimensional view of the proposed pipeline route, viewed from the northeast



*Plate 1: View looking south from near where the pipeline starts at Winwick. The pipeline heads for the central horizon*



*Plate 2: Earthworks in the field to the east of Winwick church*

## **Appendix 1: Health and Safety Statement**

The CAM ARC will ensure that all work is carried out in accordance with Cambridgeshire County Council's Health and Safety Policies, to standards defined in *The Health and Safety at Work, etc. Act, 1974* and *The Management of Health and Safety Regulations, 1992*, and in accordance with the manual *Health and Safety in Fieldwork Archaeology* (SCAUM 1997).

Risk assessments prepared for the CAM ARC office will be adhered to.

The CAM ARC has Public Liability Insurance. Separate professional insurance is covered by the Public Liability Policy held by the CAM ARC as part of Cambridgeshire County Council. The CAM ARC's insurance cover is:

Employers Liability	£20,000,000
Public Liability	£30,000,000

Full details of Cambridgeshire County Councils' Health and Safety Policies and the archaeological unit's insurance cover can be provided on request.

## Appendix 2: Summary of CHER Entries

HER No.	Grid Ref.	Keywords	Period	Form	Designation
00347	TL 094 773	Medieval gravestone, old Weston	Med	Stone	Monument
00348	TL 095 772	Deserted settlement, Old Weston	Med	Earthwork	Monument
00348a	TL 095 772	Saxon pottery, Old Weston	Sa	Scattered finds	Find spot
00348b	TL 094 772	Roman pottery, Old Weston	Ro	Stray find	Find spot
00349	TL 097 775	Soilmarks	U	Cropmark	Monument
00363	TL 0981 7735	Manor, farmstead at Model farm, Old Weston	Med, Mod	Documentary evidence. Extant building	Building
00845	TL 108 804	Coinhoard, Winwick	Med		Findspot
00923	TL 100 810	Site of post mill, Winwick	Med, Mod	Documentary evidence	Monument
01493	TL 1061 8085	Moated site and shrunken village, Winwick	Med	Earthwork, documentary evidence, find	Monument
01493a	TL 107 806	Winwick DMV	Med	Earthwork, house platform, hollow way	Monument
01494	TL 1027 8005	Brick or gravel pit, Winwick	U	Brick, gravel	Monument
01726, 54804	TL 1047 8070	All Saints Church, Winwick	Med, Mod	Extant building	Listed Building
05368	TL 125 779	Roman road	Ro	Earthwork	Monument
07877	TL 0963 7708	Roman pottery, Old Weston	Ro	5 pot sherds	Find spot
09815	TL 1040 8085	19th century manor house, Winwick	Mod	Documentary evidence	Building
10051	TL 108 793	Cropmarks, Hamerton	U	Cropmark	Monument
11621	TL 1100 8035	Ridge and furrow, Winwick	Med	Cropmark	Monument
11622	TL 1060 8120	Ridge and furrow, Winwick	Med	Earthwork, cropmark	Monument
CB 14663	TL 10982 79482	Iron Age and Roman remains, Grove Farm, Hamerton	IA, Ro	Ring ditch, enclosure, gully, trackway, boundary ditch	Monument
CB 14669	TL 10988 79487	Ridge and furrow, Grove Farm, Hamerton	Med	Ridge and furrow	Monument
CB 15036, 54795	TL 0939 7720	St Swithins church, Old Weston	Med, Mod	Extant building	Listed Building
MCB 17187	TL 0997 7742	Old Weston Methodist Chapel, Main Street	Mod	Extant building	Building
54797	TL 10147 77595	Hospital Farmhouse, Old Weston	P Med, Mod	Extant building	Listed Building
54798	TL 10111 77535	Dobbins Cottage, Old Weston	P Med, Mod	Extant building	Listed Building
54799	TL 10025 77489	The Swan Public House	P Med, Mod	Extant building	Listed Building
54800	TL 09959 77432	1622 Cottage	P Med, Mod	Extant building	Listed Building
54801	TL 10124 77755	Cottage	P Med	Extant building	Listed Building
54802	TL 10126 77761	Cottage	P Med	Extant Building	Listed Building
54805	TL 10410 80721	Westward Farmhouse	P Med	Extant building	Listed Building

### Key to periods:

IA	Iron Age
Med	Medieval
Mod	Modern
P Med	Post-medieval
Ro	Roman
Sa	Saxon
U	Undated

## **Appendix 3: Aerial Photographic Assessment**

By Rog Palmer

### **Summary**

This assessment of aerial photographs examined a corridor 500m wide centred on the pipeline between Winwick (TL106 805) and Old Weston (TL101 779) in order to identify and accurately map archaeological, recent and natural features.

Ridge and furrow remaining from medieval cultivation covers much of the corridor examined.

Earthworks have been mapped at Winwick. These are likely to mark structures of a former village and include property divisions, a track and possible house plots. Some of the possible house plots – never distinct on aerial photographs – are in the field in which the pipeline terminates at Winwick.

No non-archaeological features were identified on the photographs examined.

Land use in the area is predominantly arable, possibly being converted from pasture in the 1940s.

Original photo interpretation and mapping was at 1:2500 level.



## **1 Introduction**

This assessment of aerial photographs was commissioned to examine a corridor 500m wide centred on the pipeline between Winwick (TL106 805) and Old Weston (TL101 779) in order to identify and accurately map archaeological, recent and natural features and thus provide a guide for field evaluation. The level of interpretation and mapping was to be at 1:2500.

## **2 Archaeological and natural features from aerial photographs**

In suitable cultivated soils, sub-surface features – including archaeological 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 ripening 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, which may survive in unploughed grassland, 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.

Such effects are not confined only to archaeological features. Natural faults and deposits, and recent disturbances to the bedrock, can cause similar differences in crop growth and may also appear as colour differences in bare winter soils.

## **3 Photo Interpretation and Mapping**

### *Photographs examined*

The most immediately informative aerial photographs of archaeological subjects tend to be those resulting from observer-directed flights. 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 products of such investigation. Although oblique photographs are able to provide a very detailed view, they are biased in providing a record that is mainly of features noticed by the observer, understood, 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.

Archaeological observers rarely examine clay soils, such as cover the present area, in a systematic way at appropriate times of year and much may remain there to be identified and recorded.

Vertical photographs cover the whole of Britain and can provide scenes on a series of dates between (usually) 1946-7 and the present. Many of these vertical surveys were not flown at times of year that are best to record the archaeological features sought for this Assessment and may have been taken at inappropriate dates to record crop and soil responses that may be seen above sub-surface features. Vertical photographs are taken by a camera fixed inside an aircraft and with its exposures timed 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.

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and the National Monuments Record: Air Photographs (NMRAP), Swindon. Photographs included those resulting from observer-directed flights and routine vertical surveys.

Photographs consulted are listed in section 5 of this report.

### ***Base maps***

Digital data from survey at an original scale of 1:2500 or greater were provided by the client.

### ***Study area***

Photographs were examined in detail for a 500m wide corridor centred on the pipeline route.

### ***Photo interpretation and mapping***

All photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. Scanned digital copies of the most informative were transformed to match the digital data using the specialist program AirPhoto (Scollar 2002). All scanned photographs were enhanced using the default setting in AirPhoto before being examined on screen. Transformed files were set as background layers in AutoCAD Map where features were overdrawn using standard conventions while making reference to the original prints. Ridge and furrow was sketched schematically to indicate the alignments of furlongs. Layers from this final drawing have

been used to prepare the figure in this report and have been supplied to the client in digital form.

### *Accuracy*

AirPhoto computes values for mismatches of control points on the photograph and map. In all transformations prepared for this assessment the mean mismatches were less than  $\pm 1.50\text{m}$ . These mismatches can be less than the survey accuracy of the base maps themselves and users should be aware of the published figures for the accuracy of large scale maps and thus the need to relate these mismatches to the Expected Accuracy of the Ordnance Survey maps from which control information was taken (OS 2007).

## **4 Commentary**

### *Soils*

The Soil Survey of England and Wales (SSEW 1983) shows the area to lie mostly on chalky till (boulder clay: soil association 411d: HANSLOPE) with some Jurassic and Cretaceous clay (Oxford clay: soil association 411c: EVESHAM 3) on the north and south-east sides of Winwick. Crops on both soils are unlikely to indicate sub-surface features except in times of drought.

### *Archaeological features (see figure)*

Ridge and furrow, remaining from medieval cultivation, is the predominant form of archaeological remains in the pipeline corridor and it is probable that it also was formerly present in those modern fields where nothing was visible on the photographs examined.

The moat at Winwick has adjacent features, now surviving in low relief, that are probably components of a former village and may mark property boundaries and access routes. Similar traces can be seen in fields to the south and include a probable track and smaller rectangular features that may indicate the sites of former houses. The latter are fairly indistinct on aerial photographs, even when examined stereoscopically, and should be taken as providing an indication of features rather than their exact forms. This is the field in which the Winwick end of the pipeline terminates so these features may be encountered in a trench.

Some airborne observation has taken place in the environs of the pipeline corridor. This has mostly concentrated on the earthworks at Winwick, but included photography of three other targets: a D-shaped enclosure at TL093813, a doubtful feature of indeterminate form and origin at TL108794, and another possible archaeological feature at

TL105818. None showed any indication that they would extend into the pipeline corridor.

As noted above, clay soils have rarely been subjected to systematic observation from airborne archaeologists despite the growing knowledge that crops on these soils can and do indicate buried features with similar clarity to the 'easier' soils such as chalk and gravel. Crops on clay tend to require dry conditions before they are affected by sub-surface variations and none of the vertical photographs examined were taken at such times. It must be expected, therefore, that sub-surface ditched features may be found during field investigations that have not been recorded from the air.

#### *Non-archaeological features*

No non-archaeological features were identified on the photographs examined.

#### *Land use*

Most fields have been in arable use on all dates of photography. Exceptions are fields that surround the village of Winwick (although some of those may have been 'scratched' to improve grass growth in recent years) and fewer fields on the east side of Old Weston. The relatively-fresh appearance of the levelled ridge and furrow on the 1940s photographs suggests that conversion to arable was done during the Second World War.

## **5 Aerial photographs examined**

### **5.1 National Monuments Record: Air Photographs (cover search 13287).**

#### *Specialist Collection*

<b>Photo ID</b>	<b>Repository</b>	<b>Film Details</b>	<b>Date flown</b>	<b>6 Fig NGR</b>
NHC 2534	NMR	B 70mm,120,220 Black&white	29-Jul-84	TL092812
NMR 2170	NMR	B 70mm,120,220 Black&white	26-Jul-84	TL109784
NMR 2170	NMR	B 70mm,120,220 Black&white	26-Jul-84	TL109784
NMR 2170	NMR	B 70mm,120,220 Black&white	26-Jul-84	TL109793
NMR 2170	NMR	B 70mm,120,220 Black&white	26-Jul-84	TL109793
NMR 23729	NMR	B 70mm,120,220 Colour neg	07-Oct-04	TL106807
NMR 23729	NMR	B 70mm,120,220 Colour neg	07-Oct-04	TL107807
NMR 23604	NMR	B 35 mm Colour neg	07-Oct-04	TL107806

NMR 23604	NMR	B 35 mm Colour neg	07-Oct-04	TL107806
NMR 23604	NMR	B 35 mm Colour neg	07-Oct-04	TL107806

### *Vertical Collection*

<b>Photo ID</b>	<b>Grid ref (start)</b>	<b>Grid ref (end)</b>	<b>Date flown</b>	<b>Scale</b>
RAF/106G/UK/635	TL102765	TL098810	10-Aug-45	10600
RAF/106G/UK/635	TL092790	TL094812	10-Aug-45	10600
RAF/106G/UK/635	TL120785	TL117811	10-Aug-45	10600
RAF/106G/UK/635	TL103811	TL118765	10-Aug-45	10600
RAF/106G/UK/928	TL110816	TL110816	16-Oct-45	10200
RAF/106G/UK/928	TL096768	TL091767	16-Oct-45	10200
RAF/106G/UK/928	TL092775	TL098777	16-Oct-45	10200
RAF/106G/UK/928	TL096784	TL091784	16-Oct-45	10200
RAF/CPE/UK/1925	TL116774	TL087765	16-Jan-47	9840
RAF/CPE/UK/1925	TL120800	TL092790	16-Jan-47	9840
RAF/CPE/UK/1994	TL090793	TL090793	13-Apr-47	9800
RAF/CPE/UK/2405	TL092809	TL117812	24-Nov-47	10000
RAF/541/602	TL118809	TL090809	04-Aug-50	10000
RAF/541/602	TL118792	TL090792	04-Aug-50	10000
OS/76009	TL113765	TL115814	08-Apr-76	7500
OS/76009	TL103806	TL103768	08-Apr-76	7500
OS/72408	TL090813	TL090788	03-Oct-72	7500
OS/72408	TL101767	TL101813	03-Oct-72	7500
OS/73317	TL112816	TL113794	16-Jun-73	7500
OS/73317	TL100790	TL101812	16-Jun-73	7500
OS/87076	TL087812	TL087792	27-May-87	7800
OS/93308A	TL100807	TL106807	04-May-93	7700
OS/96588	TL095765	TL094800	04-Jun-96	7900

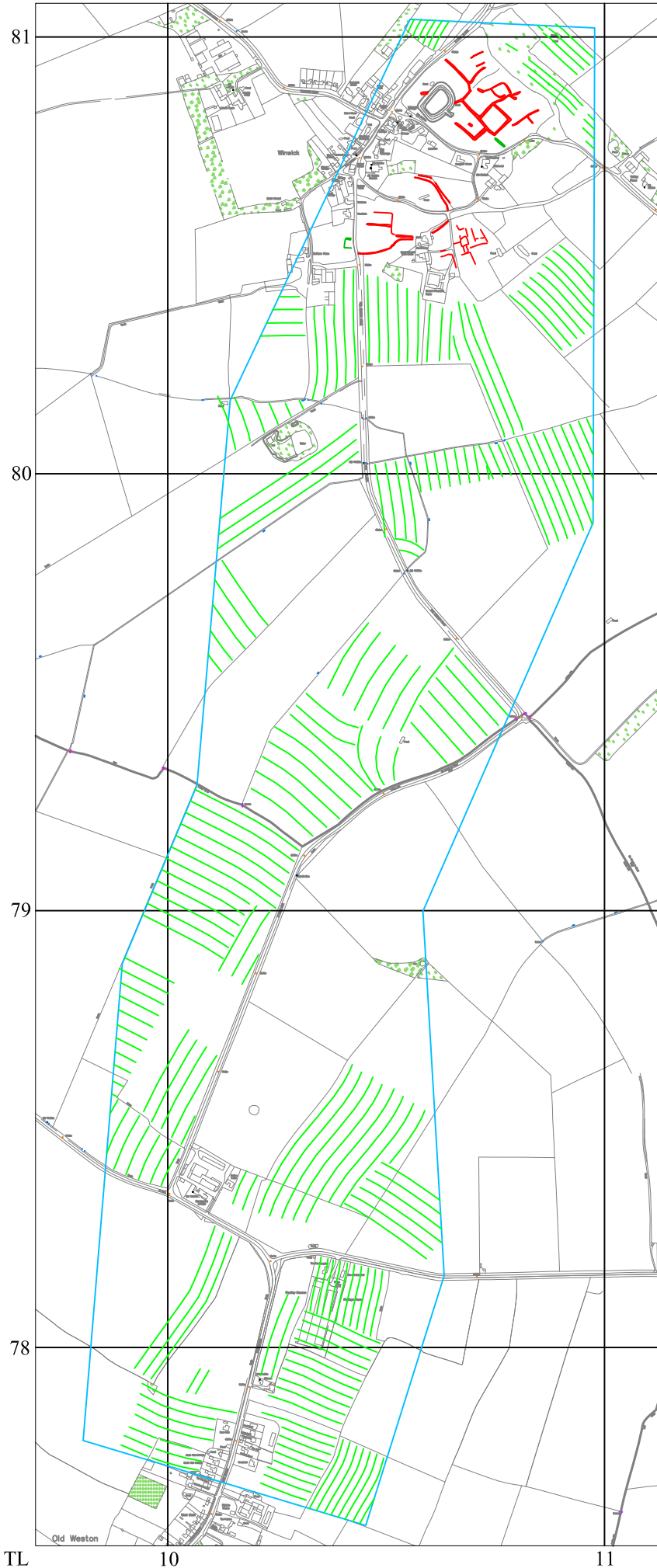
## **5.2 Cambridge University Collection of Aerial Photographs (searched 24 April 2007)**

### *Oblique photographs*

AKO 59-62	30 March 1965
AZS 46-47	24 October 1969
BLU 41-43	9 February 1973

### *Vertical photographs*

RC8kn-BM 29-30	16 July 1988	1:10000
RC8kn-BM 38-40	16 July 1988	1:10000
RC8kn-BM 131-2	16 July 1988	1:10000



Winwick to Old Weston pipeline,  
Cambridgeshire:  
Features identified on aerial photographs

- Area examined
- Earthwork ditch or hollow
- Earthwork bank
- Ridge and furrow (schematic)

Original photo interpretation and mapping at  
1:2500 level based on aerial photographs at  
CUCAP/ULM and NMRC.  
Air Photo Services Cambridge  
May 2007  
Drawing: 0708Winwick.dwg

## Bibliography

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|-----------------|----------|--|
| Ordnance Survey | 200<br>7 | <a href="http://www.ordnancesurvey.gov.uk/productpages/landline/positional-background.htm">http://www.ordnancesurvey.gov.uk/productpages/landline/positional-background.htm</a>  |
| Scollar, I.     | 200<br>2 | 'Making things look vertical', in Bewley, R.H. and Rączkowski, W., (eds), <i>Aerial archaeology: developing future practice</i> , NATO Science Series, Vol <b>337</b> , 166-172. |
| SSEW            | 198<br>3 | <i>Soils of England and Wales: sheet 4: Eastern England (1:250,000)</i> . Soil Survey of England and Wales, Harpenden.   |

## Terms and Conditions

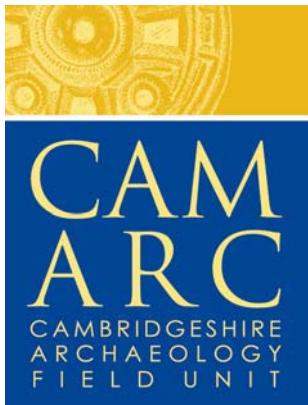
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