

35024 - Preh
35025 - Underd
35026, 27 - Med

97/3

ARCHAEOLOGICAL WATCHING BRIEF REPORT

**BRACEBOROUGH AND WILSTHORPE
WATER MAIN REPLACEMENT**

Site code = BWP96
LCNCC Acc. No. = 33.97

Event L3658
Source LJ 5117
LJ 1481

35024 - Preh
35025 - Undated
35026, 27 - Mod

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Report prepared for Anglian Water Services Ltd. by Miles Ridsdale

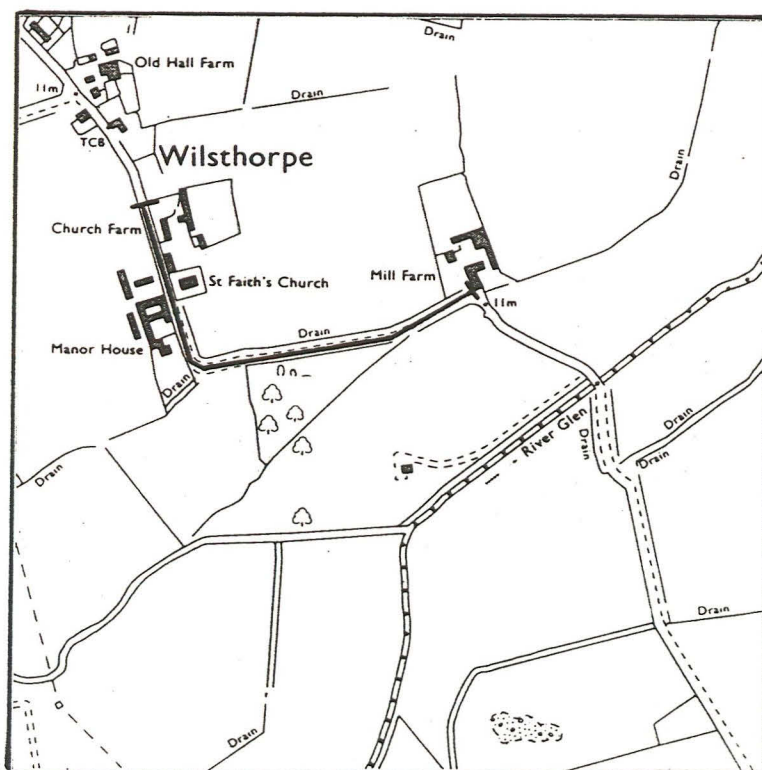
Pre-Construct Archaeology (Lincoln)
February 1997

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Summary

- * *An archaeological watching brief was carried on behalf of Anglian Water Services Ltd during water mains replacement between the villages of Braceborough and Wilsthorpe in South Lincolnshire*
- * *The pipeline route traversed areas of known prehistoric settlement remains (recorded as cropmarks during high summer): some of these features were exposed during the course of the development, as well as others which had not been seen as cropmarks.*
- * *One feature, which contained rich organic remains, but was devoid of finds, was sampled for environmental assessment and radiocarbon dating. The results of the radiocarbon determination indicate a medieval rather than a prehistoric date.*



TF 09/13

Fig. 1 1:10,000 site location
(OS copyright reference AL 51521 A0001)

1.0 Introduction

A moderately intensive archaeological watching brief took place between September 16 and October 11, 1996, during water mains replacement between Braceborough and Wilsthorpe, South Lincolnshire. The works were commissioned by Anglian Water Services Ltd, acting on a recommendation by the Assistant Archaeological Officer for Lincolnshire.

Part of the route selected for development is archaeologically sensitive: aerial photographs have revealed extensive prehistoric settlement enclosures and other features close to Church Farm and Mill Farm, in Wilsthorpe (Fig. 2).

A range of largely undated archaeological features were exposed during the course of the watching brief, some of which appear to correlate with known cropmarks.

2.0 Project Background

Anglian Water Services Ltd have been undertaking widespread water main replacement schemes throughout the region; working under the terms vested in the Water Act of 1989. In consideration of the impacts to archaeological resources which can and do take place as a result of such developments, the company routinely funds archaeological work, as defined by their own conservation policy.

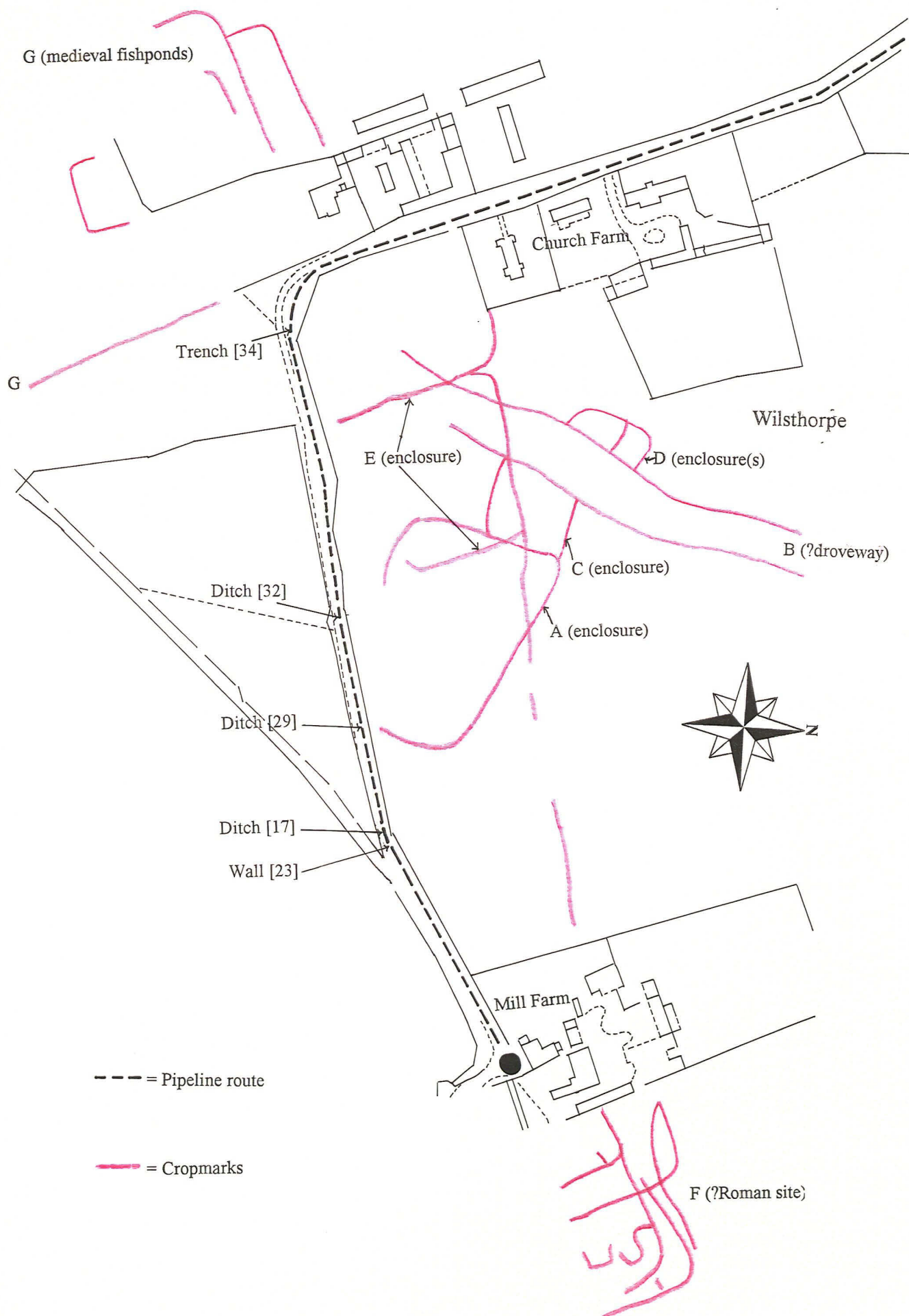
Entries within the County Sites and Monuments Record for Lincolnshire (SMR) indicate that the route chosen for the new main would cut through aspects of an irregular cropmark complex which concentrates in Wilsthorpe between Church Farm and Mill Farm (NGR TF 0920/1372 - TF 0960/1370). Some of the cropmarks appear to be enclosures attached to linear boundaries (possibly field ditches). Others appear to respect the lines of existing property boundaries (field hedges/ditches).

None of the above have been sampled by excavation and their suggested prehistoric date is based largely on comparisons with similar field monuments recorded in Lincolnshire and elsewhere.

The cutting of pipeline construction trenches raised a potential opportunity to assess the depth and character of some of the remains, as well as their date. The clients agreed, therefore, to fund a programme of monitoring and recording; to preserve, by record, any remains disturbed or exposed during groundworks.

A copy of this report will be deposited at the County SMR, and a short text will be submitted to the editor of the county archaeological journal, *Lincolnshire History and Archaeology*, effectively placing the information in the public domain. Reports will be deposited at the City and County Museum, Lincoln, accompanied with the project archive within six months of project completion.

Fig. 2 1:2500 map section, incorporating pipeline location, cropmark sites and the locations of features exposed during the course of the watching brief



3.0 Geology and topography

The geology of the immediate area comprises extensive fen gravels, known as the 1st Terrace Gravels. These deposits, which accumulated during the last (Devensian) glacial period (approximately 10,000 years ago) consist of pebbly sands and gravels containing limestone fragments and flint. The modern ground surface lies at an altitude approximately 11m OD.

The route chosen for the water main extended between both settlements and lay within roadside verges or within the road area itself.

4.0 Aims

The principle aim of the watching brief was to ensure that any artefactual or ecofactual remains exposed or retrieved during trenching would be recorded and interpreted to the standards expected by the Assistant Archaeological Officer for Lincolnshire and in accordance with the Institute of Field Archaeologists Document 'Standard Guidance for Archaeological Watching Briefs (1994).

A detailed written archaeological project brief was not prepared on this occasion, though the parameters of the fieldwork were explored during consultations between PCA, the Assistant Archaeological Officer for Lincolnshire and Anglian Water Services Ltd. The work required was to consist of a full-time/comprehensive recording brief (to be scaled-down, if necessary, in accordance with circumstances dictated by the pipeline scheme - see below).

5.0 Methodology

The fieldwork took place over a period of twenty-five days. During this time, site visits were divided disproportionately between the present project and another project extending from Tallington to West Deeping. Working in this way, it was possible to provide adequate coverage to both areas.

During each site visit, archaeological and non-archaeological strata were cleaned and then recorded using pro-forma Context Sheets and Watching Brief Record Sheets. Machine excavation was undertaken using a JCB excavator fitted with a trenching bucket. Trench depths remained relatively constant at c. 1.0m, as did the width at c. 0.4m.

The cropmark alignments, which are known from aerial photographs, were transferred to 1:2500 scale maps and provisional feature locations were marked in advance of excavation (working from fixed points such as road junctions, walls, and modern field boundaries).

Each archaeological feature exposed in section was manually cleaned by trowel. Colour photographs were taken and section drawings were made at scale 1:20. Representative soil profiles were drawn and general photographs were taken at

appropriate intervals along the route. The locations of all drawings were plotted on 1:2500 base map sections which were provided by the clients.

Recording and excavation was undertaken by M. Ridsdale and S Timms for Pre-Construct Archaeology (Lincoln).

A detailed paper and physical site archive has been prepared and will be deposited at Lincoln City and County Museum within six months following project completion. In summary, the archive contains the following:-

- context record sheets
- 1:20 section drawings
- 1:2500 location map sections, incorporating the locations of 1:20 section drawings and colour photographs
- x2 colour print films
- miscellaneous notes and correspondence.

6.0 Results

Five discrete archaeological features (or feature complexes) were identified during the watching brief, though only one correlated with the site of a known cropmark.

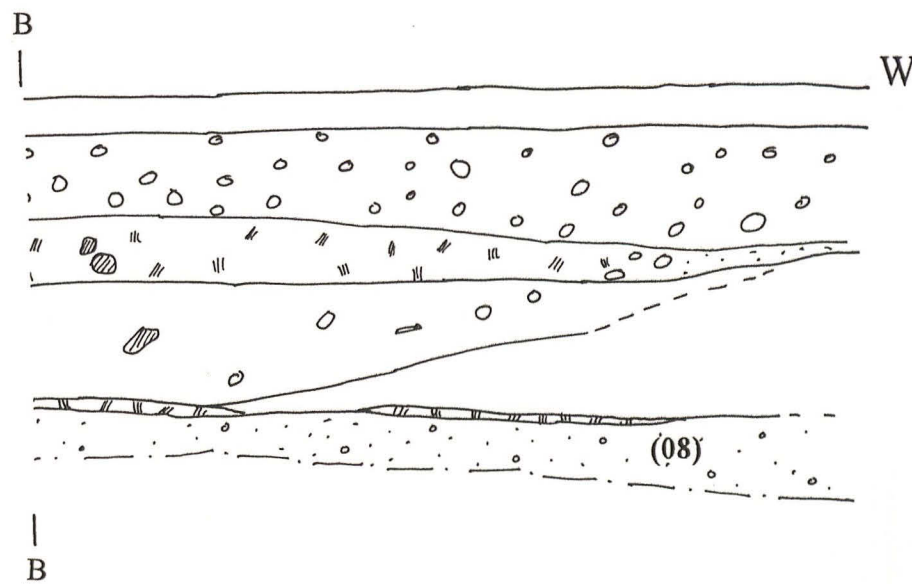
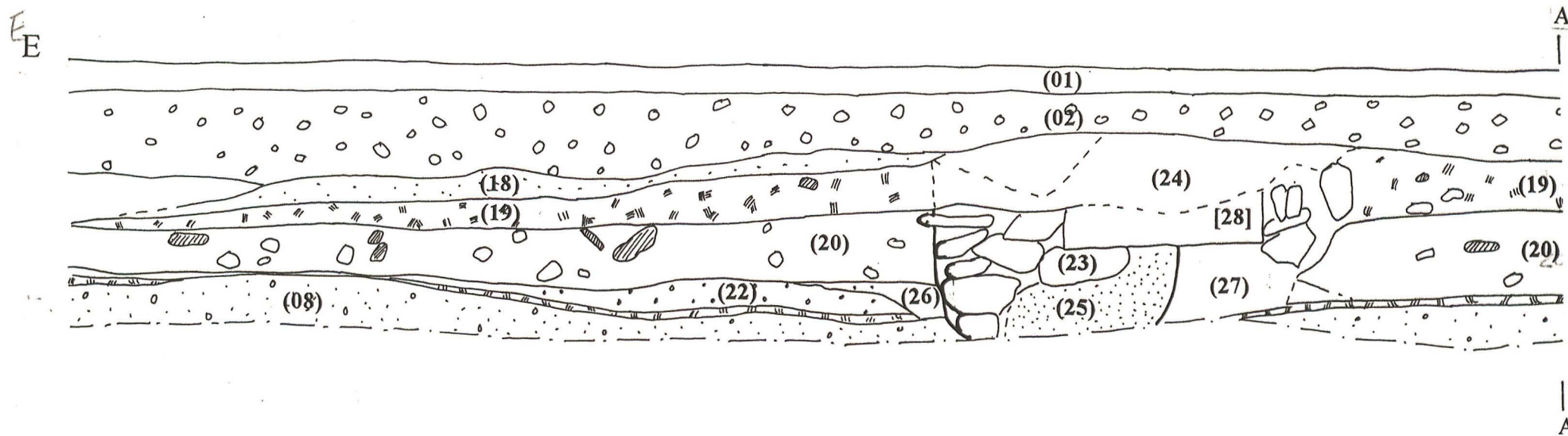
For ease of reference, the archaeological remains are described in the order that they were exposed (ie from Mill Farm, working westwards and then northwards towards Church Farm).

One discrete feature contained well-preserved organic remains. Datable finds were not recovered, though soil samples were submitted for radiocarbon determination as well as environmental assessment (below).

6.1 The archaeological features

Wall (23) and associated deposits

The truncated remains of a limestone wall were exposed approximately 117m west of Mill Farm. The wall/foundation, which was orientated north-south, consisted of rough-cut limestone blocks bonded with lime mortar, contained within a construction trench of approximately 80cm width. Scant traces of an intrusive trench, [28], suggested the sub-structure was robbed following demolition.

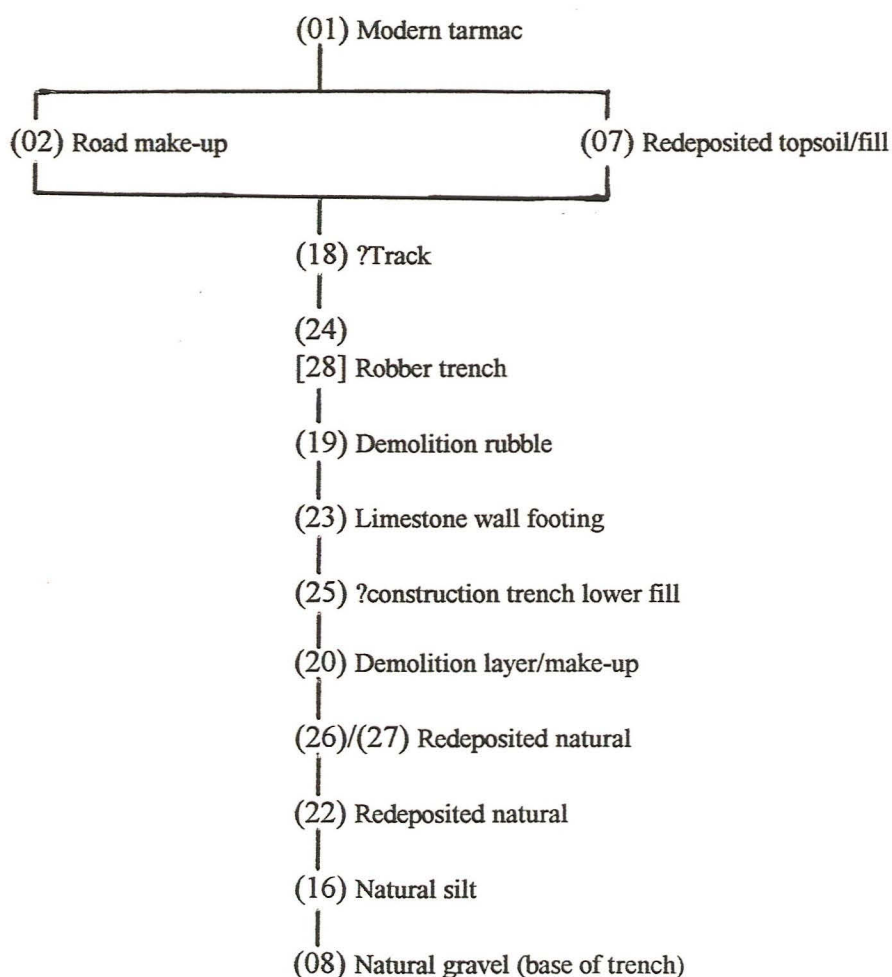


Wall (23) and associated deposits at scale 1:20

A date for the wall was not determined, though it is assumed the structure was relatively late as its construction trench was cut through a substantial deposits of demolition-type rubble/levelling, (20). Datable finds were not recovered from this context, though substantial quantities of brick rubble were.

The function of the wall was not established, though it may have been contemporary with a discreet spread of metalling, which was only exposed on its east side, (18). This comprised gravel bonded with silt and may have been the remains of a north-south track.

The stratigraphic sequence surrounding the wall may be summarised as follows:-



Ditch [17]

A substantial ?ditch, orientated south-west to north-east, was exposed in the trench sides and base approximately 125m west of Mill Farm (ie approximately 7m west of wall (23)). The complete profile of this feature was not exposed as it was restricted by the depth of the pipe trench. Its width was approximately 2.8m and it was examined to a depth of 0.4m. Its upper sides were quite steep.

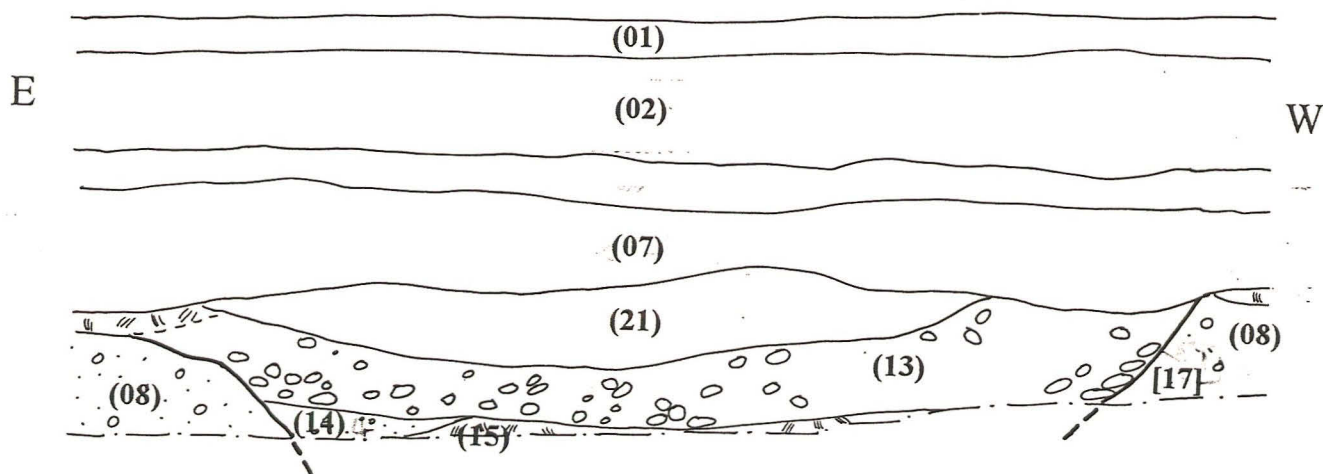
Four individual ditch fills were identified: one of these, (13), consisted of organic silty clay, mixed with twig fragments.

The ditch (assuming this to be the correct interpretation) had not been identified as a cropmark; suggesting, initially, that the extent of ?prehistoric settlement remains was greater than suspected.

No dating evidence was recovered from the ditch, despite additional digging for finds retrieval. However, a small sample of the organic fill was submitted for both radiocarbon dating and a basic environmental assessment. The details of the environmental assessments can be read in Appendix 2 and is summarised below:-

The ditch sediment was one indicative of slowly-flowing water: it contained fresh water mollusc shells, and also the spine of a stickleback. The presence of alder, blackberry and sloe seeds suggests shrub and tree growth along the edge of the ditch, possibly a hedgerow. An absence of charcoal and other cultural detritus suggests a natural rather than archaeological context for the sediments.

The radiocarbon sample was submitted by DJ Rackham and determined by Beta Analytic Inc. of Miami, Florida. The uncalibrated determination was $560 \pm 60\text{BP}$ which, when calibrated (at 2 sigma), provides a date range 1295 - 1450, with a probable date of AD 1410 (95% probability). The Lab. reference number is Beta-101167.



Exposed section through Ditch [17] at scale 1:20

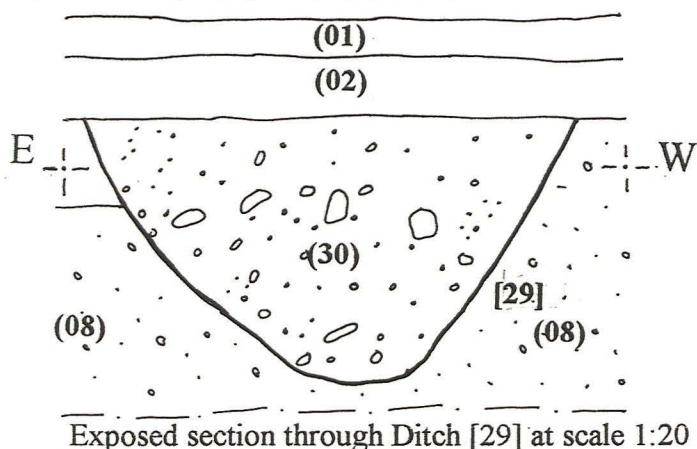
Ditch [29]

A second ditch was exposed approximately 50m west of the above. A complete (oblique) profile was obtained on this occasion, as the depth of the ditch was only

70cm. Its width was approximately 1.3m, its sides moderately steep; steeper on the west side. It was filled with firm grey silty clay mixed with limestone fragments and occasional pebbles and flint.

The ditch was exposed on the site of a known cropmark: the south-east boundary of a large enclosure (Enclosure A).

No finds were recovered from the fill of the ditch.

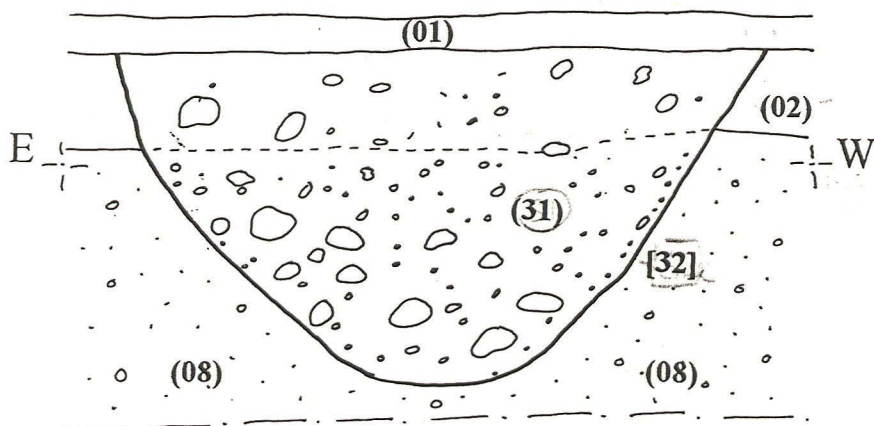


Ditch [32]

A third ditch was exposed approximately 60m west of the above. A complete profile was exposed, as the ditch was only 0.90m deep. Its width was approximately 1.63m, its sides moderately steep. It was filled with firm mid-grey sandy silt mixed with limestone fragments and occasional pebbles and flint.

The ditch was not seen on the aerial photographs which again could imply that the ditch complex is more extensive than existing records suggest.

No finds were recovered from the fill of the ditch.

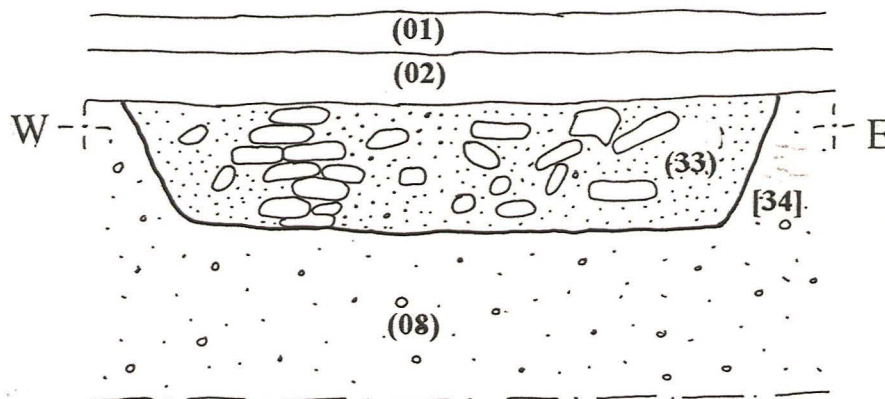


Exposed section through Ditch [32] at scale 1:20

Trench [34]

Approximately 130m west of ditch [32], a shallow, regular, north-south trench was exposed. Its depth was only 0.38m, its width approximately 1.70m. Its sides were almost vertical and it was filled with loose mid-grey sand mixed with limestone fragments.

No finds were recovered from the trench.



Exposed section through Ditch [34] at scale 1:20

7.0 Summary and conclusions

The watching brief resulted in the exposure of five discrete archaeological features and associated deposits. Only one of these, ditch [29], corresponded with the site of a known cropmark, though it is suggested that some of the other ditch-like features exposed could in fact relate to the enclosure complexes which have been recorded from the air.

No direct dating evidence was recovered from any of the features, though it is assumed, by association, that ditch [29] is of prehistoric date and relates to the enclosure complex described below.

One feature, ditch [17], did not feature as a cropmark, though was of sufficient size to have done so under favourable conditions. Its fill contained organic remains and sediments indicative of slow-moving water. Samples from the ditch were taken for environmental assessment and radiocarbon dating: the latter suggests, contrary to the superficial view, that the ditch is medieval; possibly a field boundary.

The existing aerial photographs of land between Mill Farm and Church Farm, Wilsthorpe, suggest extensive prehistoric and possibly Romano-British settlement. The cropmarks, as presented on Fig. 2, appear to indicate more than one phase of activity. Enclosures A, C and D may have been contemporary, as they appear to respect each other and/or feature B, which may be a droveway or linear boundary system.

Enclosure D, which butts the west side of B, appears to be of two phases, suggesting expansion or contraction. Enclosure C joins with the east side of B and appears to respect (or is respected by) the west edge of enclosure A. However, enclosure E, and the associated linear boundary extending eastwards from its north-east corner, is clearly of a different phase to A, B, C or D and it may be that these features relate to the Romano-British site (possibly a villa) which lies to the east of Mill Farm.

8.0 Acknowledgements

On behalf of Pre-Construct Archaeology (Lincoln), sincere thanks are expressed to Anglian Water Services Ltd, who commissioned the watching brief: in particular, Mr M Vickers, the site engineer. Thanks are also extended to the site contractors, MP Burke plc, and to James Rackham for undertaking the environmental assessment and for submitting radiocarbon samples to Beta Analytic Inc., Miami, Florida.

9.0 Appendices

Appendix 9.1 Context classification list

- (01) Modern tarmac road surface
- (02) Modern road make-up
- (03) Layer of silty clay containing fragments of wood (high water content); fill of possible ditch
- (04) Possible ditch fill; organic silty clay, occasional pebbles
- (05) Redeposited natural; orange-brown sticky clay
- (06) Layer of medium-brown silty clay mixed with occasional pebbles and charcoal flecks
- (07) Thick topsoil-like deposit; possible bank upcast?
- (08) Bright orange natural gravel
- (09) Fill of pit/gully [10]; compact and dry silty clay; occasional tile/drain fragments
- [10] Pit/gully with steep sides and flat base
- (11) Fill of possible gully/pit
- [12] Possible gully/pit
- (13) Organic fill of ditch [17]
- (14) Fill of ditch [17]
- (15) Fill of ditch [17]
- (16) Fill of ditch [17]
- [17] Ditch
- (18) Possible track/surface above (23)
- (19) Demolition layer related to structure (23)
- (20) Demolition layer related to structure (23)
- (21) Fill of ditch [17]

- (22) Layer of redeposited natural gravel
- (23) North-south wall
- (24) Fill of robber trench [28]
- (25) Deposit ?associated with intrusive activity relating to wall (23)
- (26) Redeposited natural gravel
- (27) Deposit same as (26)
- [28] Robber trench cut
- [29] North-south ditch cut
- (30) Fill of ditch [29]
- (31) fill of ditch [32]
- [32] North-south ditch cut
- (33) Fill of robber trench [34]
- [34] Robber trench

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Environmental Assessment

One sample recovered from the primary fill of an undated ditch (13) was submitted for analysis. One litre of sample was washed on a 0.25mm mesh sieve and the organic fraction of the sample floated off (by washover). The latter was found to include a number of small pieces of twigs and these and the coarser part of the organic fraction were dispatched for radiocarbon analysis in order to date the ditch fill. The mineral residue of the sample was dried and sorted for archaeological and environmental material and the organic fraction was scanned under the microscope and a note made of the presence and abundance of different categories of environmental evidence.

The primary fill of the ditch was composed of a dark greyish brown (2.5Y 4/2) fine sandy silt with some small gravel. There were calcareous root pseudomorphs and mollusc shells are abundant. Some stone and fossils shells are present.

The sediments and their contained biological material indicate that the ditch was carrying water and that it may have been hedged. Freshwater bivalve molluscs, *Pisidium* sp., were abundant and present in all sizes indicating a breeding population, ostracods (shelled aquatic crustacea) were abundant, and freshwater gastropods included *Bythnia*, *Lymnaea*, *Succinea*, *Planorbis contortus*, *Planorbis carinatus* and *Valvata piscinalis*. A spine of stickleback was also present. These clearly indicate a ditch, probably permanently carrying water, with the fine sand and silt texture of the sediment suggesting that this was flowing, albeit slowly. There are terrestrial elements in the mollusc fauna, but these are significantly less abundant than the aquatic species. The presence of seeds of elder, blackberry and sloe suggest, in the absence of any archaeological finds, shrub and tree growth along the ditch, possibly a hedgerow, although these species are typical of occupation situations where food waste or excreta are thrown out. The absence of any archaeological debris or charcoal or carbonised material in the sample suggests a natural rather than archaeological context for the sediment indicating a probability that these species derive from local vegetation not collected material. For this assessment no further plant and insect macrofossil material has been studied and no quantification was made of the identified elements of the assemblage.

Appendix 3

Information derived from the County Sites and Monuments Record (SMR)

SGR	PRN	Description
TF0920013800	33585	medieval pottery (12th century), found at "The Forge", 1976
TF0970013700	33584	undated cropmarks; enclosures to east of Wilsthorpe Mill (from aerial photographs)
TF09201380	33579	Site of Wilsthorpe Mill (post-medieval)

SGR = site grid reference

PRN = personal reference number (ie SMR reference)