

**LINDSEY ARCHAEOLOGICAL SERVICES**

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**Stenigot Reservoir to Kenwick Pumping Station:**

**Archaeological Desktop Assessment**

for a

**Proposed Water Trunk Main**

**NGR: TF 2580 8280 - TF 3430 8510**

LCNCC Museum Accn. No: **167.96**

Site code: **SKM 96**

Report prepared for J.H. Walter  
on behalf of Anglian Water Services Ltd

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# Stenigot Reservoir to Kenwick Pumping Station: Archaeological Desktop Assessment for a Proposed Water Trunk Main

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## **Summary**

*An archaeological desk-based assessment of the proposed route of a water Trunk Main through the parishes of Donington-on-Bain, Withcall, Hallington, Raithby-cum-Maltby and Louth was researched. The route passes close to a Bronze Age round barrow, an undated enclosure site and across areas of medieval ridge and furrow. A possible mill site has been suggested and numerous minor chalk and clay pits have been identified.*

*The assessment notes the likelihood of unknown archaeological sites and artefacts, especially of prehistoric date, being revealed during groundworks for this pipeline because of its location within the Lincolnshire Wolds.*

## **Introduction**

Lindsey Archaeological Services (LAS) was commissioned by J.H. Walter on behalf of Anglian Water Services Ltd. in November 1996 to prepare a desk-based assessment of archaeological remains close to the proposed route of a 10km pipeline linking Stenigot Reservoir and Kenwick Reservoir to Raithby Treatment Works (Figs. 1 and 2). A 15m wide easement will be defined, of which about 9m width will be stripped of topsoil; the easement width may be narrower where necessary. The pipeline is required to supplement an existing main which follows a similar route (Fig. 3).

The County Archaeological Officer for Lincolnshire requested this assessment but because of other commitments no formal brief was issued. J.H. Walter asked LAS to include material relating to an area 200m either side of the planned route, but a wider zone has been used where the nearby presence of known archaeological sites suggested that unknown contemporary remains might be affected by the route.

## **Method**

Research for this assessment was conducted by the author between 13th and 21st November 1996 and included:

- Searches of SMR information held by Lincolnshire Sites and Monuments Record and the LAS card index of archaeological sites and finds

- Search of documentary and cartographic archives held at the Lincolnshire Archives Office
- Examination of published sources held by Lincoln Central Library local studies collection
- Examination of oblique air photographic coverage held by LAS, consultation of air photographs held by the SMR, and study of the cropmark plots produced by the RCHM(E) Lincolnshire Mapping Project
- Consideration of borehole information for the pipeline route supplied by Mott MacDonald
- Location of an existing water main from maps supplied by Anglian Water Services Ltd.
- A rapid visual inspection of the fields along the route from adjacent roads

## **Results**

### **Topography and Geology**

The pipeline route is sited along the northern edge of a small valley in the Lincolnshire Wolds. The local geology is chalk, overlain with Devensian glacial deposits, mostly tills. Some Carstone (sandstone) is present south of the route in Raithby-cum-Maltby parish. Boulder clay and alluvium deposits are crossed by the proposed pipeline west of Poke's Hole and between Raithby Treatment Works and Southfield House, Louth (IGS 1980).

### **Scheduled Ancient Monuments**

The proposed pipe main passes close to a tumulus (SMR 00192) west of Bluestone Heath Road which has been scheduled as an Ancient Monument (SAM 27879). In effect, this means that the remains of this archaeological feature have statutory protection from any activities which may cause damage. Guardianship of this site resides with English Heritage and Scheduled Monument Consent may be necessary if activities associated with the new main are likely to affect land close to it. The present management scheme for this monument includes a 5m zone outside the extent of the tumulus.

The tumulus, although barely visible from the south, survives as the remnant of a prehistoric mound of upcast soil obtained from excavation of an enclosing ditch (now backfilled) (Pl.1). These features served as ritual monuments containing one or more cremation or inhumation burial; they were originally very prominent in the landscape. Many such sites were investigated in the 19th century, causing damage but little information was obtained. This tumulus is not marked on the 1824 Ordnance Survey (OS) 1" map, the 1892 1st edition OS 6" map or on the 1906 2nd edition 25" map, suggesting that this monument was not readily recognisable and that damage had already occurred.

### **Air Photographic Coverage**

Archaeological sites identified from the collection maintained by the National Monuments Record at Swindon have been sketch plotted at 1:10,000 scale by the RCHM(E) Lincolnshire Mapping Project (York). Permission was obtained to reproduce plotted cropmarks close to the pipeline route (Figs. 4 and 5).

All the air photographs located (including those not examined) are listed in Appendix 2. The locations of possible archaeological features are marked on Fig. 2.

### **Archaeological Findspots (Fig. 2)**

The County Sites and Monuments Record for Lincolnshire was consulted and previously reported sites and findspots close to the pipeline route were noted. Records held by LAS were also checked. A summary list is appended (App. 1).

The earliest finds from the area are a single Palaeolithic flint implement found at Home Farm, Kenwick in 1930 (SMR 41847) and Mesolithic flints found 2km west of the route during archaeological fieldwalking as part of the Bain Valley Survey in 1983.

For the Neolithic and Bronze Age periods, reported finds are more common. Archaeological monitoring of groundworks within the easement for the Stenigot to Bully Hills trunk main in 1991 located no finds close to the Stenigot reservoir but 24 worked flints and a single sherd of prehistoric pottery in the next field to the north (Coupland and Field 1992, 3). The absence of any finds was unusual for the project and may reflect disturbance caused when the reservoir was constructed.

The tumulus or round barrow east of Stenigot Reservoir is probably of Bronze Age date, and air photographs suggest that a number of smaller round ditched barrows have been ploughed flat in the field south of the road (NMR TF2928/13-14 and TF2944/5). Bluestone Heath Road (called Barton Street Road on 19th century maps) is suspected to be a prehistoric route across the Wolds and numerous prehistoric sites, especially burial mounds, lie on either side of the road (May 1976; LAO Mon 7/16/57). Air photographs show a linear ditched feature about 200m east of Bluestone Heath Road, traceable to about 1.5km north of the proposed pipeline. Other photographs show a double ditch turning from east of Bluestone Heath Road to south of the Stenigot tumulus. If these features are contemporary, they may represent an estate or territory boundary respecting the road.

At the southern end of the pipeline route, worked flints and flint arrowheads have been found at Home Farm, Kenwick.

Cropmarks of field systems and associated habitation sites have been plotted in Donington-on-Bain and Welton-le-Wold (0.8km to 2km north of the proposed pipeline) by the RCHM(E) Lincolnshire Mapping Project. The



density of these features appears to reflect intensive farming of parts of the Wolds in the Iron Age and Romano-British periods. Undated cropmark enclosures are known SW of New Buildings, Withcall (CUCAP UA 17 and 18), and in Hallington (Figs. 4 and 5). Romano-British pottery has been reported from fields near Welldale Farm, Donington-on-Bain. At Ringlands Field, in Withcall, a site initially interpreted as a Roman site may have been an Anglo-Saxon cemetery (SMR 40725).

Although early medieval settlement of this part of the Wolds seems to have been quite closely spaced, this declined considerably within the later medieval period. Close to the route, the earthwork sites of former villages at Withcall, Maltby and Kenwick illustrate the change of fortunes experienced by local communities. The extent of medieval cultivation, during times of population growth or economic expansion, onto land which may not have been frequently ploughed since is marked by some areas of surviving ridge and furrow cultivation earthworks. Part of the cause of - and the response to - a declining local population after the mid 14th century was the move to sheep rearing. Withcall was renowned until the 19th century for what was described as the largest field in England (Green 1913, 155).

#### **Borehole and Test Pit Information (Fig. 3)**

Test pits and boreholes were excavated by backactor or cable percussion and recorded along the proposed route by A.F. Howland and Associates in September 1996 on behalf of Mott MacDonald. Copies of the test pit and borehole logs were supplied to LAS. The three boreholes contain no additional information relevant to this assessment.

The test pit logs show topsoil to vary in depth between 0.3m and 0.5m, overlying clay or chalk; considerable variation occurred between consecutive pits.

Test Pit (TP) 1 was positioned east of the track beside Stenigot Reservoir, apparently about 80m west of the mapped position of the tumulus. Chalk was encountered at 1m below ground level beneath a sandy silty clay; a channel in the clay was noted at the northern end of the pit. This contrasts with TP 2, immediately east of Bluestone Heath Road and about 300m away, where chalk was found 0.5m deep. It is possible that the deeper clay deposit in TP1 represents backfill of a deliberately excavated feature: either the ditch around the known prehistoric burial mound or another unknown feature.

TP7 (east of the track to North Farm, Withcall) located flint and chalk gravel 0.3m thick between topsoil and the chalk. This pit was close to a former chalk pit seen on the site visit, and the material may represent waste spoil from that pit. In view of the underlying chalk, it is surprising that the track has cut so deeply into the hillside, unless it follows either a former watercourse or occupies an earlier quarry.

TP9, SE of Black Plantation, Withcall, cut through clay deposits to a depth of 2.9m. Springs are known to the north, and this may have been a former

course of the stream now flowing to Pokes Hole. Further east at TP10 the base of the clay was not found in the 3.5m deep pit, but at Poke's Hole (TP11) mixed strata of sands, clay and chalk were found. Chalk bedrock was identified again at a depth of 0.7m (TP12) 400m to the east close to a former chalk pit.

TP16, cut through a medieval plough ridge east of Hallington House Farm, found clays and sands but no chalk. No evidence of ceramic material was recorded and the two medieval finds found on the exposed soil during the site visit are not thought to have come from an occupation deposit.

Between TP16 and TP 23 (Saturday Pits) no chalk bedrock was recorded. This correlates closely with the extent of boulder clay deposits recorded for that area (IGS 1980). Made ground was recorded east of the A16 Louth Bypass but the nature of this disturbance is unclear as the test pit evidently struck a modern land drain. TPs 19, 26 and 27 located landfill materials to over 2m deep south of the allotments near Julian Bower, presumably backfill of former clay pits.

Despite the chalk at Saturday Pits (TP23) only clay was found beside the A16 junction south of Kenwick Thorpe Farm (TP24).

### **Placenames**

The etymology of placenames for this part of the East Lindsey district have not been published, but the following draws on general sources including Cameron (1977) and Ekwall (1960).

Round Hill (on the 1834 Withcall Enclosure Plan) may denote the natural topographical appearance of the land east of the lane to North Farm, but in this part of the Wolds prehistoric burial mounds were common and the name may record an archaeological site no longer visible (LAO Lind Encl 140).

Hallington probably contains the *Anglo-Saxon ingas* element. Kenwick may indicate an early settlement, possibly even a dairy farm; Kenwick Thorpe is likely to be a minor settlement. In its earliest recorded form (the 1086 Domesday Survey) Withcall was *Widcale*, probably from the Old Scandinavian terms for a wooded ridge (Ekwall 1960).

No derivation of Poke's Hole, on the Hallington/Withcall parish boundary, could be established. 'Poke' may perhaps have some etymological link with *puca*, Old English for goblins.

Hungry Spot, south of Julian Bower, is likely to have been an infertile area of land referred to disparagingly, although a derivation from 'hanging' (relating to the hillside) is possible. Halfpenny Lane has been described as a disparaging comment, but it may reflect the cost of passing the toll house at its eastern end. Saturday Pits, at the southern end of the route, may have been excavated on land for which service was rendered on Saturdays (Field 1982).

New Buildings, Withcall, first appears on the 1906 25" OS map; the site was earmarked for a quarry on the 1834 Enclosure map (LAO Lind Encl 140).

### **Earthworks**

The only identified surviving earthworks on or beside the route (other than chalk pits) consist of the Stenigot tumulus, the hollow way to North Farm, Withcall, and ridge and furrow NE of Hallington House Farm (Pls. 1-3). The route crosses several parish boundaries, where a raised boundary bank might be present.

Levelled medieval cultivation earthworks are known from air photographs close to the Raithby Water Treatment Works.

### **Water Management**

Whithworth Beck issues from near North Farm, Withcall, and forms the parish boundary with Hallington as far as Hubbard's Hills. The stream has been adapted at Poke's Hole, where it fills a pond and then has apparently been diverted beside the road before crossing under it. The 1891 OS 6" map marks a sluice upstream of the pond, and a sheepwash is marked at the site of the pond on the 1906 25" map (OS 1891 and OS 1906).

The sheepwash may have its origins as a mill dam, with an adjacent mill perhaps on the south side of the road (Pl. 4). The exact position of the proposed main at Poke's Hole was not clear during the site visit, but this area might produce remains of medieval or later structures or water management features. Waterlogged materials might be found in this vicinity.

The 1906 OS map marks a reservoir and pump two fields east of Pokes Hole, in the centre of the field and close to the position of the proposed main. Undulations were visible on the surface of this field when the site visit was made (Pl. 5).

A brick water tower, thought to be a Withcall estate feature, survives to the south of the road beside New Buildings.

### **Woodland**

The route will not affect any areas of ancient woodland. The fringes of small areas of plantation may be affected, particularly beside the stream and pool at Pokes Hole.

### **Quarries (Fig. 2)**

Saturday Pits beside Kenwick Thorpe Farm were whiting works, apparently active in 1892 (OS 1892). The pits are now used as a landfill site. The same edition survey marks a chalk pit at the Hallington road junction. Roadside land designated for chalk pits is indicated south of New Buildings, Withcall, on the 1834 Enclosure map.

A chalk pit to the south of Black Plantation, Withcall, was marked on the 1906 OS map (OS 1906); the same survey shows a cutting at the southern end of the track to the pit, which may also have been a quarry.

During the site visit, small hollows presumed to be former chalk quarries were identified on or beside the route at other locations:

two quarries north of the road to the north and NE of New Buildings (Pl. 6).

a quarry north of the road, just east of the lane to North Farm, Withcall (Pl. 7)

a roadside quarry NE of Poke's Hole

a roadside quarry on the north side, west of Home Farm, Hallington

a small roadside quarry at the west edge of a field of ridge and furrow, NE of Hallington House Farm (Pl. 3)

a small quarry NE of Saturday Pits

The frequency of chalk pits in this area is likely to be even higher than the recorded or visible number, especially close to roads where access would have been easiest. The pits are probably mostly post-medieval in origin but earlier examples may exist. Chalk pits will have been deliberately filled or partially filled with later material, which may be exposed when the route is prepared.

Deposits of alluvium in the valley of Whithworth Beck and pockets of boulder clay seem to have been the factors behind two clay pits recorded from near the route. The 1834 Enclosure map of Withcall names a field as Brick Pit Plat, NW of Black Plantation (Fig. 2). The 1906 OS 6" map marks an apparently active Brick Yard NE of Southfield House, Louth, and a pit is marked on subsequent maps. An extensive former clay pit west of the Sports Grounds south of Julian Bower has been backfilled.

### **Roads**

At the western end of the route the pipeline will cross the course of Bluestone Heath Road. This small road is believed to have been a prehistoric trackway, branching off from Caistor High Street, another similar track, at Ludford and continuing across the Wolds towards Burgh-le-Marsh (which was formerly a coastal settlement). The course of the road is flanked by tumuli (prehistoric burial mounds) and cropmarks which are thought to represent other prehistoric sites. Bluestone Heath Road is marked on 19th century maps as Barton Street Road (LAO Mon 7/16/57).

The pipeline route will cross the courses of two turnpike roads, part of the post-medieval network of locally maintained public highways. Nearly all the roads into Louth were subject to turnpike fees. A Louth to Horncastle Turnpike toll house stands at the junction of Horncastle Road and Halfpenny Lane and the position of a former toll bar is marked on Ordnance Survey maps; during the site visit no sign of a gate or barrier could be seen. This turnpike was established in 1770 (Wright 1982, plate 161). The existing tollhouse has recesses on two aspects for toll boards, and it is probable that Halfpenny Lane acquired its name from the appropriate toll (Pl. 8).

The route crosses the Louth to London Turnpike south of the modern cemetery. The toll house for this road was sited at Kenwick Bar.

To the SW of Hubbard's Hills the route is aligned to the north of the road from Stenigot to Louth. This road is apparently of medieval or earlier date, and has cut a deep hollow at Hallington through higher land with medieval cultivation remains and the sites of medieval settlement.

A minor track leads from the road in Withcall parish to North Farm (Pl. 2). This lane is deeply cut and on the same alignment as the lane from Home Farm and Withcall village, but it is unclear whether it is medieval or a 19th century access.

The route also passes beside a minor lane at Hungry Spot, SW of the allotments beside London Road. This lane cuts across the divisions of early enclosed fields but appears to have never extended south of the former railway line. This suggests that the lane post-dates the construction of the railway or may even have been created as access to the railway construction site.

### **Railways**

The Louth and Lincolnshire Railway was constructed with difficulty, and finally completed in 1876 (Squires 1988, 46-51). One of the most persuasive reasons for the line was the suggestion that ironstone could be mined close to the route and smelted in blast furnaces at Donington-on-Bain. Neither of these pipedreams came to fruition and the railway had a short life. The founding company went into receivership in 1882 and became the Bardney to Louth Branch of the Great Northern Railway. Between 1943 and 1948 the line was used for the distribution of bombs and other materials to airfields nearby but the line close to Louth was closed in 1956. By 1961 the track was apparently completely removed, since when part of the line has been returned to cultivated land or otherwise been removed. The site visit showed that no sign of the line remains where the pipeline route will cross it east of London Road.

### **Existing pipeline (Fig. 3)**

An existing water main is aligned on a course closely followed by the proposed main. From Stenigot Reservoir the main follows the southern side of the road but crosses to the north close to the track to North Farm, Withcall. It then is close to the position of the proposed main along most of the remainder of the route. Spurs lead to North Farm, Withcall and into Hallington. At the western end of the route the diameter is 15" but this reduces to 12" towards the eastern end of the route.

From the plans provided to LAS it is unclear how close the new main will be to the existing trench; an approximate gap of 20m or more has been suggested (R. Bannister, pers. comm.). Where the gap is this close, installation works for the existing pipe may have caused considerable

contamination to archaeological deposits, although sites would probably have survived to some recognisable extent.

No sign of other main services which might affect the archaeological impact of the project was noted during the site visit.

### **Wartime Installations**

The route passes close to the Home Chain Radar Station site at Stenigot and a Home Guard Store site west of Kenwick Hall but no wartime military features are known to be affected by the project. Pillboxes and other structures are increasingly recognised as significant features of historical and archaeological interest, and remains might be found on or beside the easement.

### **Discussion**

The author understands that J.H. Walter have already liaised with English Heritage and the Lincolnshire County Archaeologist concerning the likely impact of the proposed works and the nature of archaeological constraints on the route.

The author, employed by LAS, helped monitor topsoil stripping of the Anglian Water Services Ltd. trunk main easement between Stenigot and Bully Hills in 1991. That project located prehistoric artefacts on the easement in almost every field and identified five unknown archaeological sites in addition to those anticipated. About 300 worked, or deliberately struck, flints of Neolithic and Early Bronze Age date were found; prehistoric and Roman pottery was also recovered from several locations and a Anglo-Saxon decorated bead was found. Iron Age and Romano-British features were excavated. Although that project may have been especially productive because of the adjacent Caistor High Street prehistoric route, a high density of especially prehistoric remains are consistently found from fieldwork in the Wolds.

The Bain Valley Survey in 1983 fieldwalked transects across the Bain Valley (west of the pipeline route). The project found that Mesolithic flint artefacts were apparently confined to valley bottoms, especially close to springs. Early Neolithic sites were located at the junction between clay-with-flints and loess soils, while Neolithic and Bronze Age exploitation of the flint resource in the clay-with-flints was evident. There was little sign of Roman activity in the valley (Chowne 1984).

To use the results of that survey and the Lincolnshire Mapping Project cropmark plot as a tentative predictive model for the proposed pipeline route, particular interest lies in the tributary stream valley of Whithworth Beck where earliest finds could be anticipated. Neolithic and Bronze Age sites or finds may be expected from much of the route, and Iron Age or Roman sites may be found on higher land along the route. Unknown medieval settlement sites are less likely but possible, particularly as so much of the route is close to the boundaries of modern parishes. A prime contender for a medieval occupation

site is at Kenwick Thorpe Farm, but early enclosures east of the Raithby Treatment Works might indicate a failed hamlet.

### **Conclusion**

The most important archaeological feature known to be on or close to the pipeline route is the tumulus east of Stenigot Reservoir. As noted above, this monument has statutory protection and Scheduled Monument Consent might be necessary. Contractors' access or site compounds should not be positioned where they might intrude onto the periphery of this feature. A 3m x 0.6m test pit (TP1) already dug a short distance to the west may have encountered part of the archaeological site.

It is unlikely that any evidence of the origin of Bluestone Heath Road would be revealed in the pipe trench crossing it, but should such information be retrieved it would be of regional and possibly national importance and this part of the route should be closely monitored.

Air photographs show short stretches of a discontinuous linear ditch feature apparently flanking the eastern side of Bluestone Heath Road, perhaps acting as a prehistoric or Roman territorial or estate boundary which might extend across the line of the pipe trench. This part of the route should be closely monitored.

The route may pass across or beside a mill pond at Poke's Hole. This area may deserve investigation once the route has been marked.

The ridge and furrow remains of medieval fields survive in pasture NE of Hallington House Farm. A borehole sunk through one of these ridges disturbed a small scrap of unglazed medieval pottery and a larger piece of clay floor tile. These finds are probably the result of contemporary manuring of arable fields, but the masking effect of ridge and furrow earthworks should not be ignored. Deserted, migrated or shrunken medieval village sites are known at Withcall and Maltby, and others may not yet have been recognised.

Partially backfilled chalk pits (probably mostly post-medieval) have been identified on the route of the proposed main, and others may be present. These are unlikely to be of particular archaeological significance although the remains of associated structures might be revealed.

In conclusion, the recorded and identified archaeological constraints along this route may represent only part of the actual archaeological resource. Given the density of prehistoric occupation recorded and the number of new sites identified by an intensive archaeological watching brief along the Stenigot-Bully Hills route immediately north of the proposed pipeline, it is recommended that groundworks along the whole route should be monitored.

Re-alignment of the route would not necessarily increase or reduce its potential for revealing (and consequently damaging or destroying) unknown sites of archaeological significance.

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Geoff Tann  
Lindsey Archaeological Services  
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LAO = Lincolnshire Archives Office

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**Appendix 1:****Gazetteer of Archaeological Remains****Abbreviations:**

NGR: National Grid Reference

SMR: Lincs. County Sites and Monuments Record

<b>SMR</b>	<b>NGR (TF)</b>	<b>Description</b>
43220	255 828	World War II pill box, home radar station
40725	261 826	Roman or Anglo-Saxon cemetery, 'Ringlands' field
40726	256 836	Romano-British settlement site; pottery and metalwork, Welldale Farm
40780	257 816	Stenigot deserted medieval village site
40782	244 809	Neolithic beaker pottery, flint arrowheads and scrapers, 1968
40785	2528 8208	Slight mound, human bones, Anglo-Saxon cauldron, iron knives, 1954
40810	283 850	Possible kiln; circle of burnt clay and much pottery 1963
40811	unlocated	Romano-British pottery from Withcall, 1965
40813	286 841	Site of Withcall deserted medieval village
40828	3059 8562	Site of St. Lawrence's Church
40830	308 864	Romano-British greyware pottery 1974
40837	311 845	Medieval moats and earthworks, Knight's Templars
40838	312 841	Maltby deserted medieval village site
41388	3285 8665	Post-medieval cloth seal
41393	3183 8618	Numerous prehistoric worked flints 1929, none found during fieldwalking 1963
41394	331 868	Saxon bone fibula from modern cemetery, pre 1929
41834	3455 8490	Post-medieval buildings (Kenwick Hall) and park
41847	345 851	Palaeolithic ovate flint implement, Neolithic arrowheads, pre 1963
42906	2700 8225	linear soilmark
42982	281 831	soilmark of ?long barrow
43024	316 864	Ancient woodland, Hubbards Hills
43025		Ancient woodland, Jenny Wood
43220	255 828	World War II chain home radar site, pillboxes
43362	256 824	Pre World War I estate water tower
43392	341 849	World War I home guard store, defence structure
43432	3243 8542	Numerous prehistoric worked flints 1929
00192	2593 8293	SAM 27879 Bronze Age round barrow, beside Bluestone Heath Road

Appendix 2:

Summary Lists of Air Photographic Coverage

National Monuments Record (NMR) Air Photographic Collection, Swindon

NGR (TF)	NMR Index no. (TF prefix)	date	SF No.
253 823	2582/1/77-78	1976	965
258 839	2583/1/62-63	1976	953
258 834	2583/2/64-66	1976	953
258 839	2583/3/67-72	1976	953
257 835	2583/4/421	1977	1124
253 838	2583/5/422-426	1977	1124
256 846	2584/1/400-401	1977	1124
257 843	2584/2/412-413	1977	1124
254 841	2584/3/414-416	1977	1124
258 843	2584/4/276-277	1976	972
258 843	2584/5/278-279	1976	972
258 843	2584/6/280-281	1976	972
258 843	2584/7/282	1976	972
258 843	2584/8/283-284	1976	972
258 842	2584/9/2166-2168	1982	2108
258 842	2584/10/2167	1982	2108
258 842	284/11/2168	1982	2108
261 848	2585/1/73-78	1976	953
259 860	2585/1/73-78	1976	953
253 853	2585/2/399	1977	1124
253 852	2585/3/402-405	1977	1124
257 851	2585/4/289-290	1976	972
257 851	2585/5/291-292	1976	972
258 857	2585/7/09	1979	2936
258 852	2585/8/10	1979	2936
261 826	2682/1/53-60	1976	953
269 822	2682/2/428-433	1977	1124
264 824	2682/3/436-438	1977	1124
267 823	2682/4/02	1977	2944
267 823	2682/5/03	1977	2944
267 823	2682/6/04	1977	2944
260 826	2682/7/05	1977	2944
262 834	2683/1/61	1976	953
263 859	2683/2/321	1981	1976
264 846	2684/1/342-343	1977	1124
262 840	2684/2/285-286	1976	972
262 840	2684/3/287-288	1976	972
261 840	2684/5/28	1979	2936
261 853	2685/1/333-341	1977	1124
261 858	2685/2/344-350	1977	1124
268 859	2685/3/67-71	1983	2132
269 854	2685/4/72	1983	2132
269 855	2685/5/73-78	1983	2132
267 850	2685/7/29	1979	2936
267 850	2685/8/30	1979	2936
267 850	2685/9/31	1979	2936
268 859	2685/10/0068	1983	2132
268 859	2685/11/0069	1983	2132
268 859	2685/12/0070	1983	2132
268 859	2685/13/0071	1983	2132
269 855	2685/14/0074	1983	2132
269 855	2685/15/0075	1983	2132
269 855	2685/16/0076	1983	2132

NGR (TF)	NMR Index no. (TF prefix)	date	SF No.
269 855	2685/17/0077	1983	2132
269 855	2685/18/0078	1983	2132
264 866	2686/1/348-349	1977	1123
260 864	2686/2/312-313	1980	1812
267 865	2686/3/64-66	1983	2132
265 865	2686/4/79-80	1983	2132
269 864	2686/5/81-82	1983	2132
269 863	2686/6/307-313	1981	1976
267 862	2686/7/314-315	1981	1976
269 863	2686/8/316-318	1981	1976
260 862	2686/9/322	1981	1976
265 866	2686/10/2155-2156	1982	2108
269 863	2686/29/308	1981	1976
269 863	2686/30/309	1981	1976
269 863	2686/31/310	1981	1976
269 863	2686/32/311	1981	1976
269 863	2686/33/312	1981	1976
269 863	2686/34/313	1981	1976
269 863	2686/35/315	1981	1976
269 863	2686/36/317	1981	1976
269 863	2686/27/318	1981	1976
267 865	2686/38/0065	1983	2132
267 865	2686/39/0066	1983	2132
267 865	2686/40/0080	1983	2132
269 864	2686/41/0082	1983	2132
278 830	2783/1/434-435	1977	1124
276 834	2783/2/19	1990	12015
273 855	2785/1/306	1981	1976
279 869	2786/1/343-344	1977	1123
271 867	2786/2/345-347	1977	1123
271 867	2786/3/359-362	1977	1124
275 869	2786/4/363-364	1977	1124
273 868	2786/6/51-52	1983	2132
271 863	2786/7/296-301	1981	1976
270 861	2786/8/302	1981	1976
272 862	2786/9/303-305	1981	1976
270 866	2786/10/319-320	1981	1976
270 866	2786/11/2153-2154	1982	2108
272 867	2786/12/1-3	1982	2111
276 863	2786/13/8-10	1982	2111
270 860	2786/26/31	1979	2935
271 867	2786/27/07	1990	12015
272 867	2786/28/09	1990	12015
271 867	2786/29/10	1990	12015
270 866	2786/30/2154	1982	2108
271 863	2786/31/297	1981	1976
271 863	2786/32/298	1981	1976
271 863	2786/33/299	1981	1976
271 863	2786/34/300	1981	1976
271 863	2786/35/301	1981	1976
272 862	2786/36/304	1981	1976
272 862	2786/37/305	1981	1976
270 866	2786/38/320	1981	1976
273 868	2786/39/0052	1983	2132
272 867	2786/40/0002	1982	2111
272 867	2786/41/0003	1982	2111
276 863	2786/42/0009	1982	2111
276 863	2786/43/0010	1982	2111

NGR (TF)	NMR Index no. (TF prefix)	date	SF No.
269 863	2686/27/08	1990	12015
265 866	2686/28/2156	1982	2108
288 883	2883/1/152-158	1980	1861
285 837	2883/2/1159-1161	1983	2131
285 838	2883/3/1162	1983	2131
285 837	2883/4/1163	1983	2131
285 838	2883/5/5-6	1983	2132
285 837	2883/6/7-8	1983	2132
285 836	2883/7/9-12	1983	2132
281 835	2883/8/2165	1982	2108
284 838	2883/10/60	1989	4294
284 838	2883/11/61	1989	4294
289 834	2883/12/23	1979	2935
283 838	2883/13/24	1979	2935
282 833	2883/14/25	1979	2935
285 839	2883/15/11	1989	4465
285 839	2883/16/12	1989	4465
285 839	2883/17/13	1989	4465
284 836	2883/18/18	1990	12015
285 835	2883/19/15	1986	3148
285 835	2883/20/17	1986	3148
286 836	2883/21/18	1986	3148
285 837	2883/22/20	1986	3148
284 836	2883/23/21	1986	3148
286 835	2883/24/23	1986	3148
284 836	2883/25/24	1986	3148
284 836	2883/26/25	1986	3148
283 837	2883/27/27	1986	3148
283 838	2883/28/29	1986	3148
283 839	2883/29/30	1986	3148
284 837	2883/30/32	1986	3148
281 832	2883/31/18	1979	2941
281 832	2883/32/19	1979	2941
285 838	2883/33/0006	1983	2132
285 837	2883/34/0008	1983	2132
285 836	2883/35/0010	1983	2132
285 836	2883/36/0011	1983	2132
285 836	2883/37/0012	1983	2132
285 837	2883/38/1160	1983	2132
285 837	2883/39/1161	1983	2132
285 840	2884/1/33	1986	3148
281 868	2886/1/335-337	1977	1123
280 868	2886/2/381	1977	1124
281 866	2886/3/382-385	1977	1124
286 867	2886/4/127-130	1980	1765
282 867	2886/5/184-185	1980	1861
284 865	2886/6/186-192	1980	1861
280 869	2886/7/23	1982	2038
282864	2886/8/32	1979	2935
282 867	2886/9/185	1980	1861
284 865	2886/10/187	1980	1861
284 865	2886/11/188	1980	1861
284 865	2886/12/189	1980	1861
284 865	2886/13/190	1980	1861
284 865	2886/14/191	1980	1861
284 865	2886/15/192	1980	1861
298 855	2985/1/203-206	1976	953
294 861	2986/1/325	1977	1123

NGR (TF)	NMR Index no. (TF prefix)	date	SF No.
292 860	2986/2/326-329	1977	1123
293 860	2986/3/333-335	1978	1249
290 862	2986/4/19	1979	2976
290 862	2986/5/20	1979	2976
290 862	2986/6/21	1979	2976
290 862	2986/7/22	1979	2976
290 862	2986/8/23	1979	2976
290 862	2986/9/24	1979	2976
301 831	3083/1/308-310	1980	1812
301 831	3083/2/311	1980	1812
305 846	3084/1/82-85	1980	1861
308 846	3084/3/087	1980	1861
308 846	3084/4/088	1980	1861
305 846	3084/5/083	1980	1861
305 846	3084/6/084	1980	1861
305 846	3084/7/085	1980	1861
307 847	3084/8/26	1982	2038
301 858	3085/1/200-202	1976	953
301 856	3085/2/321-324	1977	1123
305 855	3085/3/66-76	1980	1861
304 852	3085/4/97-100	1980	1861
309 852	3085/5/29	1988	5131
309 852	3085/6/30	1988	5131
309 852	3085/7/31	1988	5131
309 852	3085/8/32	1988	5131
309 852	3085/9/33	1988	5131
301 851	3085/11/078	1980	1861
301 851	3085/12/079	1980	1861
301 851	3085/13/080	1980	1861
301 851	3085/14/081	1980	1861
304 852	3085/15/098	1980	1861
304 852	3085/16/099	1980	1861
304 852	3085/17/100	1980	1861
304 853	3085/18/24	1982	2038
305 850	3085/19/25	1982	2038
308 856	3085/20/068	1980	1861
307 856	3085/21/069	1980	1861
307 856	3085/22/070	1980	1861
305 856	3085/23/071	1980	1861
305 855	3085/24/072	1980	1861
304 855	3085/25/073	1980	1861
303 854	3085/26/074	1980	1861
302 854	3085/27/075	1980	1861
300 855	3085/28/076	1980	1861
313 840	3184/1/	1951	
313 840	3184/2/	1951	
310 846	3184/3/89-96	1980	1861
310 848	3184/4/1156-1158	1983	2131
310 840	3184/5/50-52	1982	2037
311 846	3184/6/2-3	1982	2038
304 854	3184/7/24-33	1982	2038
311 842	3184/8/34	1988	5131
311 842	3184/9/35	1988	5131
311 842	3184/10/36	1988	5131
311 848	3184/11/28	1979	2935
313 840	3184/12/14	1990	12015
313 840	3184/13/15	1990	12015
310 848	3184/14/1157	1983	2131

NGR (TF)	NMR Index no. (TF prefix)	date	SF No.
310 848	3184/15/1158	1983	2131
310 846	3184/16/090	1980	1861
310 846	3184/17/091	1980	1861
310 846	3184/18/092	1980	1861
310 846	3184/19/093	1980	1861
310 846	3184/20/094	1980	1861
310 846	3184/21/095	1980	1861
310 846	3184/22/096	1980	1861
311 846	3184/23/03	1982	2038
312 841	3184/24/28	1982	2038
310 840	3184/25/51	1982	2037
310 840	3184/26/52	1982	2037
317 855	3185/1/14	1976	2923
315 859	3185/2/112-115	1980	1861
318 851	3185/3/16	1979	2976
318 851	3185/4/17	1979	2976
318 851	3185/5/18	1979	2976
315 857	3185/7/110	1980	1861
315 857	3185/8/111	1980	1861
311 855	3185/10/102	1980	1861
311 855	3185/11/103	1980	1861
311 855	3185/12/104	1980	1861
311 855	3185/13/105	1980	1861
311 855	3185/14/106	1980	1861
311 855	3185/15/107	1980	1861
311 855	3185/16/108	1980	1861
315 859	3185/17/113	1980	1861
315 859	3185/18/114	1980	1861
315 859	3185/19/115	1980	1861
310 856	3185/20/066	1980	1861
311 855	3186/1/101-108	1980	1861
323 865	3286/1/1	1982	2038
336 867	3386/1/26	1992	12273
335 867	3386/2/27	1992	12273

**Cambridge University Committee for Aerial Photography (CUCAP)  
Air Photograph Library**

(Information taken from a summary list supplied by CUCAP to LAS)

NGR (TF)	Description
261 823	Stenigot, cropmarks
262 830	Withcall, soilmarks: UA 17 and UA 18
264 864	Welton-le-Wold, cropmarks
266 850	Withcall, cropmarks
283 837	Withcall, deserted medieval village
288 837	Withcall, cropmarks
293 830	Raithby-cum-Maltby, soilmarks
302 852	Hallington, deserted medieval village
307 856	Hallington, deserted medieval village
310 849	Raithby-cum-Maltby, earthworks
313 840	Raithby-cum-Maltby, deserted medieval village

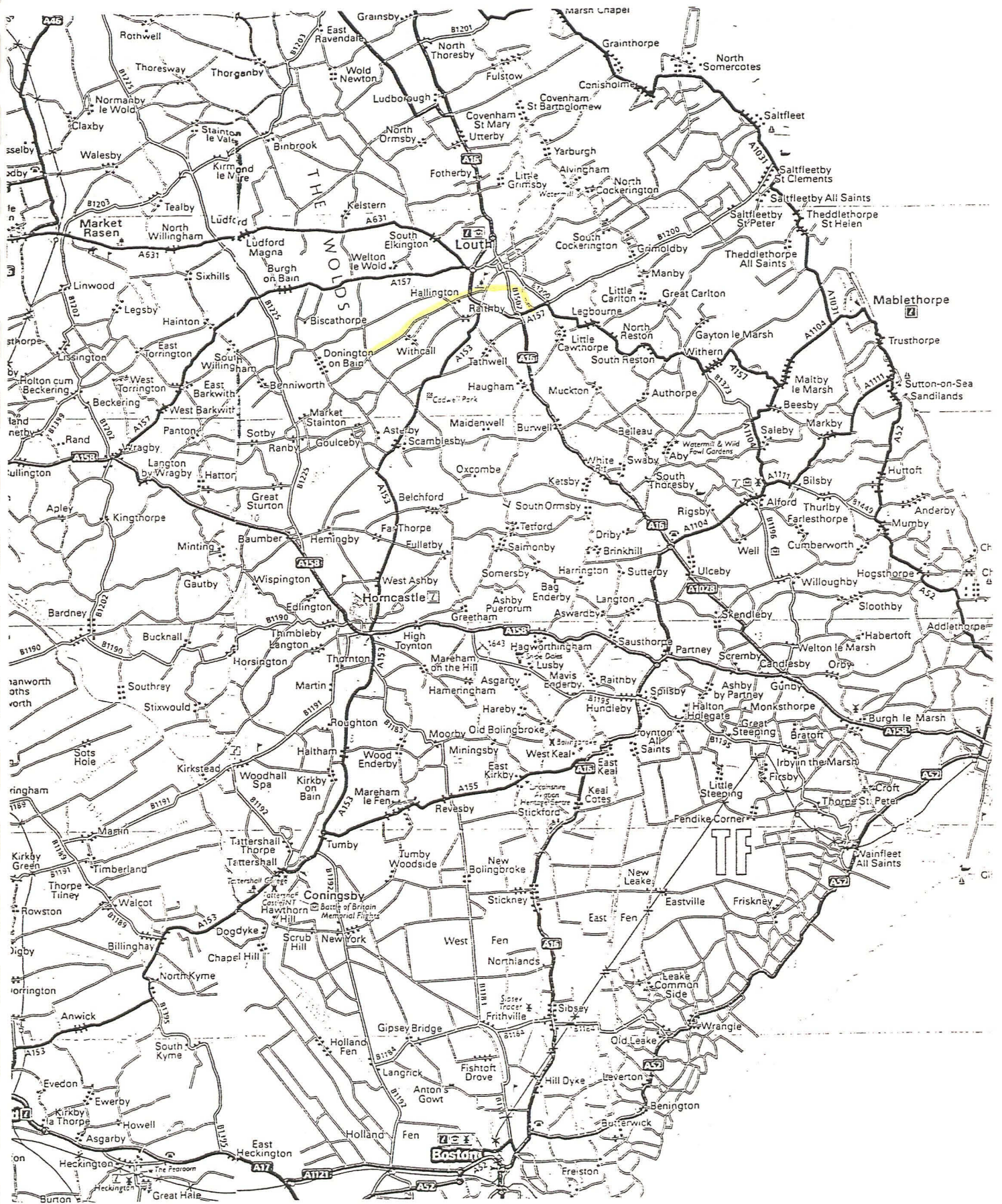


Fig. 1 Location of the pipeline route



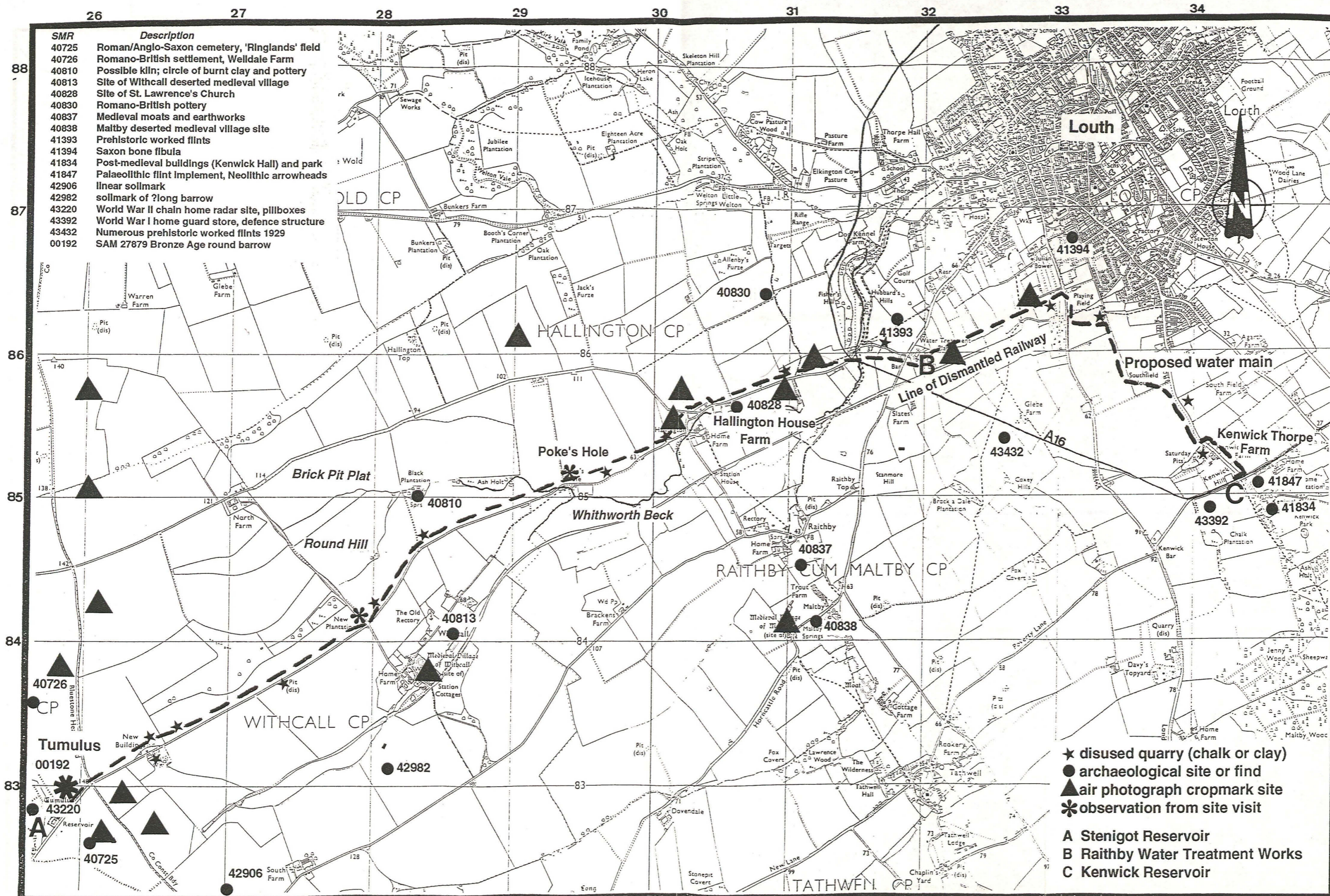


Fig. 2 The proposed water pipeline route, showing archaeological sites and findspots close to the route [see Appendix 1]. (Based on the 1:25,000 plan supplied by J.H.Walter; Plan P1; Ordnance Survey map, Sheets TF 28 and TF 38. Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

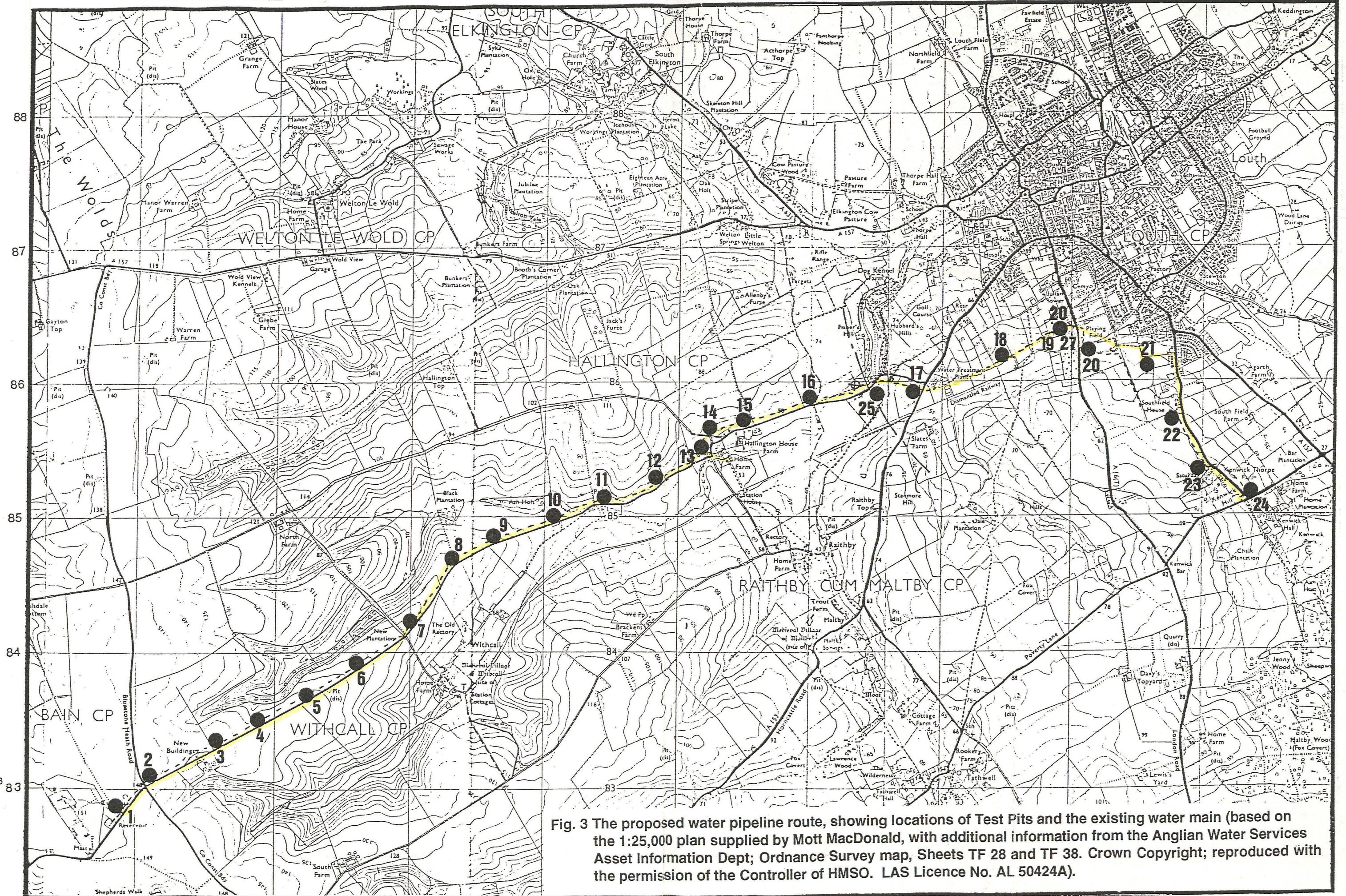


Fig. 3 The proposed water pipeline route, showing locations of Test Pits and the existing water main (based on the 1:25,000 plan supplied by Mott MacDonald, with additional information from the Anglian Water Services Asset Information Dept; Ordnance Survey map, Sheets TF 28 and TF 38. Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

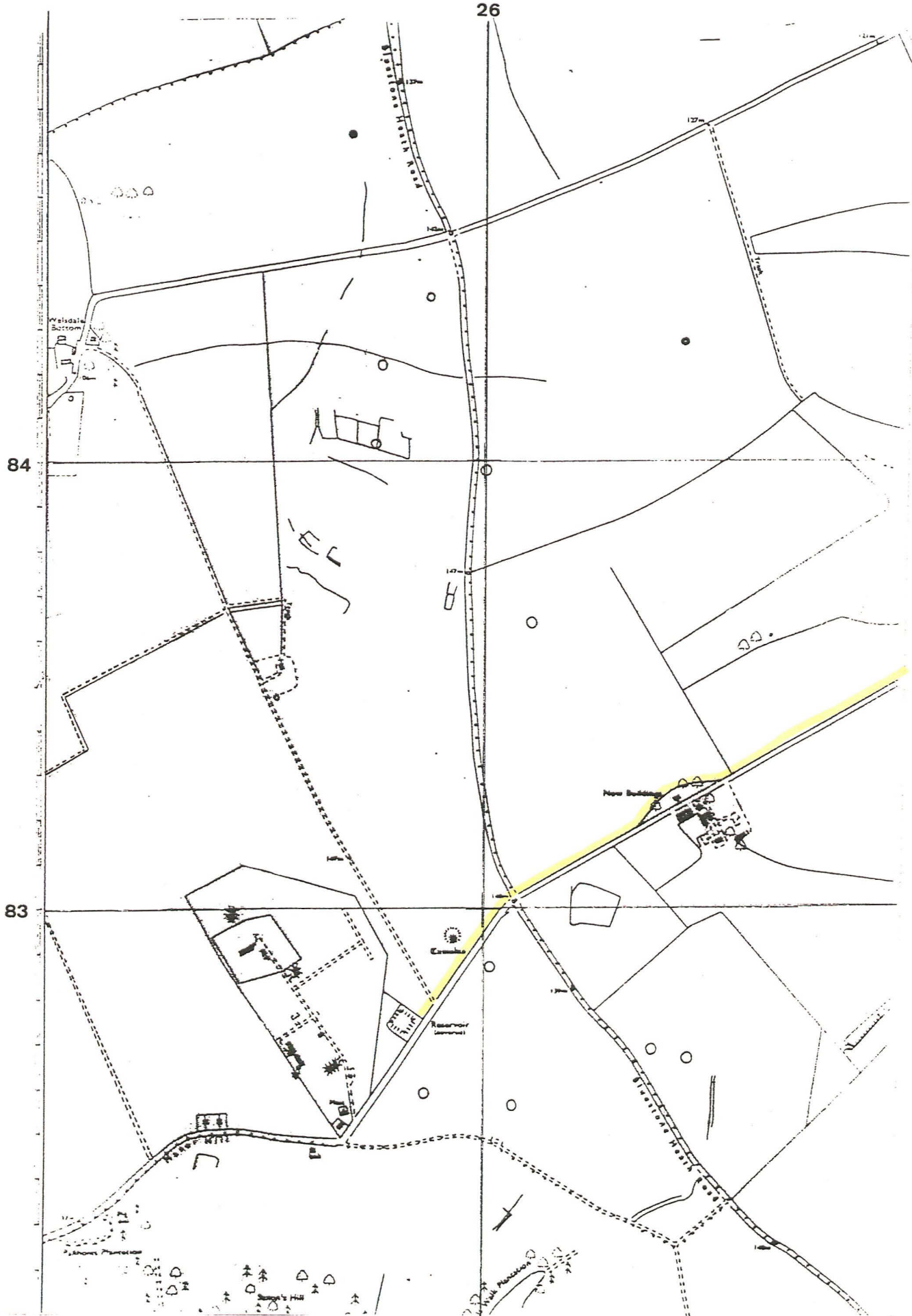


Fig. 4 Sketch plot of cropmark features close to Bluestone Heath Road (reproduced from the RCHM(E) Lincolnshire Mapping Project with permission. Overlain onto the Ordnance Survey 1:10,000 map Sheet TF 28 SE. Crown Copyright; reproduced at reduced scale with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).

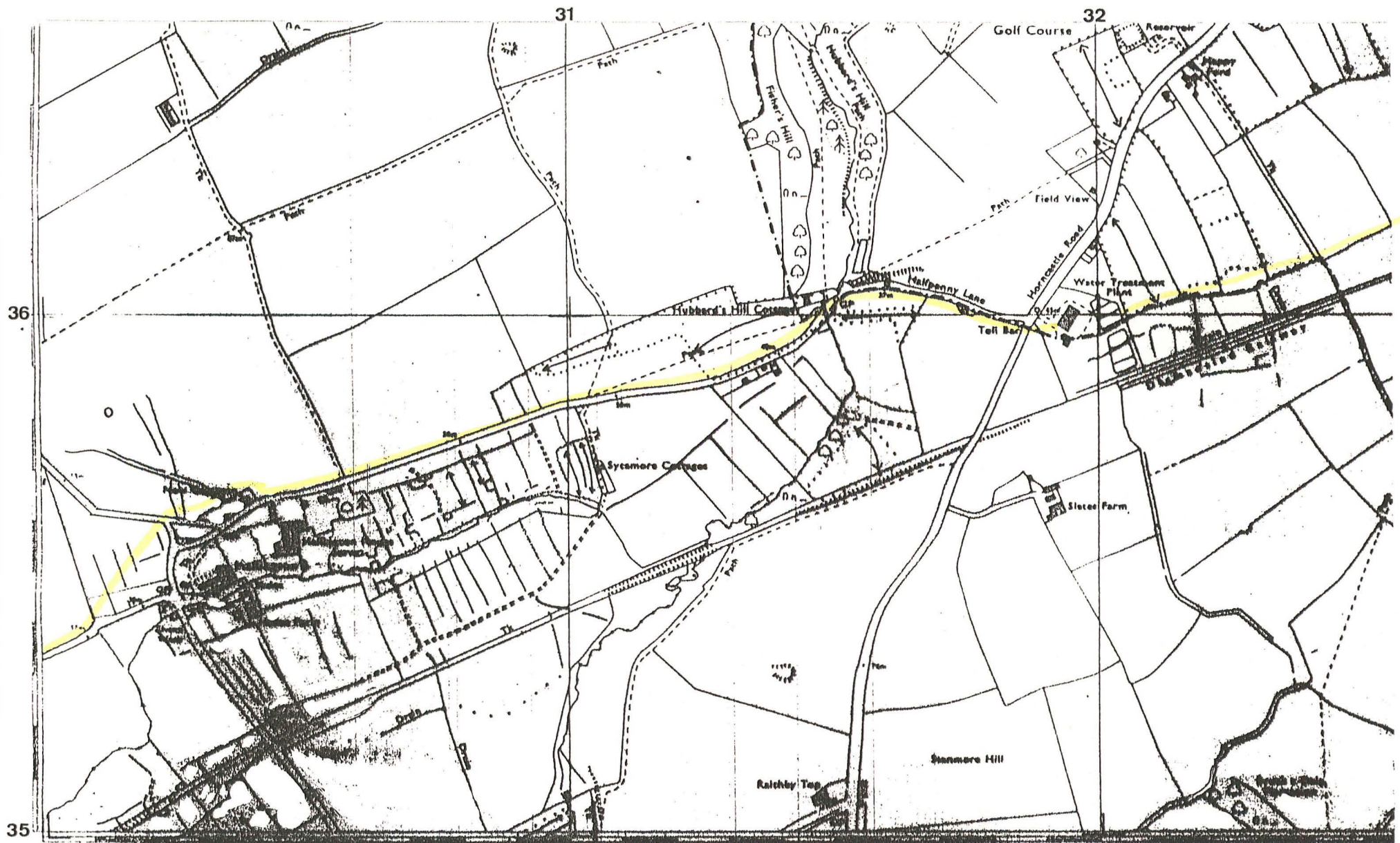


Fig. 5 Sketch plot of cropmark features at Hallington (reproduced from the RCHM(E) Lincolnshire Mapping Project with permission. Overlain onto the Ordnance Survey 1:10,000 map Sheet TF 29 NW. Crown Copyright; reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 50424A).



**Pl. 1** Remains of the Bronze Age round barrow at Donington-on-Bain (centre). The Stenigot covered reservoir and the Home Chain Radar Station are visible (right background). Looking west from Bluestone Heath Road.

**Pl. 2** Deep-cut track to North Farm, Withcall (looking north).





**Pl. 3** Slight earthwork remains of medieval ridge and furrow cultivation; Test Pit 16 is visible. Looking NE towards Louth Bypass and Hubbard's Hills.

**Pl. 4** Pond to north of road at Poke's Hole, Hallington. This has been mapped as a sheepwash but may have originated as a mill pond. Looking NW.





PI. 5 Undulations in field NW of Hallington village (looking SW).

PI. 6 Former chalk quarry to east of New Buildings, Withcall (looking north).





**Pl. 7** Former quarry south of Black Plantation, Withcall (looking east along roadside hedge).

**Pl. 8** Toll house for the Louth - Horncastle Turnpike, at the junction of Halfpenny Lane (to right) and Horncastle Road. Looking south.

