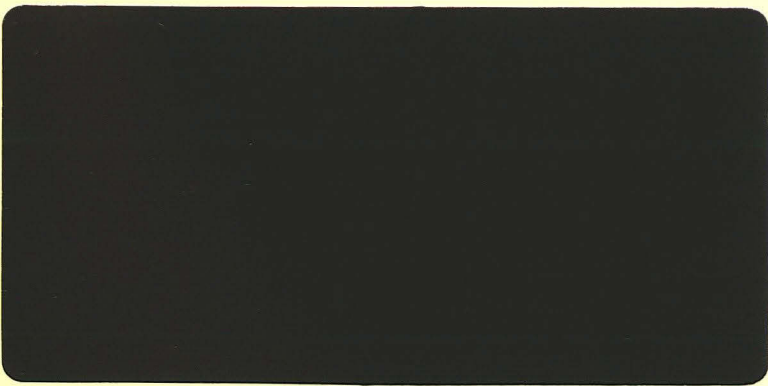


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**ARCHAEOLOGICAL EVALUATION OF
LAND OFF WILLINGTON ROAD,
KIRTON,
LINCOLNSHIRE
(KWR00)**



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**ARCHAEOLOGICAL EVALUATION OF
LAND OFF WILLINGTON ROAD,
KIRTON,
LINCOLNSHIRE
(KWR00)**

**Work undertaken for Clive Wicks Associates
On behalf of Langwith Building Associates**

February 2000

Report compiled by Joanna Hambly

**National Grid Reference: TF 3035 3845
Planning Application Nos: B99/506 and 507/Full
City and County Museum accession no: 2000.53**

APS Report No: 31/00



**Archaeological Project Services is an
IFA Registered Archaeological Organisation (No. 21)**

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1. SUMMARY

An archaeological evaluation was undertaken on land at Willington Road, Kirton near Boston. This was in response to two planning applications for the construction of residential housing on the site. Several archaeological sites and findspots are located in the vicinity of the proposed development. Prehistoric activity in the parish is represented by a find of a polished stone axe and burial mound. Romano-British occupation has been identified within 1km northwest of the site.

Evidence of Late Saxon settlement has been found 200m northeast of the proposed development. Remains of medieval date are more evident. Kirton is recorded in the Domesday Survey of 1086 as an important medieval town. Just east of the site is the 12th century parish church. Three large halls or manor houses were all located outside the town. Close to the area of evaluation is the early 16th century Old King's Head Inn. Tokens of similar date have been found in the centre of the town.

It was anticipated that, by virtue of these sites and findspots, the area could fall within a zone of Late Saxon and medieval settlement. The development could affect related deposits and, in consequence, nine trenches were excavated to test for the presence and survival of archaeological remains.

The earliest deposits encountered were natural silts that indicated that the site once lay within an intertidal zone, probably during and prior to the Roman period.

An undated but possibly Saxon or medieval pit filled with charred wheat

and barley was identified. This may have been the result of an accidental fire that destroyed a store of grain, probably gathered in preparation for further processing.

A large livestock pond and a field boundary, possibly marked by a fence, represent the post-medieval and modern periods. A quantity of iron smithing slag found in the fill of the pond suggests metal processing activity nearby. The range of artefacts recovered from both features indicates they may have been in use from the 17th century to the late 19th century. This is supported by cartographic evidence, which shows the existence of former field boundaries, a smithy and a probable farm complex in and in the vicinity of the area evaluated. The presence of these features corresponds well with the archaeological remains uncovered.

2. INTRODUCTION

2.1 Planning Background

Archaeological Project Services was commissioned by Clive Wicks Associates on behalf of Langwith Building Associates, to carry out an archaeological evaluation of land off Willington Road, Kirton, Boston District, Lincolnshire. This was to determine the archaeological implications of proposed development of the site which is subject to two full planning applications (B99/0506 and 0507/FULL) submitted to Boston Borough Council for residential development. The archaeological evaluation was carried out in accordance with a brief set by the Community Archaeologist for Boston Borough Council (Appendix 1). This investigation followed a geophysical survey that revealed a number of

potential archaeological remains at the site.

Archaeological Field Evaluation is defined by the Institute of Field Archaeologists (IFA) as '*a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present, Field Evaluation defines their character and extent and relative quality, and it enables an assessment of their worth in a local, regional, national and international context as appropriate*' (IFA 1997).

2.2 Topography and Geology

Kirton is situated 6km southwest of Boston and approximately 16km north of Spalding, in Boston District, Lincolnshire (Fig. 1).

The site and surrounding area lie on land sloping gently down to the west at c. 4m OD. Local soils are typical alluvial gleys of the Tanvats Association, developed on marine alluvium (Hodge *et al.* 1984, 319). Beneath this marine alluvium is glacial drift that was deposited in a geological basin between the Lincolnshire Wolds and the East Anglian Heights (Harden 1978, 5). These glacial deposits overlie a solid geology of Jurassic clays, probably the West Walton formation (B.G.S. 1995).

2.3 Archaeological Setting

A Neolithic stone axe and a possible tumulus provide the only evidence of a prehistoric presence in the parish. Similarly, evidence for Roman activity is scarce and is confined, in this area, to a spread of Romano-British artefacts

found approximately 1km northwest of the evaluation site.

More evidence is available for activities in the medieval period. Kirton is recorded in the Domesday Survey of 1086 AD and was an important medieval settlement, though it has since declined in favour of Boston. The area of investigation lies within 150m southwest of the 12th century parish church of SS Peter and Paul, which dominates the village centre. Approximately 200m northeast of the site, a sequence of deposits from the Late Saxon to the early medieval period, representing a farmyard with an area of open water nearby, was excavated during an evaluation on the High Street (APS 1996). Evidence of later medieval and post-medieval activity, in the form of pits, hearths and ditches has been recorded on this site as well as along Station Road and Willington Road (APS 1994b, 1994c, 1996). Located outside the village were three sizeable houses of medieval date, Bozon Hall, Orme Hall and Littlebury Hall, all now demolished.

French and German tokens of 15th and 16th century date have been found in the centre of the village and The Old Kings Head, formerly an inn, dating to the 16th century is located within 150m east of the evaluation site.

Intensive building activity in the 19th century has been recorded on the High Street (APS 1996).

Previous geophysical survey on the site identified several potential archaeological remains. These were interpreted as possible linear ditches or gullies and a large pit or spread (EAS 1999).

3. AIMS AND OBJECTIVES

The aim of the evaluation, as detailed in the brief (Appendix 1), was to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

The objectives were to establish the presence or absence of archaeological deposits and to determine, if present, their type, date and function, likely extent, spatial arrangement, local context, state of preservation, vulnerability and value.

4. METHODS

Trial trenching was used to enable *in situ* determination of the sequence, date, nature, depth, density and environmental potential of archaeological deposits. Nine trenches measuring 1.6m wide by 15m long (2% of the evaluation area), were located to provide sample coverage of the whole area and to investigate possible features identified by geophysical survey (Fig. 3).

A mechanical excavator with a toothless ditching bucket excavated each trench under archaeological supervision to the level of undisturbed archaeological features. These were then cleaned and examined by hand. If no archaeological features were encountered, the mechanical excavator stripped successive 10cm spits which were carefully monitored until it was clear that undisturbed natural deposits had been reached. One end of every trench was excavated to a depth of 1.20m, (the maximum workable depth stipulated by the Health and Safety Executive), to ensure no archaeological remains were present at depth and to

examine as fully as possible the natural depositional sequence.

All archaeological features and natural deposits were allocated a unique reference number, (a context number), with an individual written description on A.P.S. *pro forma* context sheets. All archaeological features were drawn in plan at a scale of 1:20 and in section at a scale of 1:10. A representative section of all archaeologically clear trenches was also drawn. Finds were recovered, where present, from all archaeological features and environmental samples were taken from all appropriate archaeological deposits. Throughout the duration of the work, a photographic record consisting of black and white prints and colour slides was compiled. The exact location of the trenches and archaeological features were surveyed using an electronic distance measurer.

On completion of the fieldwork, a stratigraphic sequence of all archaeological deposits present was compiled, all records were checked and cross-referenced and all photographs catalogued and archived. All finds recovered were washed, marked and archived and all environmental samples were sent to the specialist for analysis.

5. RESULTS

The records of all deposits and features identified during the evaluation were examined. Phasing was assigned based upon the nature of the contexts and recognisable relationships between them, supplemented by artefact dating where relevant. Three phases were identified:

- Phase 1 Natural deposits
- Phase 2 Undated/possible

- Phase 3 medieval deposits
- Modern deposits

Phase 1 Natural deposits

The earliest deposit encountered throughout the area of evaluation, occurring at the bottom of every trench, included contexts: [015], [018], [021], [031], [032], [035], [038], [041] and [043]. These were generally mid yellowish or reddish brown silts with varying quantities of very fine sand and clay. The deposits demonstrated varying degrees of lamination, illustrated in Fig. 5. Compact, extremely fine bands of sand and silt were observed in Trenches 2, 7 and the western half of Trench 6; less sandy and less well defined lamina were noted in Trenches 1, 8, 9 and the eastern half of Trench 6; ill defined layers of soft, sticky clays and silts were present in Trenches 3, 4 and 5. The maximum thickness of the deposit measured 0.65m as observed in Trench 1. The full depth of the deposit was not attained in any trench.

Phase 2 Undated, possible Saxon/medieval deposits

In Trench 9, a sub-square shallow, flat-bottomed pit, [019], which measured approximately 2m across cut the natural silt (Fig. 4). The primary fill of the pit consisted of a soft, very dark grey and black silt, [020], containing large quantities of burnt organic material and lumps of burnt sandy silt, well distributed throughout the deposit. A soft, light greyish brown sandy silt, [026], containing rare flecks of charcoal and fragments of burnt clay, overlay the primary fill. Animal bone was found in the feature, but no pottery or other artefacts were recovered. Environmental analysis of the primary fill of the pit, (Appendix 4), revealed that the organic material was almost

entirely composed of charred cereal grain, most of it wheat and barley with much smaller quantities of oats. Charred weed seeds, small fish, frog and vole bones, fragments of mussel shell and eggshell were present in very small quantities. Wood charcoal was absent. Burrowing snails, snails typical of grassland environments and two single shells typical of estuarine and brackish marsh environments were also recovered from the sample.

Sealing pit [019] and elsewhere overlying the natural silts was a soft, light greyish brown to mid brown silt containing small quantities of clay and sand, observed in all trenches as an homogenous layer averaging 0.30m thick. The deposit, interpreted as subsoil, included contexts: [002], [010], [014], [027], [028], [030], [034], [037], [040] and [042]. One piece of pottery dated to the 13th -14th century was recovered from layer [037] in Trench 6.

Phase 3 Modern Deposits

Cutting through the subsoil in Trench 8, was a V-shaped, linear feature, [011], with a squared base, orientated east-west (Fig. 4). This ditch, located inline with a geophysical anomaly, measured 1.00m wide and 0.5m deep and was filled with a friable, dark greyish brown silt, [012], containing moderate amounts of brick and tile fragments and small quantities of coal, well distributed throughout the deposit. Animal bone and pottery were recovered from the feature.

In Trench 2, positioned to investigate a geophysical anomaly, a large feature, [025], was revealed. The feature was at least 9.00m across and over 1m deep, though not fully excavated (Fig. 4). The sides were concave and generally well defined, though the southern edge was unclear and very disturbed, with

pieces of broken brick pressed into natural silts. A total of four fills was observed during excavation, though it is likely the primary fills were not encountered due to their depth. The earliest deposit recorded, consisted of a 0.33m thick layer of soft, reddish grey, sandy silt, [024], which contained refuse from smithing activity. Overlying this and deposited against the southern edge was a firm, dark grey, silt, [023], containing frequent pieces of brick and tile rubble, mortar, broken pottery dating to the 18th and 19th centuries, coal, charcoal, glass and bone. This was covered by two thick layers of soft greyish fine silt, [022] and [005], that were relatively clean and contained small shells of fresh water snails. A blackish brown lens of soft silt, [003], containing large quantities of coal, brick and tile, pottery and bone occurred within layer [005].

A 0.30m thick layer of friable, dark brown silt, including contexts [001], [006], [009], [013], [017], [029], [033], [036] and [039], overlay all features throughout the area of evaluation and formed the present topsoil at the site.

6. DISCUSSION

The nature and variations observed in the earliest deposit encountered reflects the depositional environment under which it formed.

Although the date of the natural deposition (phase 1) is unknown, it is clear that the area of evaluation lay within an intertidal zone. Within the zone, variations in the topography due to creeks, depressions, sandbanks *etc.* gave rise to very localised depositional environments. The nature of deposits laid down in a low energy environment, such as a creek or

depression filled with standing water, are characterised by poorly laminated, sticky, clayey silts as observed in Trenches 3, 4 and 5. A faint linear geophysical anomaly is broadly coincident with the location of these clayey silts and may represent the edge of a natural depression. Deposits formed in a higher energy environment, such as an area regularly inundated by tides, are characterised by finely laminated sands and silt, as observed in Trenches 2, 6 and 7 (Fig. 5).

Cut into the natural silts near the centre of the site was an apparently isolated pit (phase 2). The environmental data gathered from the fills of the pit yield some clues to its nature. The abundance of wheat and barley grain, and the relative scarcity of any other plant or animal species suggests that the charred material derives from a partially cleaned crop (Appendix 4). The absence of wood charcoal implies that the material was not the residue of a domestic fire, but rather a result of an accident to a store of grain, probably in readiness for further processing. Some of the grains had started to sprout (J. Rackham, *pers. comm.*), which is an attribute often associated with grain being prepared for fermentation in the brewing process. The presence of snails typical of grassland environments in the samples implies that the activity represented by the pit was being carried out on open grassy ground, the former salt marsh having been drained and reclaimed.

A similar feature, a pit of uncertain function, was recorded during excavations at Station Road, 300m northeast of Trench 9. This also yielded no artefactual dating evidence, but occurred in a stratigraphically medieval context (APS, 1994b).

Very similar deposits, rich in charred grain, filling pits and ditches have also been described at the Middle Saxon sites at Gosberton and Walpole St. Andrew (Crowson *et al.* forthcoming, 115; 218). It has been suggested that the deposit could be the remains of waste products from salt making, although nothing is known of the salt making processes in this period (*ibid.*).

The laminated nature and relatively clean sandy silt that make up the final fill of pit [019] indicate it formed as a result of natural depositional activity that caused the shallow hollow created by the underlying feature to silt up. Environmental analysis shows that the fill derives from the reworking of surrounding natural deposits and the underlying charred fill (Appendix 4).

A layer of silty subsoil overlay the shallow pit in Trench 9 and the natural deposits elsewhere across the site. Despite a lack of dateable artefacts recovered from the pit, the length of time necessary for the formation of the subsoil does suggest the pit dates from not later than the mid medieval period and may be Saxon or even earlier. It is likely that the subsoil is a result of natural soil development processes and agricultural activity. A sherd of medieval pottery recovered from the subsoil in Trench 6 may indicate that the commencement of cultivation on the site by the 13th to 14th centuries.

Post-medieval and modern activities (phase 3) within the evaluation area are represented by the east-west ditch in Trench 8 and pond in Trench 2.

The sharpness and shape of the profile of the linear cut, particularly the squared base, suggest a possible structural function for the feature, perhaps a fence line that marked a field or property boundary. The size and

quantity of ceramic material present in the fill, indicates it was deliberately deposited, though the dark silts were probably derived from the topsoil through a combination of back-filling and natural silting. Analysis of the ceramic artefacts indicates the feature may have been in use as early as the 16th century. However, a significant quantity of 19th century material shows it was back filled during this later period. This is supported by cartographic evidence in the form of the enclosure plan of Kirton of 1839 and the 2nd edition Ordnance Survey map of 1906. The earlier plan depicts the site as two east-west elongated fields divided by a boundary. The line of the ditch encountered in these investigations corresponds with the boundary between the fields. The 1906 Ordnance Survey map shows a single field similar to the present arrangement, therefore, it can be surmised that the boundary went out of use and was removed between 1839 and 1906.

The pond in Trench 2 had a very disturbed southern edge, with artefactual material pressed deeply into natural alluvial silts. This is typical of trampling by animals on soft muddy ground. It can be inferred, therefore, that it may have been dug to water livestock. Deliberate back-filling of the pond, employing domestic debris and building rubble, apparently occurred between the 17th and 19th century. Cartographic evidence indicates the pond had been backfilled by 1906 as it does not appear on the Ordnance Survey map of that year. Moreover, the pond may have ceased to exist by 1839 as it does not appear on the tithe map, though it is possible that the pond was omitted from that survey.

The earliest revealed pond fill contained pieces of post-medieval

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smithing slag suggest the proximity of an iron smithy. This is partly supported by cartographic evidence from the 1906 Ordnance Survey map, which shows the site of a smithy just beyond the southeast corner of the evaluation area. However, the recovered slag is likely to be earlier than the mapped smithy, though this may indicate that the industrial establishment was already old at the beginning of the 20th century.

The enclosure plan of 1839 and the 1906 map both depict buildings in the area of the present day house and barns at the southeast corner of the site (Fig. 3), indicating it is a long-lived property, likely to have previously been a farm.

7. ASSESSMENT OF SIGNIFICANCE

For assessment of significance the *Secretary of State's criteria for scheduling ancient monuments* has been used (DoE 1990, Annex 4; see appendix).

Period:

Ponds and property markers or ditches, as found during the evaluation, are typical of the post-medieval period but do not characterise the period, being standard features of many archaeological eras.

A possible crop processing pit was also revealed but was undated and therefore was not characterised to a particular period.

Rarity:

Evidence for crop processing, in the form of charred grain, is rare at any period.

Ponds and ditches from the post-medieval period are commonplace.

Documentation:

Several archaeological investigations in Kirton have previously been undertaken and reported. Additionally, records of archaeological sites and finds made in the Kirton area are kept in the Lincolnshire County Sites and Monuments Record and the files of the Boston District Community Archaeologist.

Group Value:

As the date of the crop processing pit is unknown, its associations have not been established and, therefore, its group value cannot be ascertained.

Moderate group value exists for the post-medieval remains. This is provided by the cartographic evidence, proximity of buildings, and other archaeological remains, dating from this period in the village.

Survival/Condition:

All archaeological deposits encountered showed some disturbance due to ploughing and natural soil formation processes, but were in a relatively good condition.

Environmental indicators were found in the form of charred plant remains. Mollusc remains were present in the silting of the pond and in the fills of the early pit, and there is potential for the survival of environmental evidence through waterlogging.

Fragility/Vulnerability:

An undated but early, possibly Saxon or medieval, feature was encountered 0.50m below the present ground level. The post-medieval features were encountered at a depth of 0.20m-0.30m. It is likely, therefore, that the proposed development would impact

on any archaeological remains, if present.

Diversity:

Period diversity is low, being confined to the features of post-medieval date. This is enhanced slightly by the crop processing pit, which is clearly earlier than the post-medieval period though of unknown date.

Although the number of archaeological features encountered was low, the functional diversity was moderate. Evidence for possible early crop processing, pastoral agriculture, land division and industrial activity was present.

Potential:

Although the undated pit was apparently isolated, there is moderate potential for other, associated remains to occur in the area. However, the absence of any early artefactual evidence of medieval or earlier date suggests that there is very low potential for settlement of the site at any time between the late Iron Age and modern periods.

Moderate-high potential exists for the survival of both charred organic remains and waterlogged post-medieval environmental evidence in the pond.

7.1 Site Importance

The criteria for assessment have established that the undated pit is of moderate-high local importance. However, although the feature has the potential to enhance the understanding of the origins and development of Kirton, this is inhibited by the lack of associations, date or clear function for the feature.

The post-medieval remains are of limited local significance.

8. EFFECTIVENESS OF TECHNIQUES

The techniques employed during the archaeological evaluation were, on the whole, effective. The removal of topsoil and non-archaeological deposits with a mechanical excavator allowed a rapid and thorough investigation of the possible features picked up by geophysical survey and a detailed study of the depositional history of the site. Manual excavation established that there were few archaeological remains at the site and these were mainly of post-medieval date. In addition, an earlier, though undated pit, was revealed. Although thoroughly examined, no clear function nor date was identified for this feature, though it is thought to have been associated with crop processing. This obscurity appears to be an aspect of the nature of the feature, rather than any shortcoming in the investigation technique.

9. CONCLUSIONS

Archaeological investigations at Willington Road, Kirton, were undertaken because the site was near the historic core of the village and there was potential that remains of Saxon, medieval and later date were located in the area.

However, few archaeological remains were encountered. These included a pond and field boundary ditch which are likely to be associated with post-medieval agricultural use of the site. Industrial residue from the pond suggests the proximity of an iron smithy in the post-medieval period.

Additionally, an apparently isolated pit, associated with crop processing, was revealed. This was undated but may be Saxon or medieval. Moreover, the absence of artefacts from the thoroughly investigated pit would suggest it was located away from any contemporary occupation.

Organic remains at the site survive in excellent condition through charring. There is also potential for environmental remains of post-medieval date to be preserved by waterlogging in the pond.

10. ACKNOWLEDGEMENTS

Archaeological Project Services would like to acknowledge the assistance of Clive Wicks who commissioned the work, and Miles Foden of Langwith Building Associates for his assistance. The work was co-ordinated by Gary Taylor and Gary Taylor and Tom Lane edited this report. Susan Smith, the community archaeologist for Boston Borough Council permitted examination of the relevant parish files. James Rackham provided the environmental assessment of the site and Jane Cowgill, Hilary Healey and Gary Taylor examined the pottery and other finds.

11. PERSONNEL

Project co-ordinator: Gary Taylor

Supervisor: Joanna Hambly

Site assistants: Rachel Hall, Fiona Walker, Katie-Sue Wilson

Finds processing: Denise Buckley

Illustration: Phil Mills

Post-excavation analysis: Joanna Hambly

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13. ABBREVIATIONS

APS Archaeological Project Services

BGS British geological Survey

DoE Department of the Environment

EAS Engineering Archaeological Services Ltd.

LAO Lincolnshire Archives Office

OS Ordnance Survey

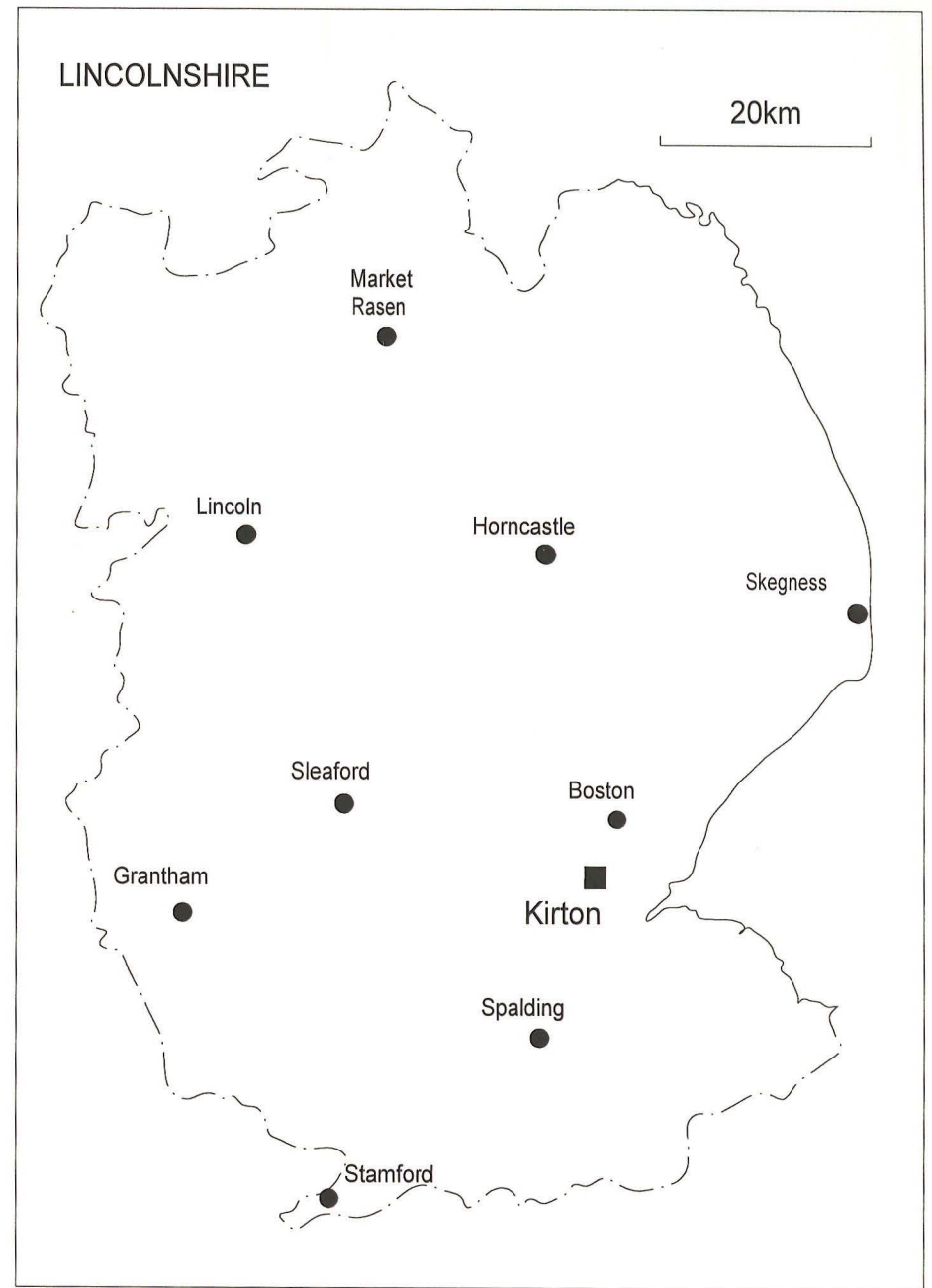


Figure 1 General Location Plan

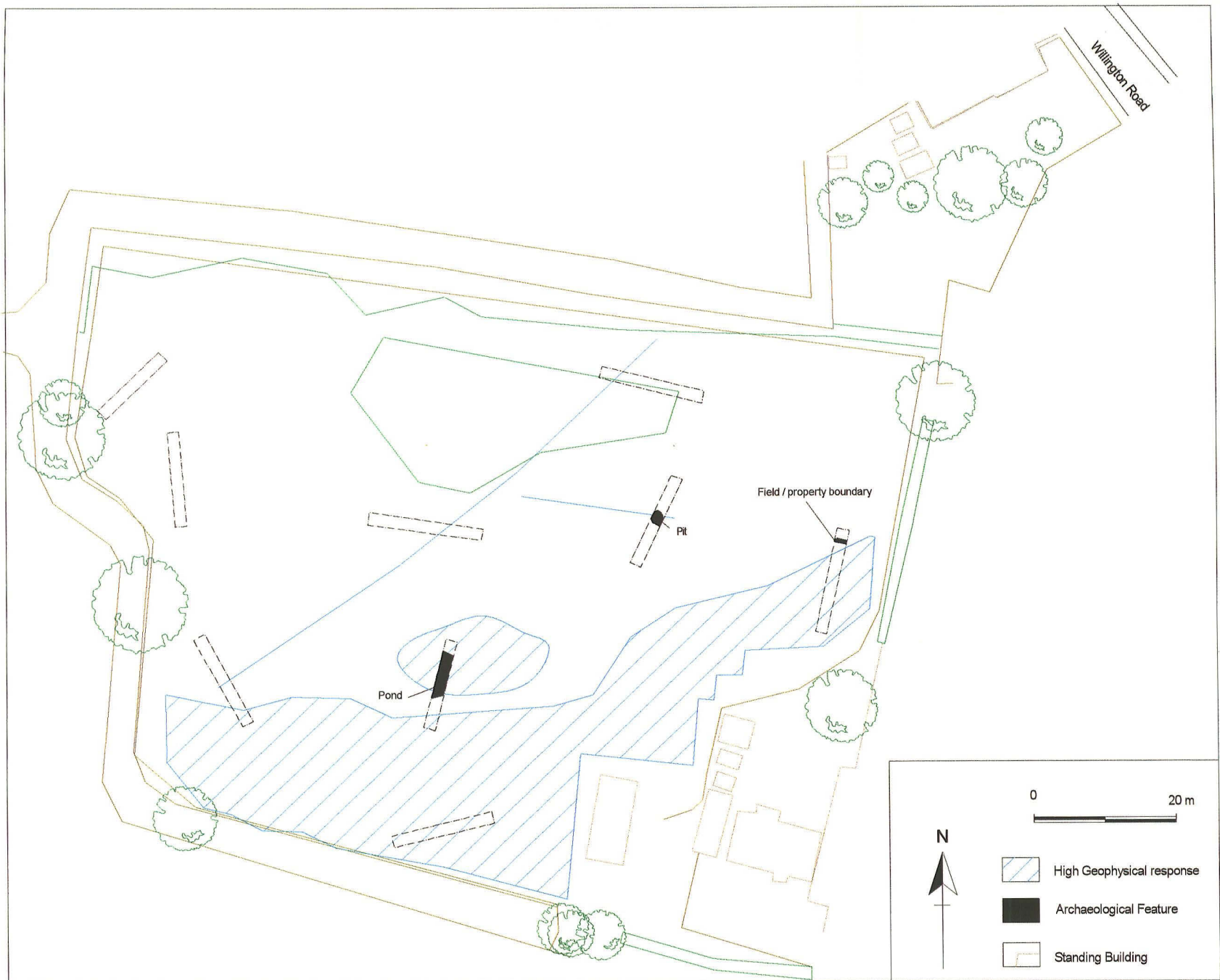


Figure 3 Trench location plan showing results of geophysical survey and interpreted archaeological features found during excavation

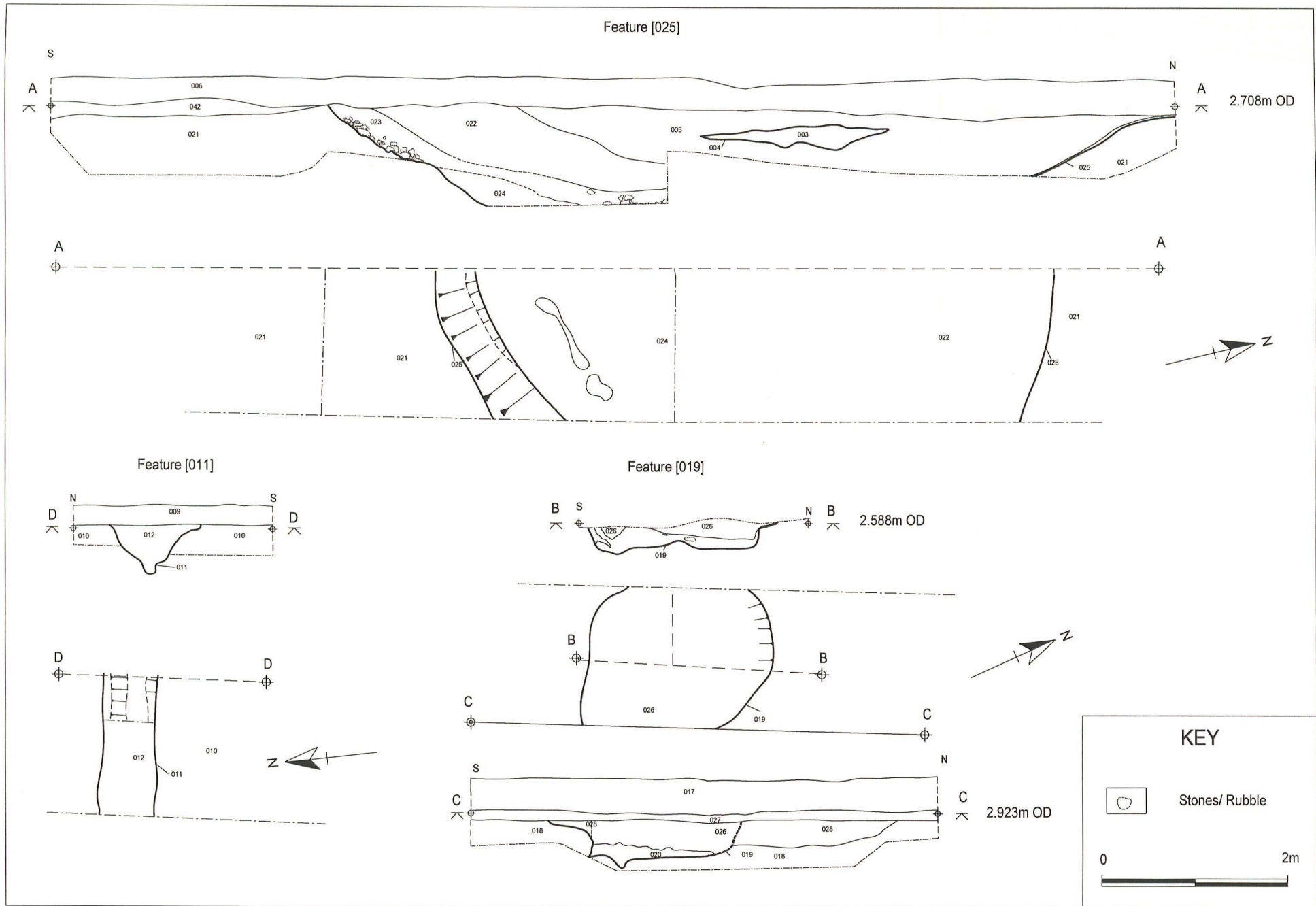


Figure 4 Plans and sections of features [019], [011] and [025]

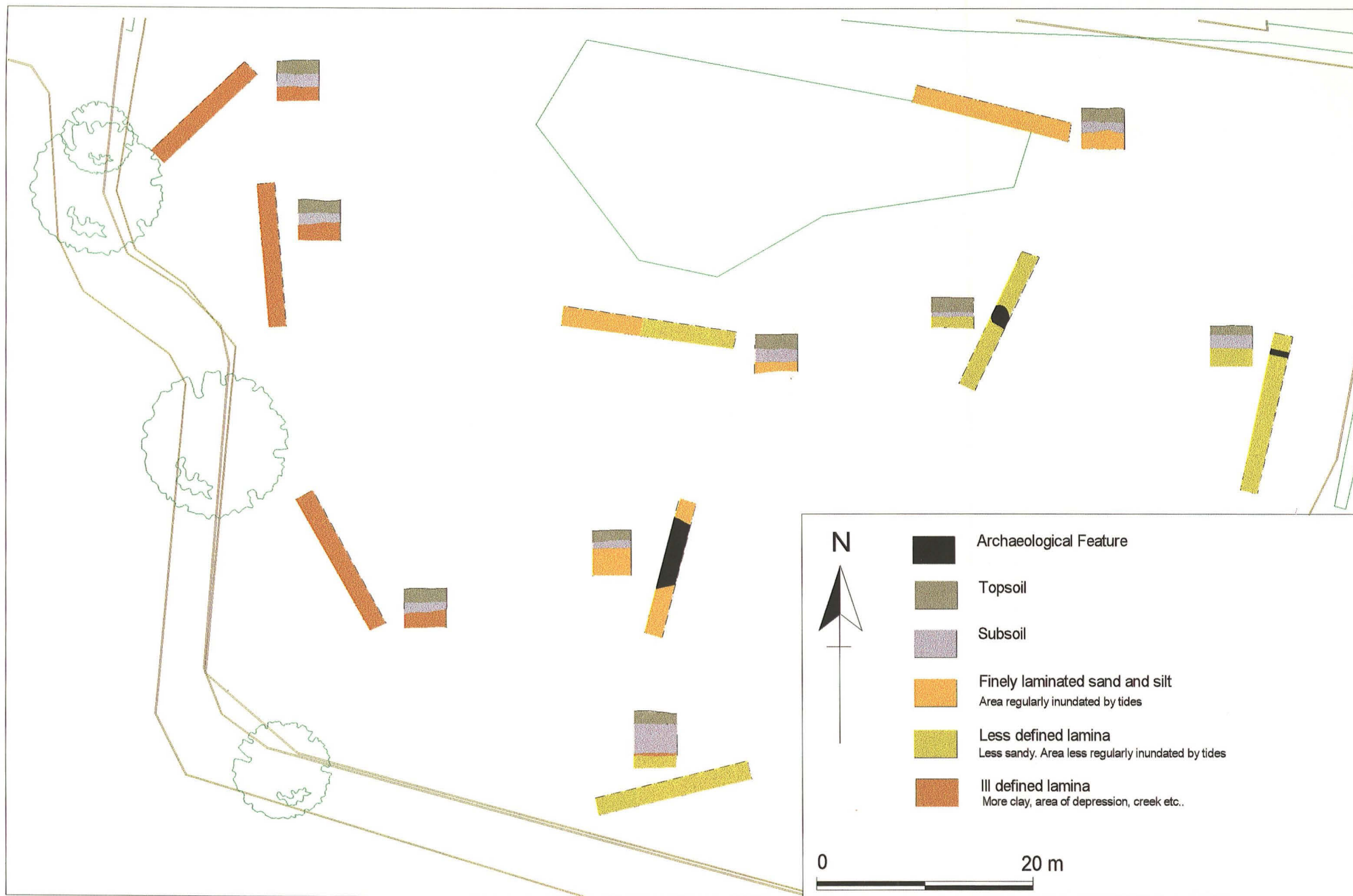


Figure 5 Representational sections of all trenches to show generalised depositional variations across evaluation area



Plate 1 General view, looking towards parish church



Plate 2 Detail of the three soil horizons encountered throughout the excavation, (trench 6)

Plate 3 Trench 8 with linear feature [011] in the foreground, looking south



Plate 4 Partially excavated pond, [025], trench 2, looking north

Plate 5 Feature [019], trench 9, looking north



Appendix 1

**SPECIFICATION
FOR THE
ARCHAEOLOGICAL EVALUATION
OF LAND AT
WILLINGTON ROAD,
KIRTON**

**PREPARED FOR
CLIVE WICKS ASSOCIATES**

**BY
ARCHAEOLOGICAL PROJECT SERVICES
Institute of Field Archaeologists'
Registered Archaeological Organisation No. 21**

JANUARY 2000

1 SUMMARY

- 1.1 *This document comprises a specification for the archaeological field evaluation of land at Willington Road, Kirton, near Boston.*
- 1.2 *The site is close to the village core, within 100m of the medieval parish church. Recent investigations on High Street and Station Road, within 250m to the east of the present site, revealed sequences of Late Saxon/early medieval settlement remains, overlain by possible flood silts. Later medieval and post-medieval settlement was established on top of these silts at both sites. Previous geophysical survey at the present site revealed a number of buried linear features and possible other remains.*
- 1.3 *A planning application has been made for development of the area. The archaeological works are being undertaken to provide information to assist the determination of the application.*
- 1.4 *The archaeological work will consist of a programme of trial trenching of the site.*
- 1.5 *On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by illustrations and photographs.*

2 INTRODUCTION

- 2.1 This document comprises a specification for the archaeological field evaluation of land at Willington Road, Kirton, Lincolnshire, national grid reference TF 3035 3845 (centre).
- 2.2 The document contains the following parts:
 - 2.2.1 Overview
 - 2.2.2 The archaeological and natural setting
 - 2.2.3 Stages of work and methodologies to be used
 - 2.2.4 List of specialists

2.2.5 Programme of works and staffing structure of the project

3 **SITE LOCATION**

- 3.1 Kirton is located 4km southwest of Boston in the fens of south Lincolnshire. The site is just west of the village centre, off Willington Road, about 100m southwest of the parish church at nation grid reference TF3035 3845.
- 3.2 The site is a roughly rectangular block of land approximately 1.1ha in extent with access to Willington Road on the east.

4 **PLANNING BACKGROUND**

- 4.1 The site is the subject of a two full planning applications (B99/0506 and 0507/FULL) submitted to Boston Borough Council for residential development. An archaeological evaluation is required for the determination of the application. As the first stage of that evaluation process a geophysical survey was undertaken. That revealed apparent archaeological remains and now a programme of trial trenching is required.

5 **SOILS AND TOPOGRAPHY**

- 5.1 The site and surrounding area is on a gentle slope down to the west at *c.* 4m OD. Soils at the site are typical alluvial gleys of the Tanvats Association developed on marine alluvium (Hodge *et al.* 1984, 319). Beneath this alluvium is glacial drift that was deposited in a geological basin between the Lincolnshire Wolds and the East Anglian Heights.

6 **THE ARCHAEOLOGY**

- 6.1 The site lies very close to the medieval village core, less than 100m west of the parish church. It is likely that the church was the focus of settlement in the Late Saxon period and investigations immediately east of the church revealed evidence of occupation of the period, perhaps a farm yard. Medieval settlement and evidence of craft working was subsequently established in the area (Archaeological Project Services 1996). Other investigations, about 250m to the east on Station Road, also revealed early medieval occupation remains dating to the 13th-14th century (Archaeological Project Services 1994a). At both sites the medieval settlement was interrupted by apparent flooding which laid down silts over the Late Saxon and medieval archaeological remains. Later medieval and post-medieval occupation was subsequently established on the surface of the

flood silts at both sites (Archaeological Project Services 1994a; 1996).

- 6.2 Medieval remains have also been identified on Willington Road approximately 500m to the north of the proposed development site (Archaeological Project Services 1994b).
- 6.3 Geophysical survey of the site has revealed a number of probable archaeological remains including two apparent ditches and an area of possible archaeological activity such as a midden, pit or bonfire.

7 AIMS AND OBJECTIVES

- 7.1 The aim of the work will be to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.
- 7.2 The objectives of the work will be to:
 - 7.2.1 Establish the type of archaeological activity that may be present within the site.
 - 7.2.2 Determine the likely extent of archaeological activity present within the site.
 - 7.2.3 Determine the spatial arrangement of the archaeological features present within the site.
 - 7.2.4 Determine the extent to which the surrounding archaeological features extend into the application area.
 - 7.2.5 Establish the way in which the archaeological features identified fit into the pattern of occupation and land-use in the surrounding landscape.
 - 7.2.6 Determine the date and function of the archaeological features present on the site.

8 LIAISON WITH THE ARCHAEOLOGICAL CURATOR

- 8.1 Prior to the commencement of the trial trenching the arrangement of the interventions (excavations) will be agreed with the archaeological to ensure that

the proposed scheme of works fulfils their requirements.

9 **TRIAL TRENCHING**

9.1 Reasoning for this technique

9.1.1 Trial trenching enables the *in situ* determination of the sequence, date, nature, depth, environmental potential and density of archaeological features present on the site.

9.1.2 The trial trenching will consist of the excavation of nine (9) trenches measuring 15m x 1.6m, giving a total area of 216sq. metres and equivalent to 2% of the development area, the normal percentage for site evaluation. The trenches may be widened and stepped-in, should archaeological deposits extend below 1.2m depth. Augering may be used to determine the depth of the sequence of deposits present.

9.2 General Considerations

9.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the evaluation.

9.2.2 The work will be undertaken according to the relevant codes of practice issued by the Institute of Field Archaeologists (IFA). *Archaeological Project Services* is an IFA Registered Archaeological Organisation (No. 21).

9.2.3 Any and all artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and promptly reported to the appropriate coroner's office.

9.2.4 Excavation of the archaeological features exposed will only be undertaken as far as is required to determine their date, sequence, density and nature. Not all archaeological features exposed will be excavated. However, the evaluation will, as far as is reasonably practicable, determine the level of the natural deposits to ensure that the depth of the archaeological sequence present on the site is established.

9.2.5 Open trenches will be marked by hazard tape attached to road irons or similar poles. Subject to the consent of the archaeological curator, and following the appropriate recording, the trenches, particularly those of

excessive depth, will be backfilled as soon as possible to minimise any health and safety risks.

9.3 Methodology

9.3.1 Removal of the topsoil and any other overburden will be undertaken by mechanical excavator using a toothless ditching bucket. To ensure that the correct amount of material is removed and that no archaeological deposits are damaged, this work will be supervised by Archaeological Project Services. On completion of the removal of the overburden, the nature of the underlying deposits will be assessed by hand excavation before any further mechanical excavation that may be required. Thereafter, the trenches will be cleaned by hand to enable the identification and analysis of the archaeological features exposed.

9.3.2 Investigation of the features will be undertaken only as far as required to determine their date, form and function. The work will consist of half- or quarter-sectioning of features as required and, where appropriate, the removal of layers. Should features be located which may be worthy of preservation *in situ*, excavation will be limited to the absolute minimum, (*ie* the minimum disturbance) necessary to interpret the form, function and date of the features.

9.3.3 The archaeological features encountered will be recorded on Archaeological Project Services pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn.

9.3.4 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at a larger scale.

9.3.5 Throughout the duration of the trial trenching a photographic record consisting of black and white prints (reproduced as contact sheets) and colour slides will be compiled. The photographic record will consist of:

9.3.5.1 the site before the commencement of field operations.

9.3.5.2 the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.

9.3.5.3 individual features and, where appropriate, their sections.

9.3.5.4 groups of features where their relationship is important.

9.3.5.5 the site on completion of field work

9.3.6 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. If removal of the remains is necessary the appropriate Home Office licences will be obtained and the local environmental health department informed. If relevant, the coroner and the police will be notified.

9.3.7 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered ready for later washing and analysis.

9.3.8 The spoil generated during the evaluation will be mounded along the edges of the trial trenches with the top soil being kept separate from the other material excavated for subsequent backfilling.

9.3.9 The precise location of the trenches within the site and the location of site recording grid will be established by an EDM survey.

10 ENVIRONMENTAL ASSESSMENT

10.1 If appropriate, during the evaluation specialist advice will be obtained from an environmental archaeologist. The specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis should further stages of archaeological work be required. The results of the specialist's assessment will be incorporated into the final report

11 POST-EXCAVATION AND REPORT

11.1 Stage 1

11.1.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will

be prepared. All photographic material will be catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

- 11.1.2 All finds recovered during the trial trenching will be washed, marked, bagged and labelled according to the individual deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

11.2 Stage 2

- 11.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.
- 11.2.2 Finds will be sent to specialists for identification and dating.

11.3 Stage 3

- 11.3.1 On completion of stage 2, a report detailing the findings of the evaluation will be prepared. This will consist of:
 - 11.3.1.1 A non-technical summary of the findings of the evaluation.
 - 11.3.1.2 A description of the archaeological setting of the site.
 - 11.3.1.3 Description of the topography and geology of the evaluation area.
 - 11.3.1.4 Description of the methodologies used during the evaluation and discussion of their effectiveness in the light of the findings of the investigation.
 - 11.3.1.5 A text describing the findings of the evaluation.
 - 11.3.1.6 Plans of the trenches showing the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.

- 11.3.1.7 Sections of the trenches and archaeological features.
- 11.3.1.8 Interpretation of the archaeological features exposed and their context within the surrounding landscape.
- 11.3.1.9 Specialist reports on the finds from the site.
- 11.3.1.10 Appropriate photographs of the site and specific archaeological features or groups of features.
- 11.3.1.11 A consideration of the significance of the remains found, in local, regional, national and international terms, using recognised evaluation criteria.

12 **ARCHIVE**

- 12.1 The documentation, finds, photographs and other records and materials generated during the evaluation will be sorted and ordered into the format acceptable to the City and County Museum, Lincoln. This sorting will be undertaken according to the document titled *Conditions for the Acceptance of Project Archives* for long term storage and curation.

13 **REPORT DEPOSITION**

- 13.1 Copies of the evaluation report will be sent to: the client, Clive Wicks Associates; the Community Archaeologist, Boston Borough Council; Boston Borough Council Planning Department; and the Lincolnshire County Sites and Monuments Record.

14 **PUBLICATION**

- 14.1 A report of the findings of the evaluation will be published in Heritage Lincolnshire's annual report and an article of appropriate content will be submitted for inclusion in the journal *Lincolnshire History and Archaeology*. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and later remains, and *Britannia* for discoveries of Roman date.

15 **CURATORIAL MONITORING**

15.1 Curatorial responsibility for the project lies with Community Archaeologist, Boston Borough Council. As much written notice as possible, ideally at least seven days, will be given to the archaeological curator prior to the commencement of the project to enable them to make appropriate monitoring arrangements.

16 **VARIATIONS TO THE PROPOSED SCHEME OF WORKS**

16.1 Variations to the scheme of works will only be made following written confirmation from the archaeological curator.

16.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

17 **SPECIALISTS TO BE USED DURING THE PROJECT**

17.1 The following organisations/persons will, in principal and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

<u>Task</u>	<u>Body to be undertaking the work</u>
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust Roman: B Precious, independent specialist Anglo-Saxon: J Young, independent specialist Medieval and later: H Healey, independent archaeologist; or G Taylor, APS

Other Artefacts	J Cowgill, independent specialist; or G Taylor, APS
Human Remains Analysis	R Gowland, independent specialist
Animal Remains Analysis	Environmental Archaeology Consultancy; or P Cope-Faulkner, APS
Environmental Analysis	Environmental Archaeology Consultancy
Radiocarbon dating	Beta Analytic Inc., Florida, USA
Dendrochronology dating	University of Sheffield Dendrochronology Laboratory

18 PROGRAMME OF WORKS AND STAFFING LEVELS

- 18.1 Fieldwork is expected to be undertaken by up to 4 staff, a supervisor and 2/3 assistants, and to take six (6) days.
- 18.2 Post-excavation analysis and report production is expected to take 10 person-days within a notional programme of 10 days. A project officer or supervisor will undertake most of the analysis, with assistance from the finds supervisor and CAD illustrator. Two half-days of specialist time are allotted in the project budget.
- 18.3 **Contingency**
- 18.3.1 Contingencies have been specified in the budget. These include: environmental sampling/analysis of waterlogged remains; pump (not expected as no evidence of waterlogging previously identified in this area); Roman pottery (none expected); Anglo-Saxon pottery (not expected); Medieval pottery- large quantities (moderate amount expected and allowed for); faunal remains -moderate-large quantities (small amounts expected and allowed for); Conservation and/or Other unexpected remains or artefacts.
- 18.3.2 Other than the pump, the activation of any contingency requirement will be by the archaeological curator (Boston Community Archaeologist), not Archaeological Project Services.

19 **INSURANCES**

19.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

20 **COPYRIGHT**

20.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act* 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

20.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

20.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act* 1988 for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act* 1988 and may result in legal action.

20.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

21 **BIBLIOGRAPHY**

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Specification: Version 1, 27/1/00

Appendix 2

CONTEXT DESCRIPTIONS

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
001	1	Dark brown silt, thickness 0.3m	Topsoil
002	1	Mid brown silt, thickness 0.7m	Subsoil
003	2	Blackish brown silt, thickness 0.26m	Dump, fill of [025]
004	2	NOT USED	
005	2	Mid grey silt, thickness 0.6m to LOE	Fill of [025]
006	2	Dark brown silt, thickness 0.3m	Topsoil
007		NOT USED	
008		NOT USED	
009	8	Dark brown silt, thickness 0.3m	Topsoil
010	8	Mid brown silt, thickness 0.34m	Subsoil
011	8	Linear cut, with stepped sides and flat base, seen 1m wide, depth 0.5m	Field boundary ditch
012	8	Dark greyish brown silt, thickness 0.5m	Fill of [025]
013	7	Dark brown silt, thickness 0.3m	Topsoil
014	7	Mid brown clayey silt, thickness 0.28m	Subsoil
015	7	Mid reddish brown silt, thickness 0.48m	Natural
016	6	Finds recovery	Finds recovery
017	6	Mid brown silt, thickness 0.34m	Topsoil
018	9	Mid yellowish brown laminated sandy silt, thickness 0.25m to LOE	Natural
019	9	Sub rectangular cut, with vertical sides and flat base, seen width 2m, depth 0.5m	?Pit

020	9	Very dark grey/ black clayey silt containing lumps of burnt silt, thickness 0.34m	Fill of [019]
021	2	Reddish brown clayey silt, thickness 0.65m to LOE	Natural
022	2	Mid brownish grey silt, thickness 0.56m to LOE	Fill of [025]
023	2	Dark grey silt frequent rubble, thickness 0.40m	Dump/ Fill of [025]
024	2	Reddish grey sandy silt, thickness 0.33m	Fill of [025]
025	2	Cut with concave sides not fully excavated, width seen 9m, depth to LOE 1.05m	Pond
026	9	Light greyish brown sand and silt, thickness 0.25m	Fill of [019]
027	9	Mid greyish brown silty clay, thickness 0.12m	Subsoil
028	9	Mid brownish grey silt, thickness 0.3m	Subsoil
029	3	Mid greyish brown silt, thickness 0.32m	Topsoil
030	3	Light greyish brown silt, thickness 0.25m	Subsoil
031	3	Reddish brown silt, thickness 0.43m to LOE	Natural
032	3	Bluish grey silt, thickness 0.14m	Natural
033	4	Mid greyish brown silt, thickness 0.4m	Topsoil
034	4	Light greyish brown silt, thickness 0.29m	Subsoil
035	4	Reddish brown silt, thickness 0.42m	Natural
036	6	Dark brownish grey clayey silt thickness 0.35m	Topsoil
037	6	Mid brownish grey silt, thickness 0.3m	Subsoil
038	6	Mid greyish brown clay sandy silt, thickness 0.2m	Natural
039	5	Greyish brown silt, thickness 0.32m	Topsoil

040	5	Mid greyish brown clayey silt, thickness 0.33m	Subsoil
041	5	Greyish brown silt, thickness 0.32m	Natural
042	2	Mid brown silt, thickness 0.7m	Subsoil
043	1	Soft (plastic), mid yellowish brown, sandy silt.	Natural

Appendix 3

THE FINDS

Jane Cowgill, Hilary Healey MPhil and Gary Taylor MA

Provenance

The material was recovered from dumped infills or siltings of a pond (003, 007, 022, 023, 024), a ditch (012), a pit (020), topsoil (016, 036) and subsoil (037). Most of the earlier pottery is of relatively local manufacture, being produced in Boston or related kilns at the southern edge of the Lincolnshire Wolds, about 20km to the north. Much of the later pottery was probably made in Staffordshire in the Midlands. There is a single foreign import from Germany. The clay pipes are probably all local products from the general Boston area.

Range

The range of material is detailed in the tables. Pottery, clay pipe, glass, metal working waste and objects, mortar, cinders and mollusc shell were recovered during the investigation. An isolated sherd of medieval date is the earliest material recovered though the major component of the assemblage is post-medieval, 16th-19th century, date.

Table 1

Context	Description	Date
003	1x Midlands Yellow ware, 17 th century 1x Westerwald stoneware, tankard, early 18 th century 1x Midlands Purple-type black glazed ware, 18 th century 3x red painted earthenware, black glazed, including pancheon, 18 th century 1x red painted earthenware, brown glazed, 17 th -18 th century 2x Boston/Bolingbroke-type wares, 16 th -17 th century 1x clay pipe bowl, Oswald type G6, bore 6/64", 1660-80 1x clay pipe bowl, 2 linked fragments, Lincoln Type A, 1640-90 2x clay pipe stems, bore 7/64", 17 th century 1x clay pipe stem, bore 6/64", 17 th -early 18 th century 1x iron square-sectioned nail	18 th century
007	2x creamware, late 18 th -19 th century 1x blue and white transfer printed tableware, early 19 th century 1x body sherd of mid green square bottle glass, 19 th century	19 th century
012	3x Boston/Bolingbroke-type wares, including pancheon and jug, 16 th -17 th century 1x red painted earthenware, black glazed, 18 th -19 th century 1x unidentified sherd (very small)	18 th -19 th century
016	1x red painted earthenware, black glazed, 18 th century 1x body sherd of small blue bottle glass with mould seam, late 19 th -early 20 th century.	late 19 th -early 20 th century.
020	4x burnt clay 1x oyster shell	
022	1x base sherd of dark green wine bottle, much iridescence, 18 th century	18 th century

Context	Description	Date
023	16x creamware, 18 th -early 19 th century 10x red painted earthenware, black glazed, including pancheon, 18 th -early 19 th century 2x linked brown glazed earthenware, 19 th century 9x blue and white transfer printed tableware, 2 sets of 2 linked sherds, 19 th century 3x polychrome handpainted figurine, late 18 th - 19 th century 2x mocha ware cups, 19 th century 4x clay pipe stems, bore 5/64", mid 18 th -mid 19 th century 2x body sherds of mid green wine bottle glass, 19 th century 1x cockle shell (small)	19 th century
024	6x smithing slag, including 2 plano-convex hearth bottoms, coal and charcoal inclusions, post-medieval 1x mortar	post-medieval
036	1x blue and white transfer printed tableware, 18 th -19 th century 1x Boston/Bolingbroke-type ware, 16 th -17 th century 1x coal	18 th -19 th century
037	1x Nottingham/Lincoln ware, 13 th -14 th century	13 th -14 th century

Although most of the medieval to early post-medieval pottery is relatively local there are regional and foreign imports. These include a single foreign import, a sherd of a German stoneware tankard from (003) made at Westerwald near Koblenz. Tankards are an early 18th century form in this ware (Hurst *et al.* 1986, 221-2).

Two partial clay pipe bowls were recovered from context (003). The more complete example is Oswald's General Type 6, dating from c. 1660-80 (Oswald 1975, 37; 39). The second bowl is a Lincoln Type A example, though too little of the bowl survives to determine the particular form. Bowls of this general form date to the period 1640-90 (Mann 1977, 17-8).

The collection of iron slag from context (024) does not have independent dating evidence. However, the slag contains inclusions of coal, the fuel used in the smithing, indicating that it is probably of post-medieval date. This industrial waste derives from iron smithing and indicates the presence of a post-medieval smithy in the vicinity. Although an iron smithy is known to have been located adjacent to the site at the beginning of the 20th century the recovered slag is a little earlier, as 19th-early 20th century smithing would use coke as a fuel and this would become incorporated in the slag, but is absent in the recovered examples.

Condition

All the material is in good condition and presents no long term storage problems. Archive storage of the material is by material class.

None of the iron or metal working debris was X-rayed.

Documentation

Several archaeological investigations have previously been undertaken in Kirton and are the subjects of reports. Post-medieval pottery types, as found during this investigation, have been studied and reported both as kiln evidence and site assemblages.

Potential

Although mostly occurring with later artefacts, the post-medieval aspect of the assemblage has moderate potential and suggests occupation in the vicinity in the 16th-17th century. Moreover, the artefacts of this date may imply that the features that contained them, the pond and ditch, were established in the post-medieval period. The slag is also of moderate significance and indicates the presence of a post-medieval iron smithy in proximity to the site.

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Appendix 4

THE CERAMIC BUILDING MATERIAL FROM KWR00

By Phil Mills

The Ceramic Building Material from KWR00

By Phil Mills B.Sc. (Hons)

Methodology

The fragments of ceramic building material recovered from the site were examined under a 20 x binocular microscope. Their fabrics were described and compared with the fabric type series retained at Archaeological Project Services.

Condition of the material

There were 21 pieces, weighing a total of 3865g recovered from the site. The assemblage comprised four separate fabrics. The majority of the assemblage was too fragmentary to assign form, however a modern pan tile, a modern floor tile, a hand made half brick and a hand made floor brick were identified. No cross identifications with other fabrics in the APS type series were made.

Statement of Potential

It is recommended that the pieces be retained for future information about the spread of tile fabric types over the region, therefore helping to map out the changing development of the medieval brick and tile industry.

Fabrics

KWR1

A red fabric with grey core (Munsell: 10R5/8-10R 5/8) with a hard sandy feel irregular fracture, and inclusions of abundant well-sorted very fine rounded mica, rare well-sorted fine subangular quartz and abundant well-sorted fine angular shell.

KWR2

A reddish brown fabric (Munsell: 5YR4/4) with a hard sandy feel irregular fracture, and inclusions of abundant well-sorted very fine rounded mica, abundant poorly-sorted medium subangular quartz and abundant poorly-sorted coarse angular shell.

KWR3

A red (Munsell: 2.5YR5/6) fabric with a hard smooth feel fine fracture, with inclusions of sparse well-sorted very fine rounded mica, moderate well-sorted medium subangular quartz and very common poorly-sorted medium angular shell.

KWR4

A reddish brown (Munsell: 5YR4/4) fabric having a soft granular feel, irregular fracture, with inclusions of moderate well-sorted fine rounded black iron stone, moderate poorly-sorted fine subangular mica, abundant poorly-sorted medium subangular quartzite and rare poorly-sorted medium angular voids.

The Forms

Bricks

One brick that had been halved prior to firing was identified from context 003.

Shape Fairly regular; fairly regular slightly rounded arrises; sunken margins upper face; slight creasing header face; slight creasing, striations stretcher face; fairly rough sanded underside base face Dimensions: 133.33 x 56.15 x 122.5 mm.

Floor Tiles

Two possible floor tiles were identified from the site. Modern floor tile, in fabric KWR1 was found in context 012, and a fragment of a possible floor tile in fabric KWR2 was recovered from context 007, this latter is: Shape fairly regular; fairly regular and fairly rounded arrises; finger striations, yellow wash, sunken margins on upper face; very creased header face; slightly creased stretcher face; very rough base face Dimensions: 142 x 46.7 x 128 + mm.

Pan Tiles

One fragment of pan tile, in fabric KWR-1 was recovered. The only complete dimension to remain was thickness that had an average of 16.15mm.

Markings

Two examples of marked tile were identified. A modern floor tile with score marks in fabric KWR-1 from context 012, and a hand made brick, in fabric KWR3 with a 'W' graffiti on the underside, which had been incised prior to drying and firing, from context 003.

The Catalogue

		Fabric	Wt (g)	No	Cnrs	Len(mm)	Wth(mm)	Tk (mm)	Mortar	
003										
	B/T	KWR2	15	1					No	
	B/T	KWR4	45	4					Yes	
	Brick	KWR3	1265	1	8	133.33	122.5	56.15	Yes	
	<i>A brick that has been halved prior to firing</i>									
	Brick	KWR3	340	1	2	153.5	55 +	49.5	No	
	<i>Possible 'w' graffiti</i>									
007										
	Brick	FT?	KWR2	1185	1	2	142	128	46.7	No
	<i>Fab sample</i>									
	Tile	PAN	KWR5	375	1			16.15	No	
	<i>fab type series</i>									
012										
	Brick	KWR4	330	2					No	
	<i>Fab series</i>									
	Brick	KWR3	135	2					No	
	<i>Fab series</i>									
	Brick	KWR2	80	1					No	
	Tile	FT	KWR1	30	1				No	
	<i>Retained for fabric type series. Probably late post med/modern</i>									
020										
	B/T	KWR4	10	4					No	
036										
	B/T	KWR3	10	1					No	
	Brick	KWR3	45	1					No	

Wt = Weight, No = No of fragments, Cnrs = No of Corners, Len = Mean Length, Wth = Mean Width TK = Mean Thickness, Mortar = presence or absence, '+' indicates incomplete dimension, fab - fabric

Appendix 5

ENVIRONMENTAL ARCHAEOLOGY ASSESSMENT

By James Rackham

Kirton - KWR00**Environmental Archaeology Assessment*****Introduction***

Evaluation excavations conducted by Archaeological Project Services in Kirton resulted in the taking of two soil samples for environmental assessment from an undated feature that contained fired clay and charred material. These samples are briefly assessed.

Table 1: Samples taken for environmental analysis

site	sample	context	trench	volume in l.	weight	description	date
KWR00	1	20	9	23	28	primary fill cut/pit?	undated
KWR00	2	26	9	10	7.5	upper fill of cut/pit?	undated

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and float were dried, and the residues subsequently re-floated to ensure the efficient recovery of charred material. The dry volume of the flots were measured, and the volume and weight of the residues recorded.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The float of each sample was studied under a low power binocular microscope. The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2 and 3.

Results

The two samples were taken from the primary and upper fills of an undated feature in Trench 9. The samples themselves produced no dating evidence but the large quantities of charred cereal would permit a radiocarbon date to be obtained.

The residue of sample 1 was composed, almost entirely, of fired earth, the slightly sandy silt fabric being consistent with the firing of the natural estuarine silts which composed most of the surface deposits on the site. None display the pinky mauve colouration often associated with salt production debris. The majority (by count) are small rounded pebble sized pieces, some of which include coarse organic inclusions, not necessarily added temper. There are also a number of larger pieces with man-made irregular surfaces, although the silty clays are unwedged. The three largest pieces appear to be 'objects' in the loosest sense of the word and have some similarities to Iron Age and Romano-British briquetage, but are more irregular in

shape and do not conform to any of the 'types' found in briquetage assemblages. It does not appear to be structural daub and apart from one possible impression that could have been made by a piece of roundwood, typical wattle impressions are absent.

Other finds from the residue include a few small fragments (up to 6mm in diameter) of coal, a single flake of hammer scale and a few fragments of unidentified animal bone. The coal is small enough to have moved down through the soil and may be a contaminant.

Table 2: Finds from the samples

sample	context	vol in l.	residue vol ml.	fired earth g	coal g.	ham'r scale	bone in g.	comments
1	20	23	1000	1034	<1	1	<1	large poorly wedged lumps fired earth
2	26	10	10	12	<1		2	

The environmental material is dominated by charred cereal grains. The flot of 145 millilitres is almost entirely composed of charred grain, although a few charred weed seeds, chaff and straw fragments are present. The absence of any wood charcoal implies the charred material does not derive from domestic fires. A few small bones of fish, frog/toad and vole were present - some of them burnt, fragments of mussel shell and several fragments of bird eggshell, probably chicken, were sorted from the residue, again a number of which were burnt. Some of these finds indicate that at least some 'domestic' rubbish was incorporated into the fills of the feature. The flot contained a number of snail shells, of which *Cecilioides acicula*, the burrowing blind snail, is most abundant, but because of its burrowing habit the shells may be intrusive. Other taxa included shells of *Vallonia excentrica*, a species typical of grassland, and *Hydrobia ulvae* and possibly *Hydrobia ventrosa*. These latter two species, represented by only single shells, are typical of estuarine and brackish marsh environments and may indicate some marine influence at the site. However they might be residual in the marine silts that form the natural on the site.

Table 3: Environmental finds from the samples with preliminary identifications

cont	flot vol ml.	snail */#	ch'rd grain *	chaff *	ch'rd seed *	un- ch'rd seed *	ch'rd straw *	egg- shell *	fish *	small mam- mal *	comment
20	145	3/2	5+	2	3	2	2	2	1	1	wheat, barley, oat, legume, mussel, vole, frog/toad, straw
26	5	2/1	3		1	1	1	1			wheat, barley, oat, mussel, straw

* frequency of items: 1=1-10; 2= 11-100; 3=101-250; 4=251-500; 5=>500

diversity of molluscs as follows: 1=1-3; 2=4-10; 3=11-25; 4=26-50 taxa.

Sample 2 contains a very similar assemblage, but at much lower densities and with no substantial lumps of fired earth. This looks like secondary infilling of the feature with some reworking of the earlier deposits or similar material from nearby.

Discussion

The abundance of cereal grain, most of it wheat and barley, with much smaller quantities of oat, and the relative lack of straw, chaff and weed seeds, suggests that the charred material derives from a partially cleaned crop. The density of this material in the sample clearly indicates that the remains derive from an event or are related, functionally, to the feature. It is possible that the charring resulted from an accident during the parching of the crop before storage or milling, in which case the feature and the fired clay within it may relate to a corn drying structure. The absence of wood charcoal in the feature is perhaps problematic since there is no evidence for what fuelled the fire, or 'drier' if such was the case.

Domestic occupation is suggested by the bone fragments, egg and mussel shell, while iron smithing may have occurred somewhere on site, although the single flake of hammerscale is an unreliable indicator. The very few snail shells suggests that the site was grassland, while two shells of aquatic estuarine taxa could be derived from the estuarine silts of the site or indicate the proximity of estuarine or brackish water conditions.

Recommendations

In the absence of any dating or identification of the charred plant remains it is difficult to assess the importance of the deposits. The deposits appear to represent evidence for crop production and processing and since they could be as early as Saxon, or potentially even earlier, this might indicate early cultivation of the reclaimed fen silts. If no further work is to be envisaged at the site then a radiocarbon date and botanical analysis of the charred assemblage would establish both its date and character, but further field work may be warranted on this feature and any adjacent activity and I would recommend that the radiocarbon analysis is carried out before a final decision is made in respect of any archaeological conditions on the site.

Acknowledgments

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Bibliography

Williams, D. 1973 Flotation at Siraf, *Antiquity*, 47, 198-202

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Appendix 6

GLOSSARY

- Context** An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, *e.g.* (004).
- Cut** A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, *etc.* Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
- Fill** Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) which become contained by the 'cut' are referred to as its fill(s).
- Layer** A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
- Medieval** Pertaining to the Middle Ages, dating from approximately AD 1066-1500.
- Natural** Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity.
- Prehistoric** The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
- Reworked** Soil deposits are sometimes changed by the water table increasing and decreasing continually, by worms moving through the soil, or by roots. These processes normally take several hundred years to transform a soil, and serve to homogenise it, removing any original textural or colour changes.
- Saxon** The period dating from approximately AD 450-1066.

Appendix 7

THE ARCHIVE

The archive consists of:

43 Context sheets

Photographic record sheets for

Black and white negatives and contact prints

colour slides

11 1:10 scale section drawings

5 1:20 scale plans

1 section record sheet

1 plan record sheet

2 context register sheets

This document

The digital archive consists of:

Copies of the digitised plans and sections in DCAD 2000 format

Copies of all survey data in DCAD 2000 format

Copies of the photos used in this report in JPEG format

Copies of this report in Word 97 and Word Perfect 5.1 format

All digital archives are stored at APS.

All primary records are currently kept at:

Archaeological Project Services,

The Old School,

Cameron Street,

Heckington,

Sleaford,

Lincolnshire,

NG34 9RW

The ultimate destination of the project archive is:

Lincolnshire City and County Museum,

12, Friars Lane,

Lincoln,

LN2 1HQ

The archive will be deposited in accordance with the document titled Conditions for the Acceptance of Project archives, Produced by the Lincolnshire City and County Museum.

Lincolnshire City and County Council Museum Accession Number:

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