# ARCHAEOLOGICAL EVALUATION OF LAND AT LONDON ROAD, KIRTON, LINCOLNSHIRE (KLR01)

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# ARCHAEOLOGICAL EVALUATION OF LAND AT LONDON ROAD, KIRTON, LINCOLNSHIRE (KLR01)

Work Undertaken For
RPS Chapmen Warren

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Report Compiled by
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**CONTENTS**

List of Figures



**Appendices**

**List of Figures**



**List of Plates**

Plate 10 Partial section through medieval ditch (903), looking southeast.

## 1. SUMMARY

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

*In the northern half of the site property boundaries dating to the Late Saxon/early medieval periods were identified, associated with the reuse of a defunct palaeochannel. Layers of tipping from the edges of this feature contained artefacts and environmental indicators which suggest the presence of domestic settlement in close proximity. Evidence from the boundary ditches also indicates the presence of domestic activity and, significantly, the presence of an iron smithy in the immediate vicinity.*

*In the Southern half of the site a medieval drainage ditch or sewer was revealed, and two post-medieval field boundaries were recorded.*

*Finds of Late/Saxon pottery, bone, industrial residues and a fragment of lava quern were recovered from the northern half of the site. Medieval and post-medieval pottery and building material was recovered from the southern half of the site.*

## 2. INTRODUCTION

### 2.1 Planning Background

Between the 27th September and 5th October 2001, an archaeological evaluation was undertaken on land east of London Road, Kirton, Lincolnshire. A planning application (B/01/0269/OUTL) has been made for residential development on the site. An archaeological evaluation was required for the determination of the application.

Two previous applications (B/00/310/OUTL & B/00/0312/FULL) have been submitted for the site, and previous non intrusive archaeological investigations have taken place; a desk-based assessment (Hawkes 2001) and a Geophysical Survey (Whittingham 2001).

Archaeological Project Services (APS) was commissioned by RPS Chapman Warren to undertake the archaeological evaluation of the site. A specification (Appendix 2) detailing the methods, techniques and procedures of the evaluation was produced to fulfil the requirements of the project brief (Appendix 1) issued by the Boston Community Archaeologist.

The evaluation was carried out in accordance with the guidelines specified in the Institute of Field Archaeologists' *Standard and Guidance for Field Evaluation* (IFA 1999).

### 2.2 Definition of an Archaeological Field Evaluation

Archaeological Evaluation is defined 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, national or international context as appropriate*' (IFA 1999).

### 2.3 Topography, Geology and Soils

Kirton is located 4km southwest of Boston in the fens of south Lincolnshire (Figure 1). The site lies on the south side of the village

centre, to the east of London Road (Figure 2), on fairly level ground at *c.* 3m OD at National Grid Reference TF 305 383.

Local soils are typical alluvial gleys of the Rockcliffe Association developed on marine alluvium (Hodge *et al.* 1984, 301). Beneath the marine alluvium is glacial drift that was deposited in a geological basin between the Lincolnshire Wolds and the East Anglian Heights (Harden 1978, 5).

## 2.5 Archaeological Setting

A Neolithic polished greenstone axe, which may be an import into the fens, and a possible Bronze Age 'tumulus' provide the only indication of a prehistoric presence in Kirton parish. However, it is possible that the 'tumulus' is in fact a medieval saltern mound.

Evidence of Romano-British activity is also scarce, but is represented by finds of this period from along Willoughton Road, on the northwest edge of the village. This spread of artefacts may represent the location of a settlement site.

The early origins of the village are not fully understood. However, recent investigations immediately to the west have revealed Saxo-Norman ditches and pits associated with dumps of domestic refuse of the same date (Thomson 2001). To the north a group of late Saxon/early medieval ditches and post holes were revealed, probably representing a peripheral agricultural settlement on newly drained fens (Snee 2001).

Medieval use of the area is, however, well attested to. Kirton village was the administrative centre of Kirton Wapentake at the time of the Domesday Survey of *c.* 1086 (Morris 1986). The village name is recorded as *Chirchetune* and is derived from the Old English words '*cirice*' (a church) and '*tun*' (a village), although at some point between 1096 and 1155-56 '*cirice*' was relaced by the Old Norse *'kirkja'* (Cameron 1998). Kirton grew to be an important medieval town, though it has since declined in favour of Boston.

The church of SS Peter and Paul (BD 14/043) lies in the centre of the village, and was originally built in the 12th century although it was substantially altered and reduced in size in the early 19th century. Located outside the village were three sizable houses of medieval date, Bozon Hall (14/018), Littlebury Hall (14/002) and Orme Hall (14/019), all now demolished. Medieval and later pottery and coins associated with Orme Hall have been recovered at the northwestern edge of the town (14/020, 021, 022 & 024) and a watching brief in the area (14/044) recorded a medieval ditch and finds of medieval pottery (Cope-Faulkner 1994).

To the west of the village, a number of medieval and post-medieval finds have been reported (14/041 & 14/034). Finds of medieval pottery have also been reported on the east and southwest outskirts of the village (14/023 and 14/025, 027, 028 & 029).

A number of investigations have been carried out in the centre of Kirton village. These have revealed a sequence of deposits from the late Saxon period to the modern day at High Street (14/050) (Cope-Faulkner 1996) and evidence of medieval activity on Station Road (14/045) (Taylor 1994). On both of these sites the medieval and earlier deposits were sealed below a layer of alluvium. Similarly undated archaeological activity was covered by alluvium on Willington Road (14/051), near the village centre (Hambly 2000).

French and German jettons (counting pieces or tokens) of 15th and 16th century date have

been found in the centre of the town (Cope-Faulkner 1994). Also in the town centre, close to the church, is the Old King's Head Inn (14/042) of early 16th century date (Pevsner & Harris 1989).

## 3. AIMS AND OBJECTIVES

The aim of the evaluation was to gather sufficient information to support a future planning application and 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

Based on the results of a previous Geophysical survey, targeted 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 20m long (2% of the evaluation area), were located to provide sample coverage of the whole area and to investigate possible features identified by the geophysical survey (Figures 3 & 13).

A mechanical excavator with a toothless ditching bucket excavated each trench under archaeological supervision to the level of undisturbed archaeological features. The base and sides of the trenches were then cleaned and any possible archaeological features or deposits were examined by hand. If no archaeological features were encountered, the trenches were excavated to the level of the undisturbed silts. In such cases a sondage was excavated to ensure no archaeological remains were present at depth and to examine as fully as possible the natural sequence of deposits.

All archaeological features and natural deposits were allocated a unique reference number (a context number), with an individual written description on APS *pro forma* context sheets. All archaeological features were drawn in plan at a scale of 1:20 and in section to 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. 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 matrix 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 were relevant. Six phases of deposits were identified:

| | |
|---|---|
| Phase 1: | Natural Deposits |
| Phase 2: | Undated Pre-Saxon/Early Medieval Deposits. |

Phase 3: Late-Saxon/Early Medieval Deposits
Phase 4: Medieval Deposits
Phase 5: Undated Deposits
Phase 6: Post-medieval and Later Deposits

## 5.1 Phase 1: Natural Deposits

### Trench 1

The earliest deposit encountered in Trench 1 was 0.28m or more of loose, light brown silty sand (103) with slight traces of clay. This was overlain by firm, dark brown sandy clayey silt (102), *c.* 0.25m thick.

### Trench 2

A short distance to the northwest, in Trench 2 the earliest deposit was more than 0.2m of loose, light brown silty sand (202).

### Trench 3

To the north of Trench 2, Trench 3 exposed two, probably contemporary natural deposits. In the north of the trench was at least 0.2m of firm, mid brown sandy silt (310), and in the south was firm, mid to light brown silty sand (311), greater than 0.42m thick. Separating the two deposits was a broad northeast-southwest oriented palaeochannel (309), with irregular convex sides.

### Trench 4

The earliest deposit encountered in Trench 4 was firm, mid brown silt (402), greater than 0.7m thick.

### Trench 5

In the southern half of the site, in Trench 5, the earliest deposit was more than 0.30m of firm, mid brown silt, (503) with occasional sand layers. Overlying the silt (503) was a layer of firm/stiff, dark brown clay (502), *c.* 0.50m thick. Sealing the clay layer (502) was up to 0.45m of friable, orange-brown silt (501).

### Trench 6

In Trench 6 a series of deposits, very similar to Trench 5, was revealed. The earliest deposit was greater than 0.35m of firm, grey-brown sand (606), which was overlain by *c.* 0.20m of firm, mid brown silt (605), with occasional sand layers. Developed over silt layer (605) was a band of firm/stiff, dark brown clay (604), c. 0.20m thick, which was in turn sealed by approximately 0.20m of friable, orange-brown silt (603).

### Trench 7

To the south of Trench 6, Trench 7 revealed firm, brown clayey silt (702), greater than 0.15m thick, sealed by c. 0.45m of firm, laminated orange-brown silt (701).

### Trench 8

Trench 8, a short distance further west of the other trenches showed a marked change in the depositional sequence of the southern half of the site. In this trench the earliest deposit was more than 0.80m of firm, pale orange-brown sand (803).

### Trench 9

Further to the west and close to the street frontage, Trench 9 revealed a small outcrop of firm/stiff, dark brown slightly silty clay (905), greater than 0.2m thick, which was overlain by up to 0.68m of firm, yellow brown sand (904), with bands of iron pan

## 5.2 Phase 2: Undated Pre-Saxon/Early Medieval Deposits.

### Trench 2

In the west end of Trench 2 was a partially exposed fragment of either a pit a ditch terminus (205), a quarter circle was visible in plan, *c.* 0.3m radius, with concave sides and flat base. Filling this feature was loose, mid greyish brown clayey silt and sand (206), with occasional flecks of fired clay. No other finds were recovered from this feature, but its stratigraphic location indicates that it dates to the early medieval period or before.

### Trench 3

The palaeochannel in Trench 3 contained a number of fills, the earliest of which was a layer of firm, mottled mid brown clayey sandy silt (307), up to 0.28m thick. Overlying fill (307) and the southern edge of the palaeochannel was a tip layer (305), comprising soft, mid brownish grey clayey sandy silt with frequent shell fragments, up to 0.15m thick. No finds were recovered from fill (307) and only bone fragments were recovered from tip layer (305). It is likely that layer (305) is late Saxon/early medieval in date and that fill (307) is earlier.

## 5.3 Phase 3: Late-Saxon/Early Medieval Deposits

### Trench 1

In the east end of Trench 1 was a north-south oriented ditch (104), 0.9m wide and c. 0.25m deep, with concave sides and rounded base. The fill (105) was loose, mid grey sandy silt with mid brown and black lenses. A fragment of a rim and spout from a Stamford ware spouted pitcher was recovered from this fill, indicating an early 12th century date for this feature. Ditch (104) lies on the same alignment as a 'positive linear trend' recorded by geophysical survey (Fig.13).

### Trench 2

Truncating the east side of pit/terminus (205) was a north-south oriented ditch (203), *c.* 1.9m wide and 0.5m deep, with concave sides and a rounded base. The fill was loose, light to mid brown clayey silt with occasional pebbles and charcoal fragments. Two sherds of late Saxon/early medieval pottery were recovered from this deposit. In addition a quantity of slag, including plano-convex hearth bottoms, was recovered associated with fragments of vitrified hearth linings. Ditch (203) lies on the same alignment as an 'area of magnetic enhancement' recorded by geophysical survey (Fig. 13).

### Trench 3

On the north side of palaeochannel (309) was a tip layer (308), up to 0.12m thick, of soft, mid to dark grey mottled sandy silt, with frequent shell fragments. Quantities of late Saxon/early medieval pottery, bone and a fragment of lava quern were recovered from this deposit.

On the south side of the palaeochannel (309), undated tip layer (305) was overlain by up to 0.32m of friable, mid to light brown silty sand (304). A quantity of late Saxon/early medieval pottery, burnt clay and bone was recovered from this layer.

## 5.4 Phase 4: Medieval Deposits

### Trench 9

At the west side of the southern half of the site, natural sand (904) was cut by an approximately east-west oriented ditch (903), of which the south side was exposed in the trench. From the exposed remains it

was established that it was greater than 1.6m wide, probably more than 1.3m deep, with a sloping south side that became concave at the lower end. The fill (902) was firm, orange-brown silty sand with yellow brown lenses and a mid brown band at the base. A sherd of 13th - 14th century pottery and a fragment of animal bone were recovered from the fill.

### 5.5 Phase 5: Undated Deposits

**Trench 1**

At the west end of Trench 1 was an irregular shaped feature (106), possibly a pit, greater than 0.95m long and 1.1m wide and approximately 0.5m deep with concave sides and an irregular flattish base. The fill comprised loose, mid grey sandy silt (107) with mid brown and black lenses. No dateable artefacts were recovered from this deposit.

**Trench 3**

Overlying undated palaeochannel fill (307) was a band of soft, light grey (slightly mottled) silty sand (306), up to 0.06m thick. This was sealed by a substantial fill (303), comprising soft, mid to light brown sandy silt, up to 0.40m thick. Overlying fill (303) and late Saxon/early medieval deposit (304) was a lens of soft, mid greyish brown sandy silt (302), with occasional shell fragments, up to 0.2m thick.

### 5.6 Phase 6: Post-medieval and Later Deposits

**Trench 1**

The latest deposit encountered in Trench 1 was loose, blackish brown clayey silt (101), *c.* 0.4m thick.

**Trench 2**

In Trench 2 a similar topsoil deposit (201) was encountered, up to 0.6m thick, with occasional brick/tile fragments.

**Trench 3**

The uppermost deposit in Trench 3 was 0.30m of topsoil (300), which sealed the upper, undated, fill of palaeochannel (309).

**Trench 4**

Natural silty clay (402) was overlain by 0.2m of topsoil (401).

**Trench 5**

In the southern half of the site, the natural deposits in Trench 5 were sealed by a layer of firm, dark grey-brown silt (500), *c.* 0.30m thick.

**Trench 6**

Cutting the orange-brown silt (603) was an approximately east-west oriented ditch (602), 0.88m wide and 0.45m deep, with sloping sides and a V-shaped base. This was filled with firm, very dark grey brown silt (601), with frequent brick and tile, pottery and refuse fragments, dating to the 19th and 20th centuries. Overlying the fill and covering the entire trench was *c.* 0.4m of topsoil (600).

**Trench 7**

In Trench 7, orange-brown silt (701) was overlain by *c.* 0.34m of topsoil (700).

**Trench 8**

In the southwest corner of the site, natural sand (803) was cut by a northeast-southwest oriented ditch, *c.* 2m wide and 0.6m deep,

with sloping sides and a flat base. The fill was soft, dark brown sandy silt (801), from which finds of 18th to 19th century brick, tile, pottery and glass were recovered. Overlying fill (801) was 0.40m of topsoil (800).

**Trench 9**

In Trench 9, ditch fill (902) was sealed below *c.* 0.30m of friable, dark grey-brown silt (901) with occasional pebbles and brick and tile fragments.

## 6. DISCUSSION

The earliest deposits (Phase 1) encountered during the investigation demonstrate the complex development of fen silts and the degree of change in the natural sequence over a comparatively small area. In the northern half of the site the sequence was of fining silts with only small amounts of clay, these were probably laid down as intertidal deposits developing into salt marsh.

In the southern half of the site, the earliest deposits were marine sands overlain by intertidal silts and then clays associated with brackish marshland. In the north and west of this area the clays were overlain by silts, probably representing a later episode of marine transgression. In the southeastern part of the area there were deep deposits of marine sand, which in Trench 9 were shown to overlie fine clay.

The palaeochannel (309) is probably and ancient feature and its earliest fills were laid down before the Late Saxon period.

The undated (Phase 2) pit or ditch terminus identified in Trench 2 cannot be assigned a function due to its fragmentary nature. Its stratigraphic position strongly suggests that it dated to the late Saxon/early medieval period or before. The undated tip layers in Trench 3 are possibly contemporary with those identified as late Saxon/early medieval, although they could be earlier.

In the northern half of the site, the late Saxon/early medieval period (Phase 3) was well represented.

In Trench 1 a north-south ditch was revealed from which a large un-abraded fragment of domestic pottery was recovered. Environmental analysis of a sample taken from this features fill produced charred remains of grasses and dried plants which may have been used as domestic fuel or kindling. This evidence strongly suggests that this ditch was associated with domestic settlement, and may have been a property boundary. It is possible that the feature was a field boundary but this is less likely.

A late Saxon/early medieval ditch in Trench 2 was parallel to the ditch in Trench 1, but larger and may form part of a pattern of contemporary enclosures. Although almost no burnt material was observed in the fill, the finds recovered from it included 15 pieces of iron slag. The fragments of slag included plano-convex hearth bottoms, vitrified hearth lining, hammer scale and possible fluxing materials. These finds indicate the presence of a late Saxon/early medieval smithy in the immediate area.

Although the palaeochannel in Trench 3 had largely silted up before the late Saxon/early medieval period it was clearly still extant as a linear hollow. The environmental evidence from the tip layers suggests it is unlikely that it carried even slow running water by this time, and may have been only seasonally flooded. In this form it appears to have been utilised by the people of the late Saxon/early medieval settlement, possibly as part of the layout of enclosure boundaries. During this period dumping in the area began to fill the channel up further. Layers of tipping of Late

Saxon/early medieval date are recorded from which finds of pottery, bone and a fragment of lava quern were recovered. The bone fragments show signs of butchery and gnawing by animals and environmental analysis of samples taken from one layer produced possible dietary residues and burnt waste, probably domestic hearth waste.

The only medieval (Phase 4) feature identified during the investigation was a heavily silted northwest-southeast oriented ditch. This was probably a drainage ditch or sewer.

In Trench 1 an undated (Phase 5) pit was excavated and a sample taken for environmental analysis. The analysis showed that the fill of this feature was derived from crop processing and that the species of plant present were consistent with the feature dating to the medieval period. It is possible that this pit was contemporary with the late Saxon/early medieval ditch located a short distance to the east, and the presence of weeds associated with damp marginal soils may support this, i.e. it is established from previous investigations in the area that the farm land in the hinterland of late Saxon/early medieval Kirton was newly reclaimed and marginal, evidence for a similar situation in later periods is lacking.

The latest, undated, fills of palaeochannel (309) in Trench 3, probably represent the infilling of the remains of the hollow by medieval and possibly later agriculture.

Two post-medieval (Phase 6) ditches were encountered in the southern half of the site (Trenches 6 and 8), both of these were probably field boundaries, the fills contained typical post-medieval refuse and building materials and it is likely they were deliberately filled in as the village expanded along London Road. Across both parts of the site the latest deposit was recent topsoil.

## 6.1 OVERVIEW

Geophysical Survey indicated the presence of a number of magnetic anomalies, some of which may have been of archaeological origins. Trial trenching has revealed a larger number of archaeological remains than the survey indicated and has identified an area of Late Saxon/early medieval remains in the north of the site.

A defunct palaeochannel, possibly reused in the Late Saxon/early medieval period as a property boundary, contained discrete tip layers including domestic refuse. Two parallel, north-south oriented, ditches, of Late Saxon/early medieval date, were located to the south of the palaeochannel. The western ditch (104) produced evidence of domestic occupation in the immediate area and industrial residues were recovered from the eastern ditch (203), suggesting the presence of a smithy.

A later medieval drain or sewer was located at the western side of the southern half of the site, and two post-medieval field boundaries were also revealed.

The artefact assemblage suggests that the northern part of the site was part of a diffuse Late Saxon/early medieval settlement but later reverted to agricultural land. Significantly, a recent investigation approximately 150m to the northwest recovered a similar, single phase Late Saxon/early medieval collection of material (Thomson 2001) and other sites of this date have been located throughout the village (Snee 2000, Hambly 2000). A body of evidence is emerging to suggest that the earlier settlement of Kirton was spread of a wider area than the later medieval village. This is a consistent pattern of settlement development to other siltland settlements in the area, such as Swineshead (Albone 1999). This process of settlement change is not fully

understood, but has important implications for interpretation of the social and economic function of early fenland villages.

The southern half of the site appears to have been agricultural land since its reclamation towards the end of the Saxon period.

## 7. ASSESSMENT OF SIGNIFICANCE

For assessment of significance the *Secretary of State's criteria for scheduling of ancient monuments* has been used (DoE 1990, Annex 4; see Appendix 8).

**Period:**

Three phases of datable remains were identified during the investigation. The majority of the remains in the northern half of the site were of Late Saxon/early medieval date, in the southern half of the site medieval and post-medieval remains were revealed.

**Rarity:**

Evidence of Late Saxon/early medieval settlement is moderately rare, and the northern half of the site represents single phase occupation, which is more unusual. Late Saxon/early medieval metal working is rare.

**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 files of the Boston District Community Archaeologist, and the Lincolnshire Sites and Monuments Record.

**Group Value:**

The two ditches and the re-used palaeochannel form a coherent group of features of the same date, the group value is therefore moderately high for this part of the site. The medieval ditch exists in islolation and has low group value, the two post medieval ditches had a moderately low group value.

**Survival/Condition:**

The preservation of features and remains was consistently high across the whole of the site.

**Fragility/Vulnerability:**

The features and deposits were covered between 0.25 and 0.5m of topsoil only, and at this comparatively shallow depth they are vulnerable to ground disturbance.

**Diversity:**

Period diversity is moderate with Late Saxon/early medieval and later periods represented. Functional diversity is high with pits ditches and reused natural features identified. In addition the tipped refuse and industrial residues indicate domestic activity, crop processing and smithing taking place in the immediate vicinity.

**Potential:**

The presence of domestic material in the northern half of the site indicates a high potential for settlement remains to occur in the immediate area, with structural remains possible on this part of the site. Potential also exists for pits or other features associated with crop processing, and hearth or other smithing remains to occur in this area. Potential exists for more ditches to occur in the southern half of the site.

### 7.1 Site Importance

The criteria for assessment have established that the Late Saxon/early medieval remains revealed in the northern part of this site are of high local importance and moderately high regional importance, with reference to the settlement and economy of the fens during this period. The high level of survival enhances the sites potential for understanding the early development of Kirton.

## 8. EFFECTIVENESS OF TECHNIQUES

The techniques employed during the trial trenching were, on the whole effective. The removal of ploughsoil and non-archaeological deposits with a mechanical excavator allowed a rapid and thorough investigation, and an opportunity to study the depositional history of the site. The correct identification and retention of industrial residues and the effective sampling of environmental remains allowed an assessment of the site in wider terms than the excavation of the features, in itself, would have achieved. The constant presence of a qualified archaeological scientist ensured that the necessary specialist information could be gained in an efficient and cost effective manner.

## 9. CONCLUSIONS

Archaeological investigations on land at London Road, Kirton, Lincolnshire, were undertaken because the site was near the historic core and there was potential that remains of Saxon, medieval and later date were present in the area.

In the northern half of the site property boundaries dating to the Late Saxon/early medieval periods were identified, associated with the reuse of a defunct palaeochannel. Layers of tipping from the edges of this feature contained artefacts and environmental indicators which suggest the presence of domestic settlement in close proximity. Evidence from the boundary ditches also indicates the presence of domestic activity and significantly the presence of an iron smithy in the immediate vicinity. Finds of Late/Saxon pottery, bone, industrial residues and a fragment of larva quern were recovered from the northern half of the site.

Medieval and post-medieval pottery and building material was recovered from the southern half of the site, where little was revealed other than a medieval drainage ditch or sewer was revealed, and two post-medieval field boundaries.

## 10. ACKNOWLEDGEMENTS

Archaeological Project Services would like to acknowledge the assistance of Mr Gary Lees of the RPS Chapman Warren who commissioned the fieldwork and this report. The project was coordinated by Denise Drury and Tom Lane edited this report. Rebecca Wilcox, the Boston Community Archaeologist permitted the examination of the relevant parish files.

## 11. PERSONNEL

Project Coordinator: Denise Drury
Site Supervisor: James Snee
Archaeological Team: Ben Crossley and Vicky Mellor
Surveying: Tobin Rayner
Finds Processing: Denise Buckley
CAD Illustration: James Snee
Photographic Reproduction: Sue Unsworth
Post-excavation Analyst: James Snee

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## 13. ABBREVIATIONS

| | |
|---|---|
| APS | Archaeological Project Services |
| IFA | Institute of Field Archaeologists |
| PCA | Pre-Construct Archaeology |
| SMR | Sites and Monuments Record Office |
| WYAS | West Yorkshire Archaeology Service |


Figure 1 General Location Plan.

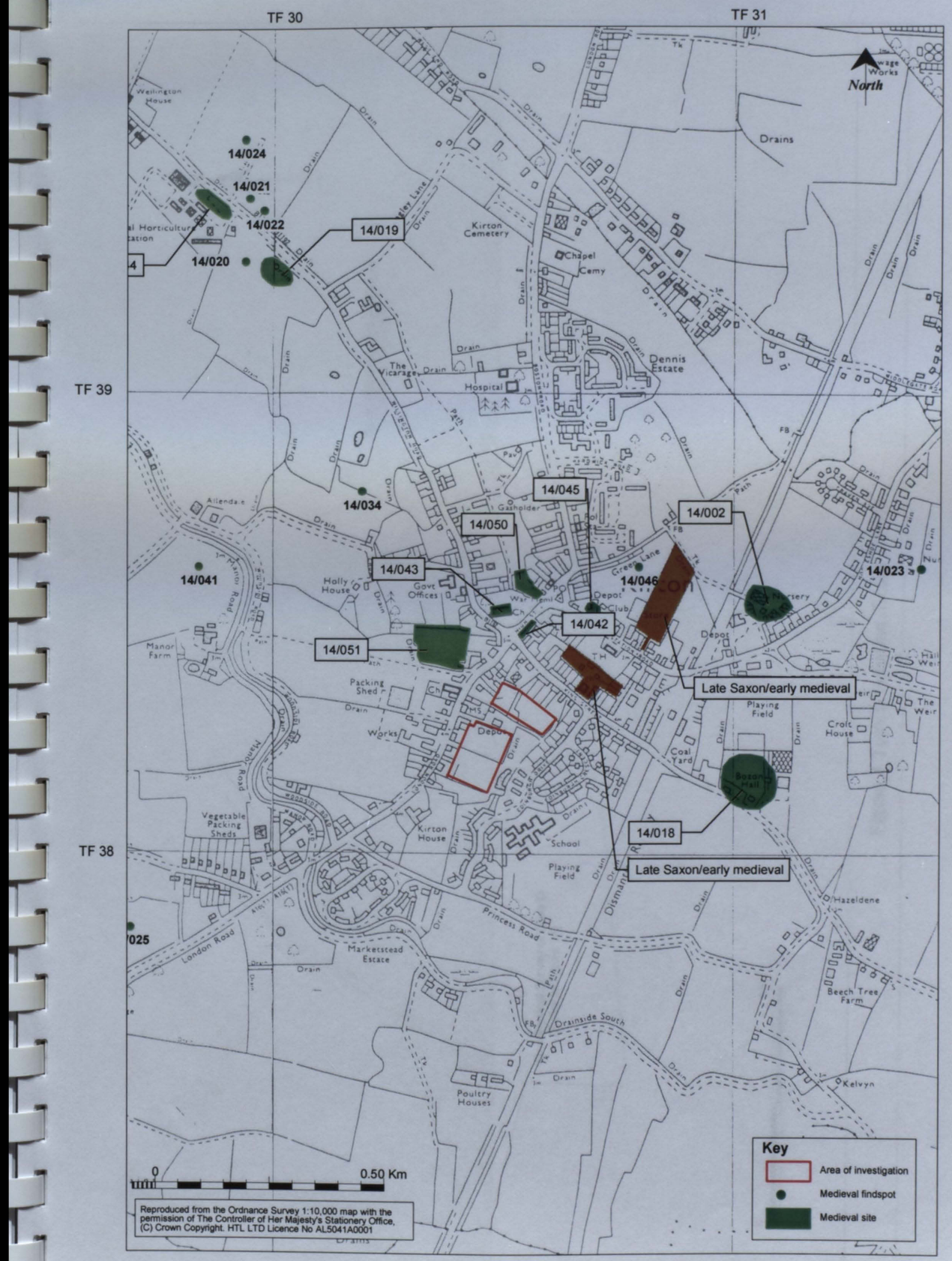
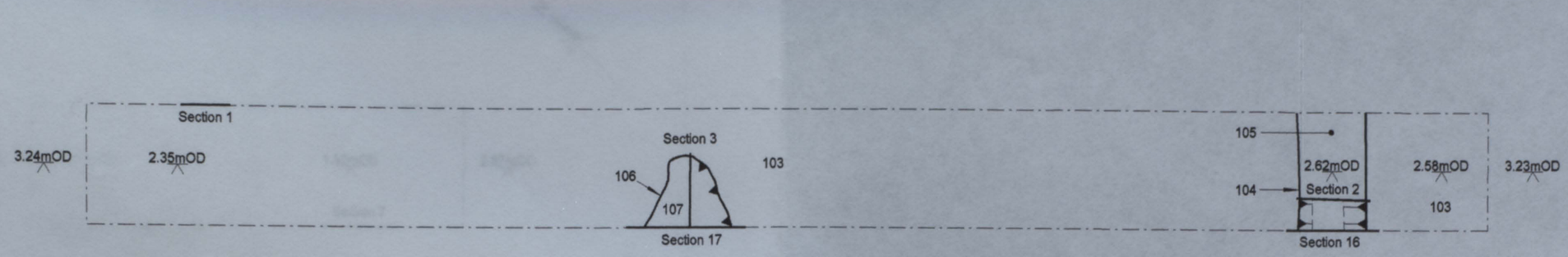
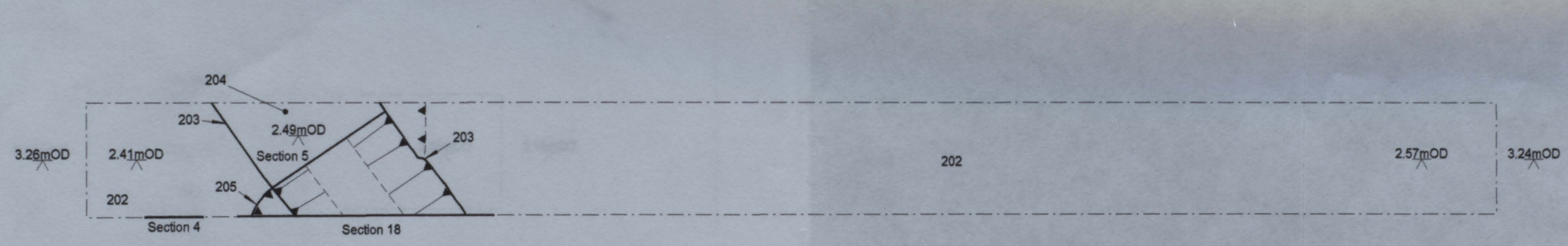



Figure 2 Location plan and archaeological setting

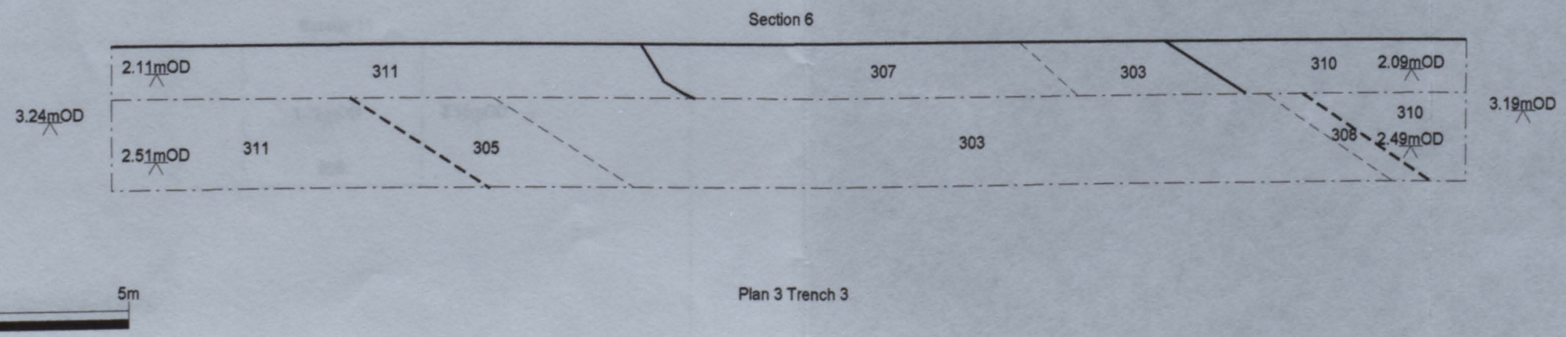

Figure 3 Trench Location. Scale 1:1000.




Plan 1 Trench 1

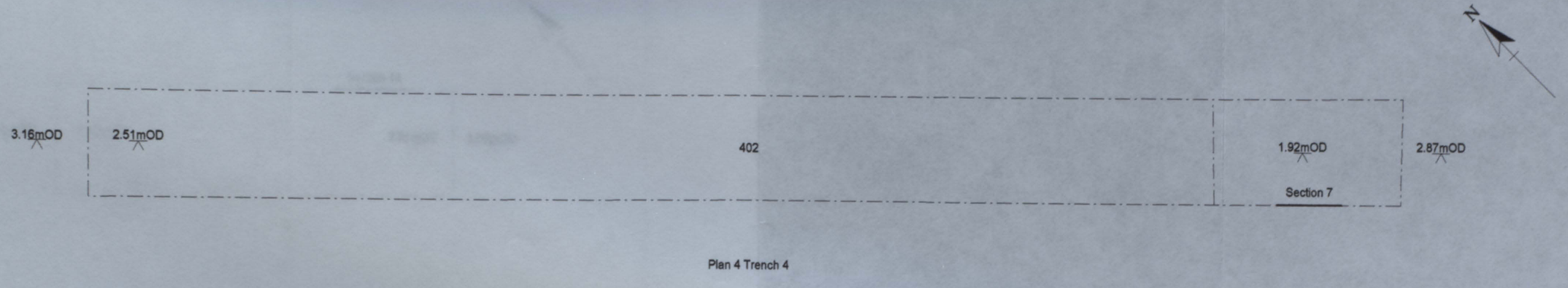


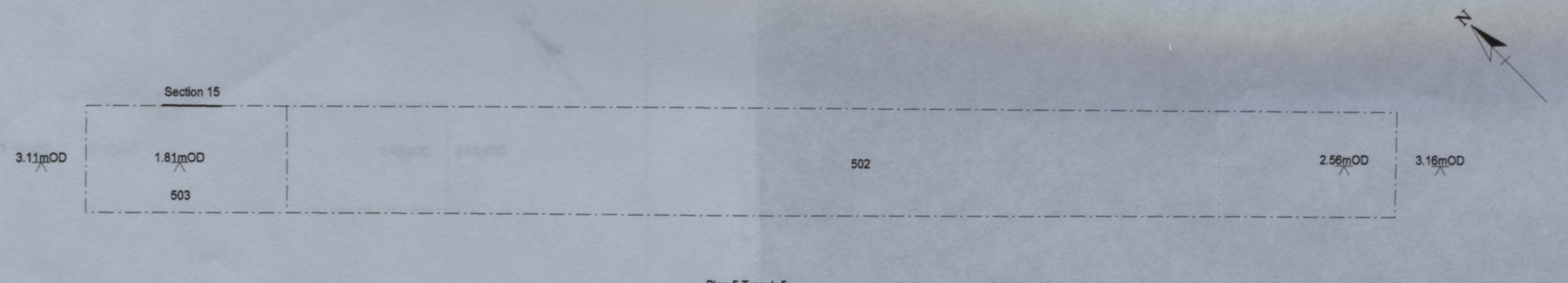

Plan 2 Trench 2




Plan 3 Trench 3

Figure 4 Plans of Trenches 1 to 3. Scale 1:75.



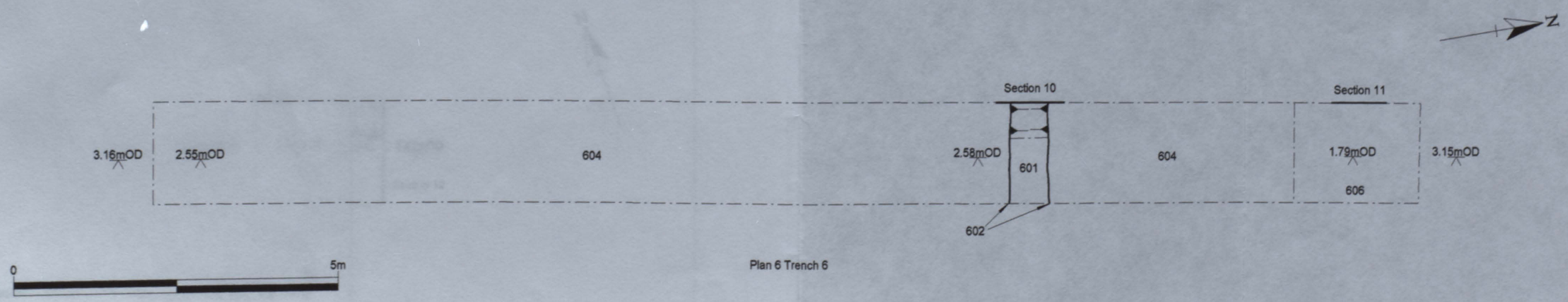




Figure 5 Plans of Trenches 4 to 6. Scale 1:75.

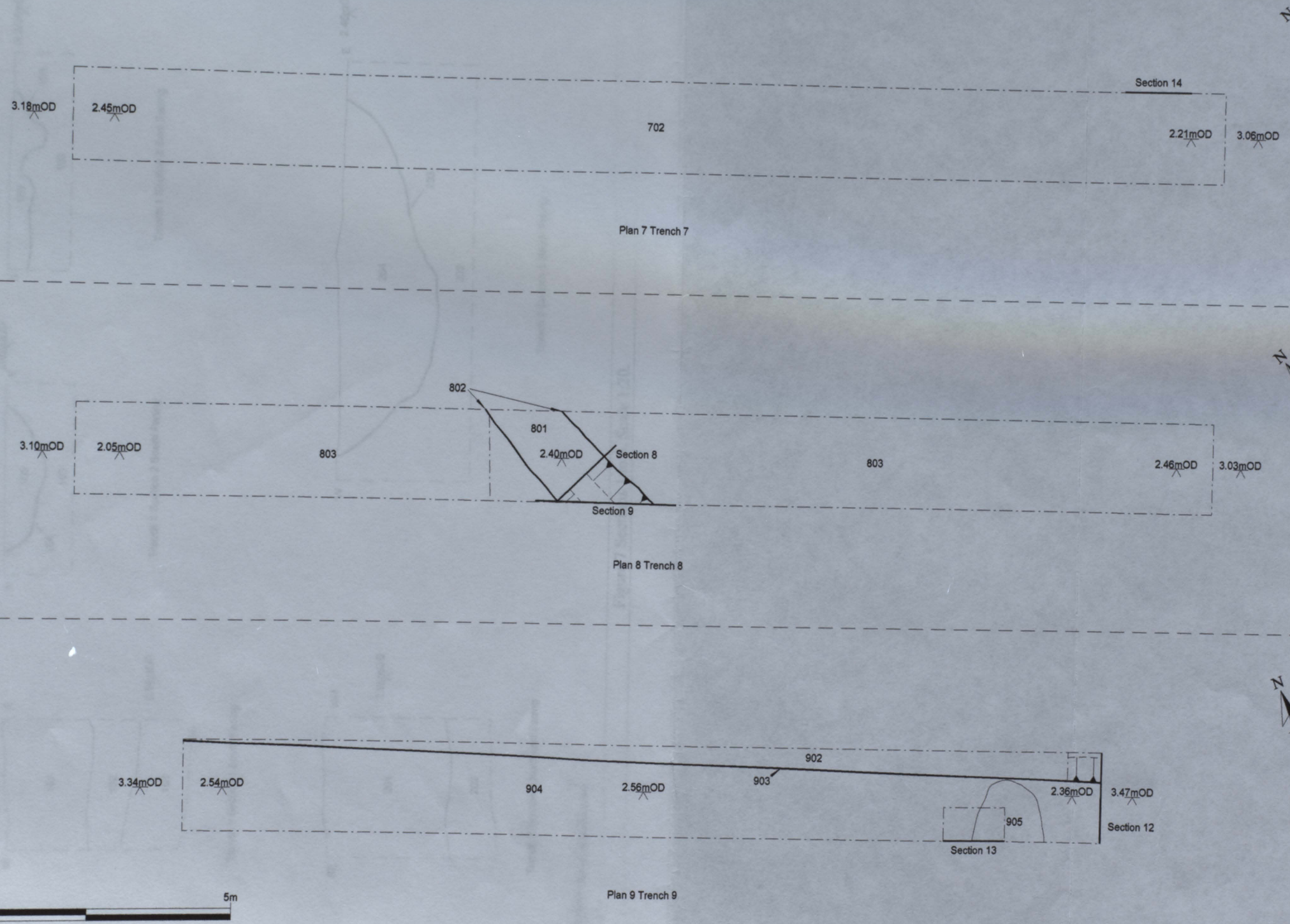
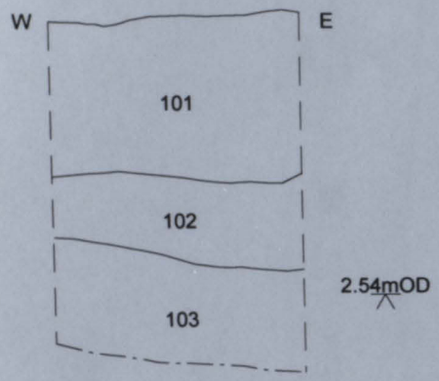
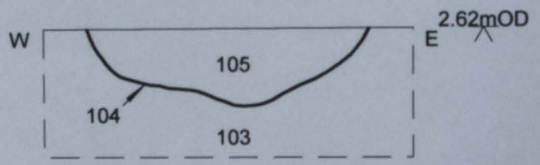


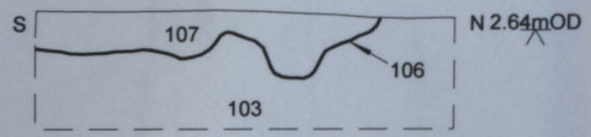

Figure 6 Plans of Trenches 7 to 9. Scale 1:75.



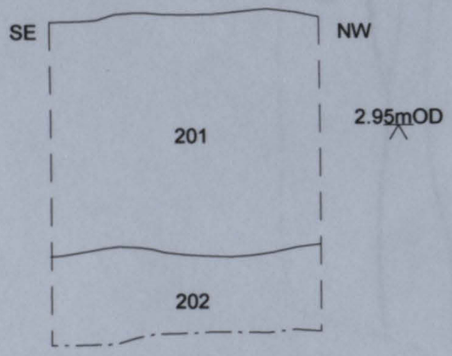

Trench 1 Section 1 South Facing



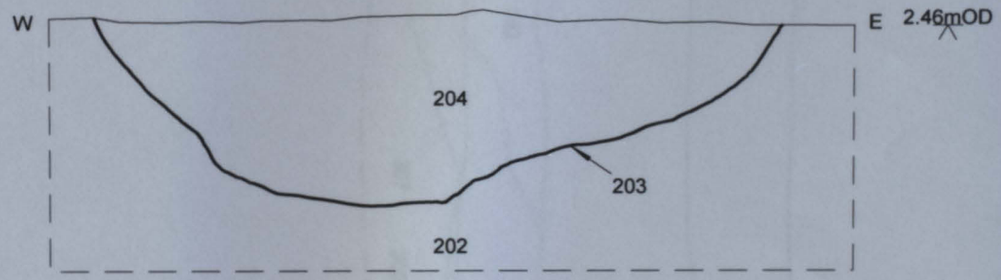

Trench 1 Section 2 South Facing




Trench 1 Section 3 East Facing




Trench 2 Section 4 Northeast Facing




Trench 2 Section 5 South Facing


Figure 7 Sections 1 to 5. Scale 1:20.

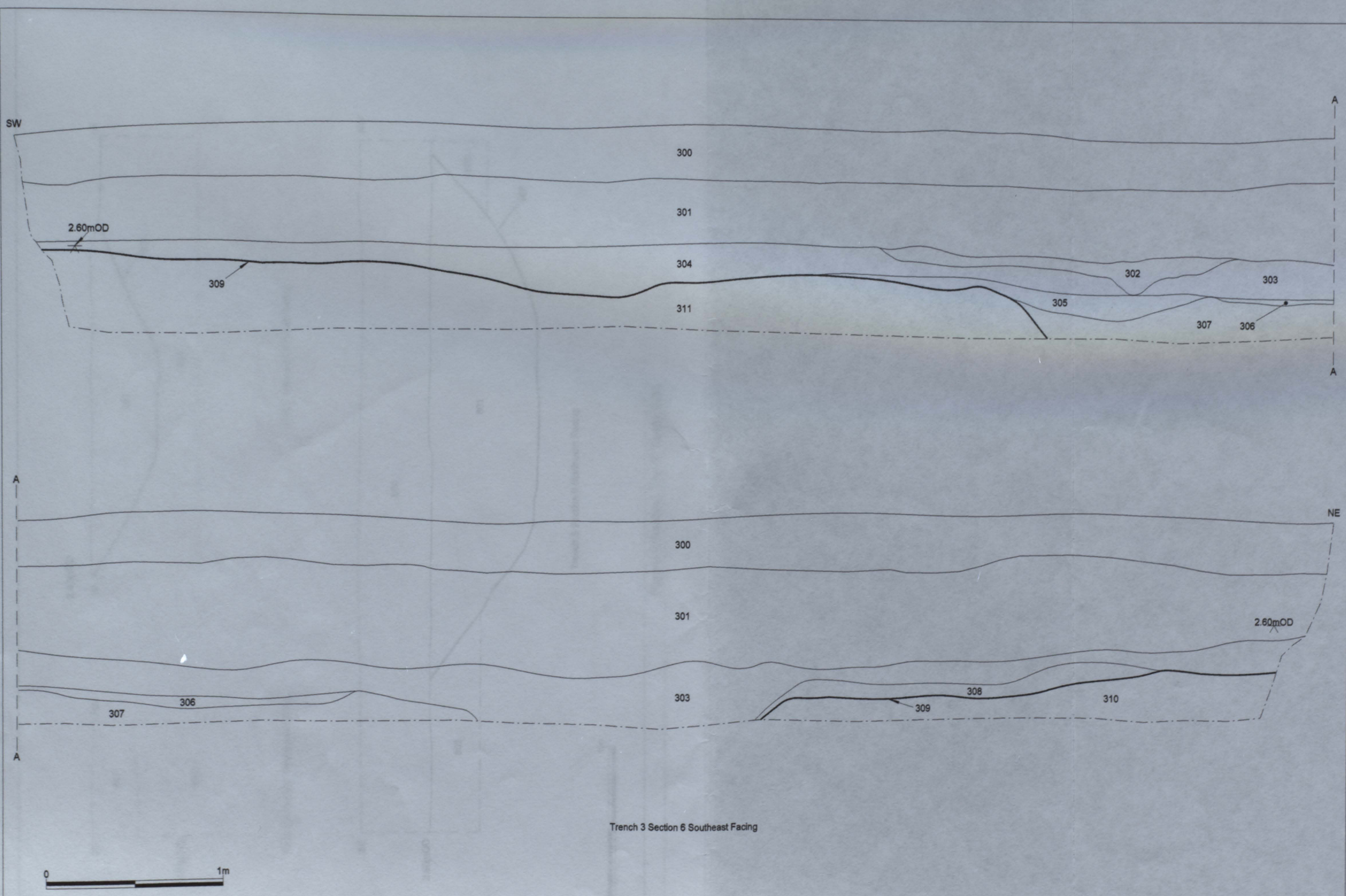



Figure 8 Section 6. Scale 1:20.

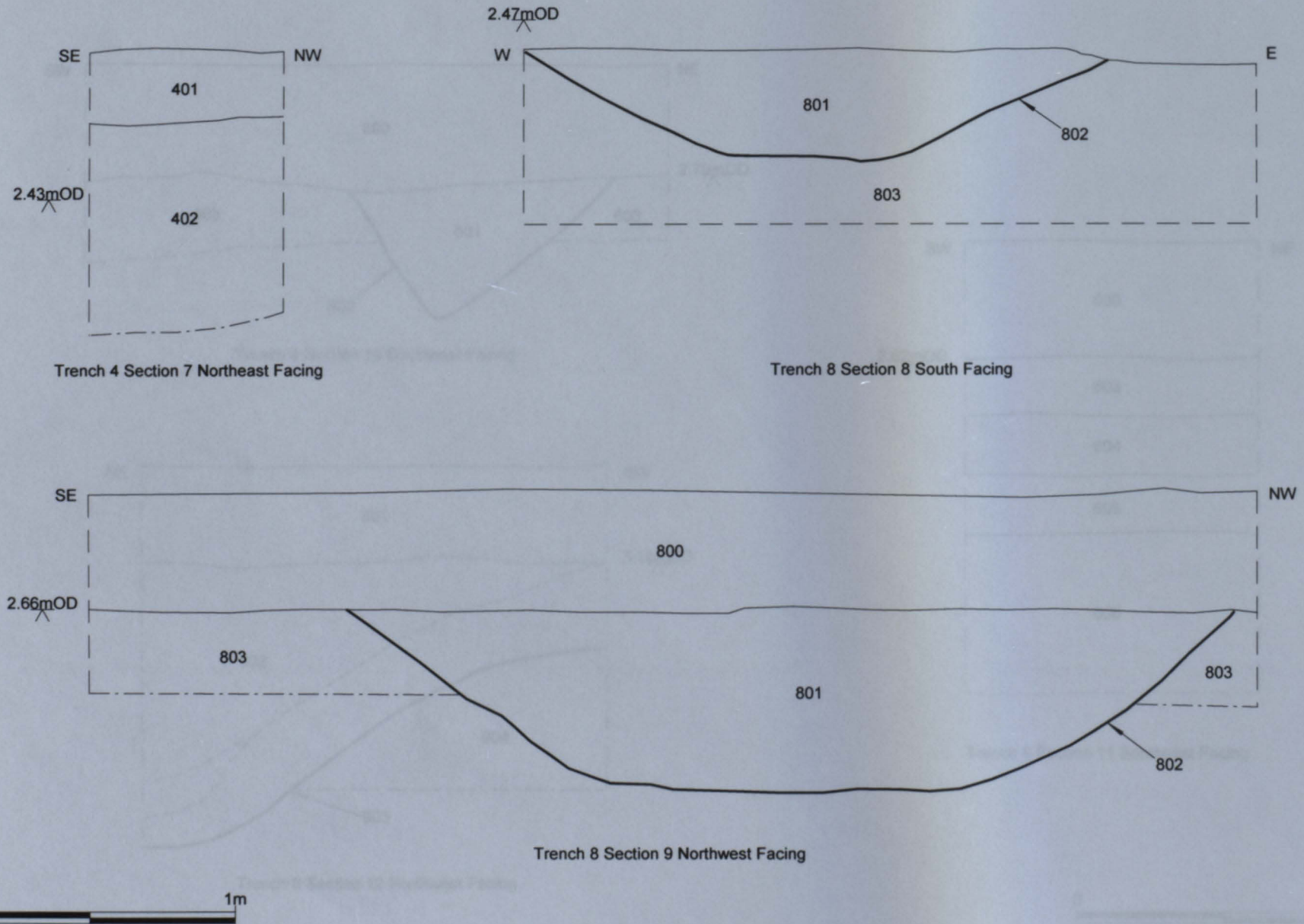
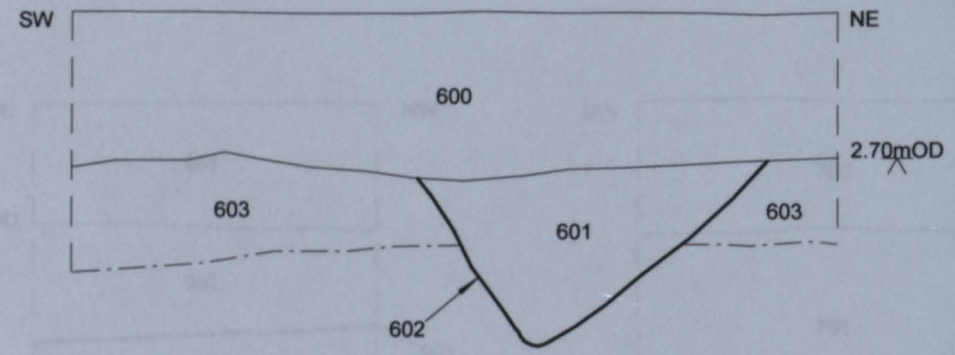
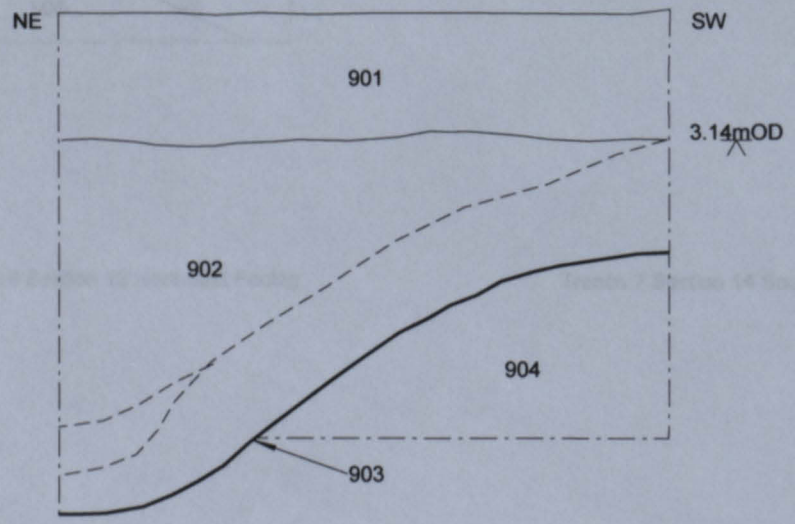


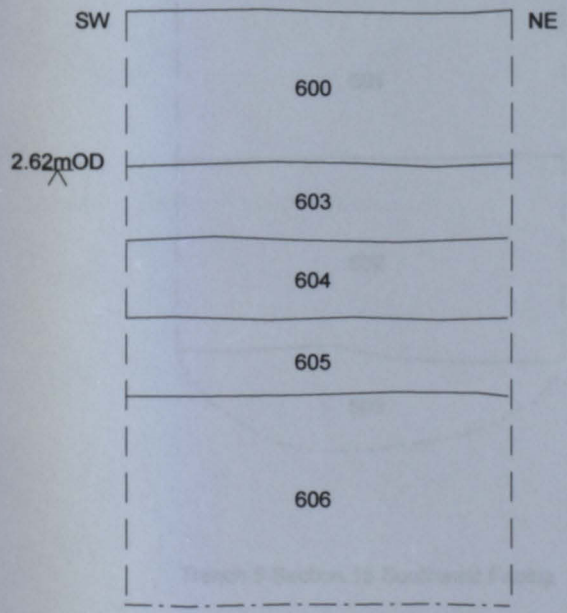

Figure 9 Section 7 to 9. Scale 1:20.




Trench 6 Section 10 Southeast Facing

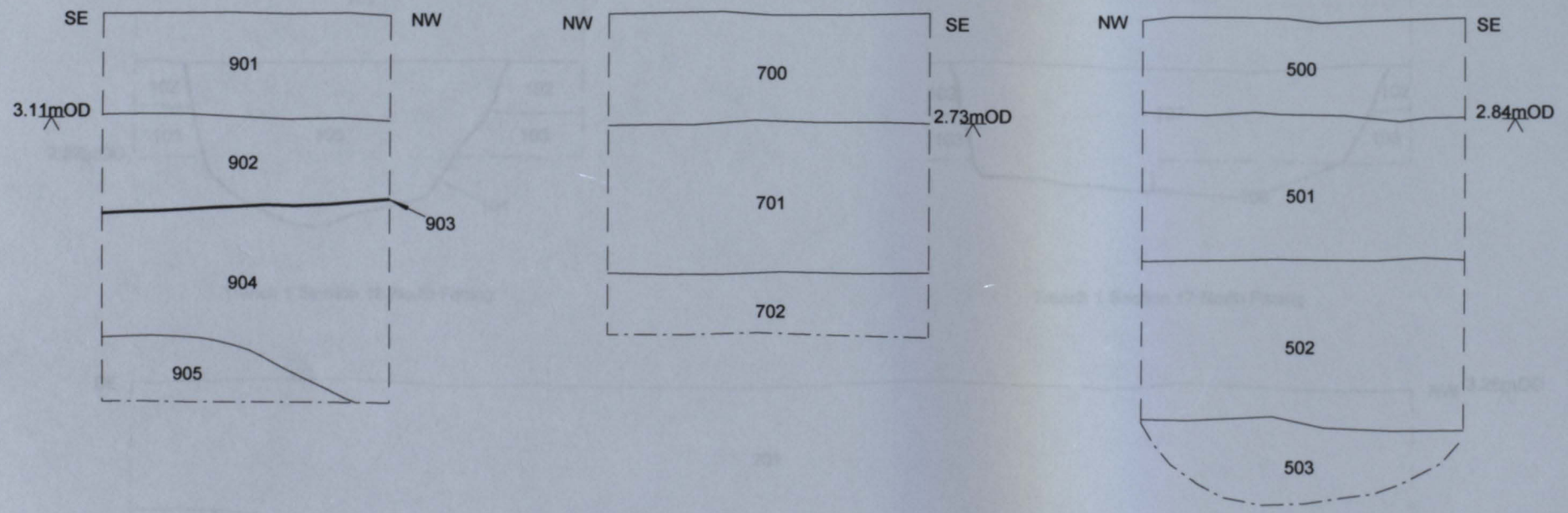



Trench 9 Section 12 Northwest Facing




Trench 6 Section 11 Southeast Facing


Figure 10 Section 10 to 12. Scale 1:20.

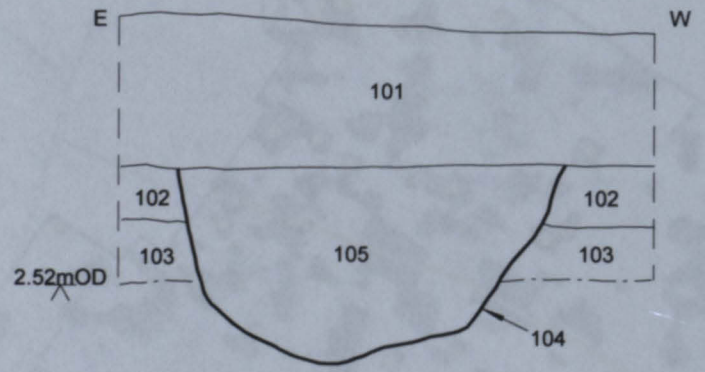



Trench 9 Section 13 Northeast Facing

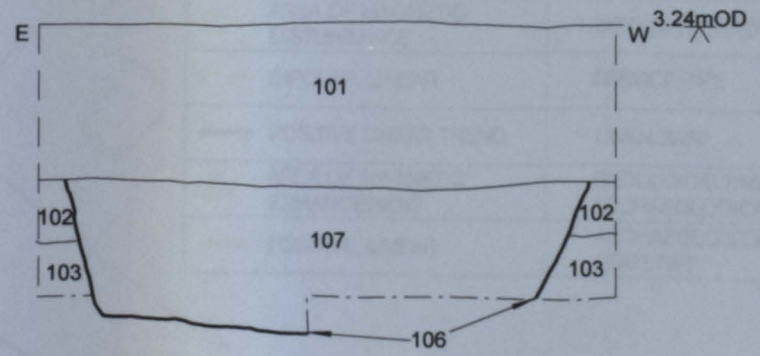
Trench 7 Section 14 Southwest Facing

Trench 5 Section 15 Southwest Facing

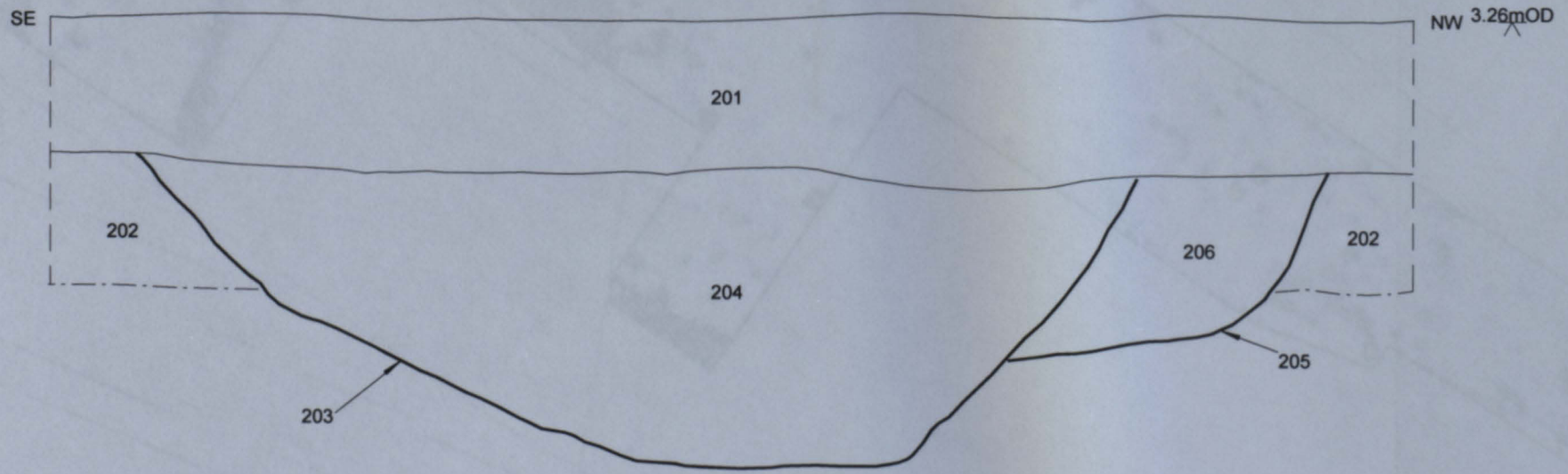

Figure 11 Sections 13 to 15. Scale 1:20.




Trench 1 Section 16 North Facing




Trench 1 Section 17 North Facing





Trench 2 Section 18 Northeast Facing

Figure 12 Sections 16 to 18. Scale 1:20.

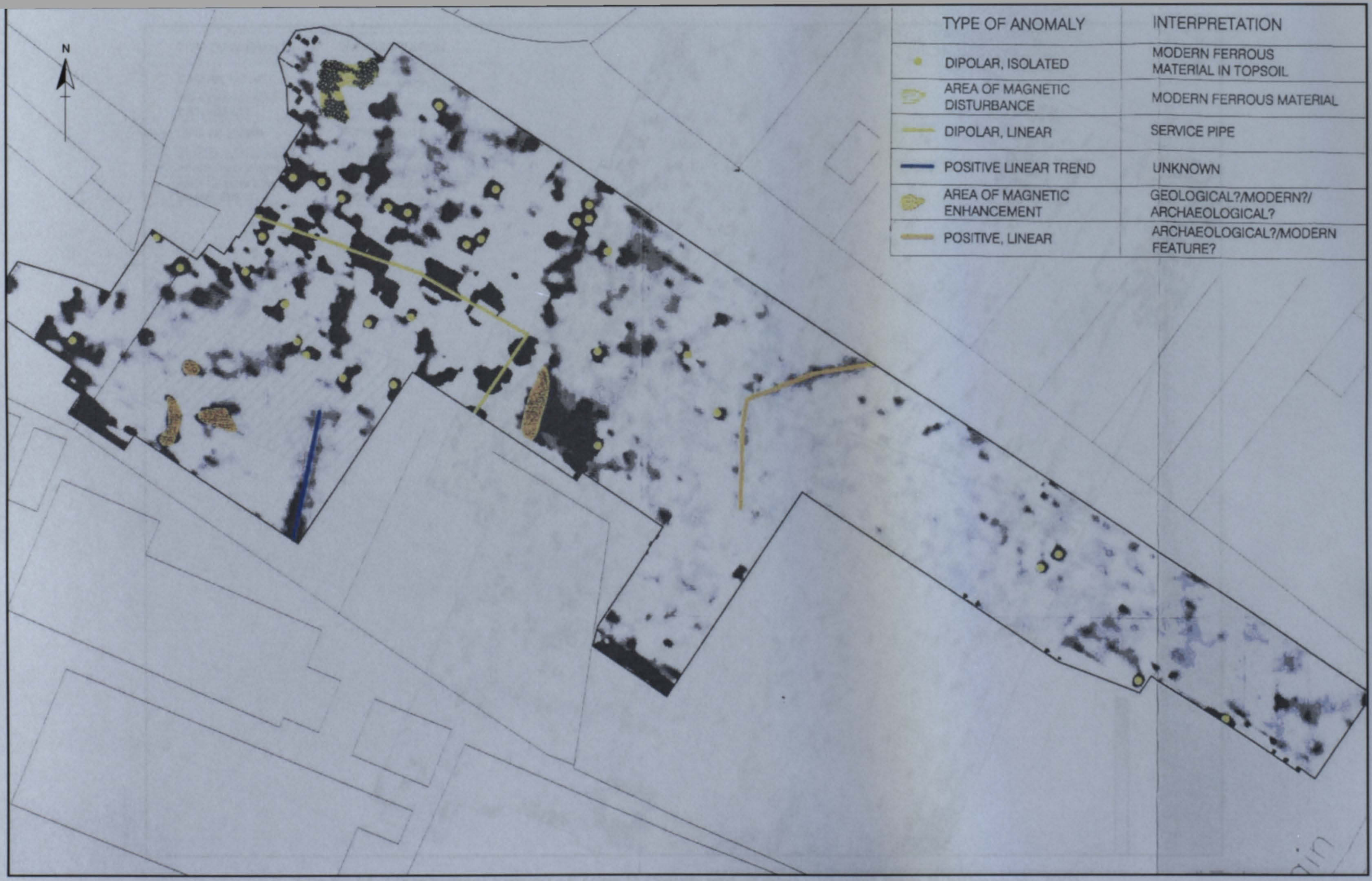



Figure 13 Geophysical Survey of Zone A (North end of site) - Extract from Whittingham 2001

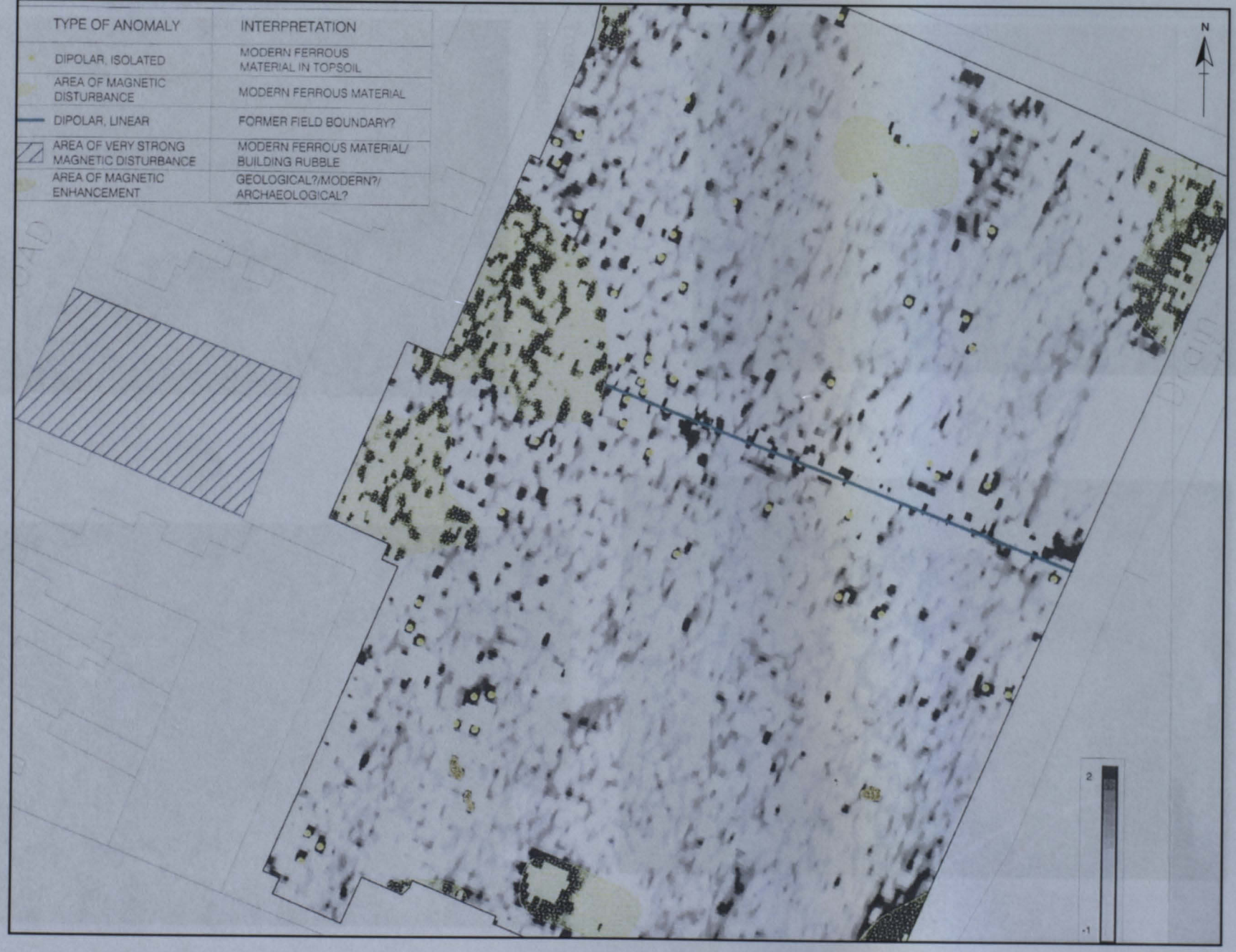



Figure 14 Geophysical Survey of Zone D (South end of site) - Extract from Whittingham 2001

Plate 1 General view of Trench 1, looking east.

Plate 2 General view of Trench 2, looking southeast.

Plate 3 General view of Trench 3, looking northeast.

Plate 4 General view of Trench 4, looking southeast.

Plate 5 General view of Trench 6, looking northeast.

Plate 6 Section through undated pit (106) in Trench 1, looking west.

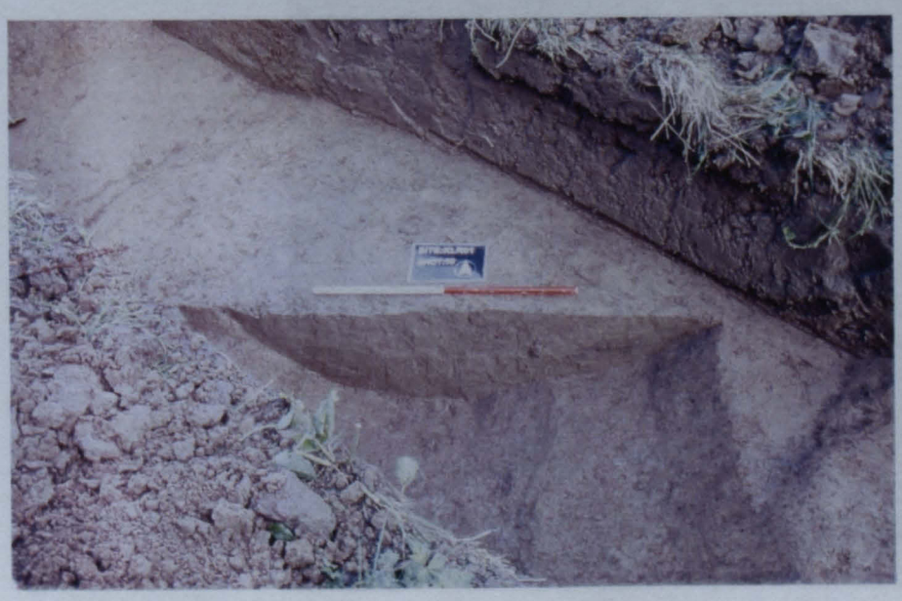


Plate 7 Section through Late Saxon/ early medieval ditch (203) in Trench 2, looking north.


Plate 8 Section through post-medieval ditch (602) in Trench 6, looking northwest.

Plate 9 Section through post-medieval ditch (802) in Trench 8, looking north.

Plate 10 Partial section through medieval ditch (903), looking southeast.

# Appendix 1

**BRIEF FOR ARCHAEOLOGICAL EVALUATION AT**

**Fossit & Thorne, London Road, Kirton Lincolnshire**

**Application Number:** B/01/0269/OUTL

**Site Address:** Fossit & Thorne, London Road, Kirton.

NGR: TF 305 383

**Applicant:** Fossit & Thorne

**Agent:** Chapman Warren (R Bellamy / 45.1659)
Millford House,
260 Lichfield Road,
Sutton Coldfield,
West Midlands, B74 2UH.

**Site Location and Description:**
The application site is located within Kirton, a village located approximately 6kms southwest of Boston in Lincolnshire.

A full description of the site is available in an archaeological desk-based study undertaken by AC Archaeology on behalf of Fossit & Thorne (Hawkes, 2001).

**Planning Background:**
Planning permission is sought for residential development.

The Boston Community Archaeologist has also commented on two previous planning applications on this site, B/00/ 310/OUTL and B/00/0312/FULL.

Before planning permission can be determined, further archaeological evaluation must be carried out to inform a recommendation on the archaeological impact of the development.

**Archaeological Background:**
AC Archaeology has prepared an Archaeological Desk-Based study and produced a Geophysical Survey, carried out by Archaeological Services WYAS, on behalf of the client. This has provided a detailed account of the proposed development site and has given indications on the archaeological potential of the site. (Hawkes, 2001) & (WYAS, 2001).

Two archaeological evaluations have recently been undertaken by Archaeological Project Services on King Street and Station Road. Both have produced evidence for archaeological activity, and have produced late Saxon and early medieval pottery. Although the reports for these sites are not yet available, the results from the King Street evaluation suggest that there was occupation close to the site. The King Street evaluation is located in NGR 3075 3840, not far from the northern edge of the proposed development site.

**Reason for Archaeological Evaluation**
The proposed development is situated within the historical core of Kirton and has the potential to reveal archaeological deposits relating to the late Saxon and Medieval periods of Kirton once

development commences. It is therefore felt that a scheme of 2% trial trenching should be undertaken in order to advise on the threat to the archaeology caused through this development.

**Signed.** . . . . . .

**Rebecca Wilcox**
**Boston Community Archaeologist**

**Date: 7/08/01**
Brief is valid for 1 year from this date. Please contact the Community Archaeologist after this time.

**For the Particular Attention of the Client**

**1. Introduction**

1.1. This brief should be sent to archaeological contractors, together with all relevant site plans of the proposed development, as the basis for the preparation of a detailed archaeological project specification. In response to this brief contractors will include the anticipated working methods, timescales and staffing levels. (The Boston Community Archaeologist does not maintain a list of archaeological contractors but names of local units can be found in the Yellow Pages or from the Institute of Field Archaeologists, Tel: 0118 931 6446).

1.2. The client will submit these detailed specifications for approval by the Boston Community Archaeologist. Failure to seek approval at an early stage may result in delay later on. To avoid any such delay the client is strongly advised to seek approval of the detailed specification as soon as possible. The client may choose between those specifications that are considered by the Boston Community Archaeologist to adequately satisfy the brief.

1.3 All contractors supplying specifications should refer to SCAUM Principles of Competitive Tendering (SCAUM Guidelines and Notes on Competitive Tendering for Archaeological Services 1996).

**For the Particular Attention of the Archaeological Contractor**

**2. Requirement for Work**

In order for this planning application to be determined a 2% trial trenching evaluation needs to be undertaken over the area covered by the geophysical survey to test both anomalies and negative areas.

2.1 The evaluation will consist of:

2.1.1 **Intrusive** - trial trenching.

2.2 The purpose of the archaeological evaluation should be to gather sufficient information to establish the presence/absence, extent, condition, character, quality and date of any archaeological deposits.

2.3 Any adjustments to the brief for the evaluation should only be made after discussion with the Community Archaeologist for Boston Borough Council. If any major archaeological discovery is made it is hoped that this will be accommodated within the scheme and preservation in situ be given due consideration.

**3. Stages of Work and Techniques**

3.1 A report should follow the evaluation which integrates earlier investigations so as to provide a context for any archaeology encountered. The report must place the findings in

a local, regional and national context in order that the any archaeological deposits can be fully assessed.

3.2 The evaluation should take into account environmental evidence and provide an assessment of the viability of such information should further archaeological work be carried out.

4. **Methods**

4.1 In consideration of methodology the following details should be given in the contractor's specification:

4.1.1 A projected timetable must be agreed for the various stages of work;

4.1.2 The staff structure and numbers must be detailed. This should include lists of specialists and their role in the project;

4.1.3 It is expected that all on site work will be carried out in a way that complies with relevant Health and Safety legislation and that due consideration will be given to site security;

4.1.4 The method of geophysical survey should be described and the reasons given as to why the method was chosen. **(The work should be carried out according to the guidelines in Research & Professional Services Guidelines No. 1 '*Geophysical Survey in Archaeological Field Evaluation*' (English Heritage 1995).**

4.1.5 The amount of trial trenching will be adequate to investigate the nature and extent of the archaeology. Current practice is to sample at least 2% of the proposed development area.

4.2 Excavation is a potentially destructive technique and the following factors should be bourne in mind:

4.2.1 The use of an appropriate machine with a wide toothless ditching blade.

4.2.2 The supervision of all mechanical earthmoving by an experienced archaeologist.

4.2.3 The machine should be used to remove topsoil down to the first archaeological horizon.

4.2.4 The most recent archaeological deposits are not necessarily the least important and this should be considered when determining the level to which machining will be carried out.

4.2.5 When archaeological features are revealed by machine these will be cleaned by hand.

4.2.6 A representative sample of every archaeological feature must be excavated by hand (although the depth of deposits must be determined, it is not expected that every trench will be excavated to natural).

4.2.7 All excavation must be carried out with a view to avoiding features which may be worthy of preservation *in situ*.

4.2.8 Samples should be taken from deposits which are suitable for further investigation for ecofacts /artefacts and/or the identification of archaeological processes.

4.2.9 Any human remains encountered must be left *in situ* and only removed if absolutely necessary. The contractor must comply with all statutory consents and licences regarding the exhumation and interment of human remains. It will also be necessary to comply with all reasonable requests of interested parties as to the method of removal, reinterment of disposal of the remains or associated items. Attempts must be made at all times not to cause offence to any interested parties.

4.2.10 It is expected that an approved single context recording system will be used for all on-site work and post fieldwork analysis.

4.2.11 All excavated features will be drawn at the appropriate scale (1:10 for section drawings, 1:20 for single contexts, 1:50 or 1:100 for site plans).

4.2.12 A metal detector should be used to scan all spoil from machining.

4.2.13 If discovered during excavation, finds of gold and silver must be archaeologically removed to a safe place and reported to the local coroner immediately (within 14 days) in accordance with the Treasure Act 1997 and Code of Practice. If removal of such finds is not possible on the same day than adequate security arrangements should be made.

4.2.14 The contingencies for the extended excavation/recording/sampling required for this brief.

## 5. Monitoring Arrangements

5.1 The Community Archaeologist for Boston Borough Council will monitor the fieldwork to ensure that it meets the specification. To facilitate this she should be contacted at least one week prior to the commencement of fieldwork. The Community Archaeologist should be kept informed of any unexpected discoveries and regularly updated on the project's progress. They should be allowed access to the site at their convenience and will comply with any health and safety requirements associated with the site.

## 6. Reporting Requirements

6.1 An interim report is expected within two weeks, may take the form of consultation with the Community Archaeologist if the results of trial trenching are mainly negative. The final report should be a straightforward account of the fieldwork carried out and should be produced within two months of the completion of the fieldwork phase. If this is not possible then the Boston Community Archaeologist must be consulted at the earliest possible opportunity. The report should include:

6.1.1 Plans of the trench layout and features therein, including relevant trench sections and OD levels.

6.1.2 Tables summarising features and artefacts together with a full description and brief interpretation.

6.1.3 Plans of actual and potential deposits.

6.1.4 A consideration of the evidence within the wider landscape setting.

6.1.5 A consideration of the importance of the findings on a local, regional and national basis.

6.1.6 A critical review of the effectiveness of the methodology.

6.1.7 A consideration of the impact of the proposed development upon any archaeological remains.

6.2 Any recommendation for further work is the responsibility of the Boston Community Archaeologist. The report produced by the contractor, therefore, should not include a written recommendation concerning further works. Should the contractor wish to make recommendations to the Boston Community Archaeologist, this may be done orally or in writing separately from the submitted report (*IFA Standard and Guidance for Archaeological Field Evaluation paragraph 3.4.8)*.

6.3 A copy of the evaluation report must be deposited with the Community Archaeologist for Boston Borough Council, Boston Borough Council, The Lincolnshire Sites and Monuments Record and the client.

## 6. Archive Deposition

6.1 Arrangements must be made with the landowner(s) and/or developers and an appropriate museum for the deposition of the object and paper archive. If the receiving museum is to be the City and County Museum, Lincoln then the archive should be produced in the form outlined in that museum's document 'Conditions for the Acceptance of Project Archives'.

## 7. Publication and Dissemination

7.1 The deposition of a copy of the report with the Lincolnshire Sites and Monuments Record will be deemed to put all information into the public domain, unless a special request is made for confidentiality. If material is to be held in confidence a timescale must be agreed with the Boston Community Archaeologist but is expected this will not exceed six months. Consideration must be given to a summary of the results being published in Lincolnshire History and Archaeology in due course.

7.2 Should remains of regional or national importance be found, the results of the evaluation should be published in an appropriate format. It is expected that nationally significant remains will be published in the relevant national journal.

8. **Additional Information**

8.1 This document attempts to define the best practice expected of an archaeological evaluation but cannot fully anticipate the conditions that will be encountered as work progresses. Changes to the approved programme of evaluation work, however, are only to be made with the prior written approval of the Boston Community Archaeologist.

**8.2 Bibliography**

**Hawkes, JW (2001) *Proposed Development at Fossit and Thorne, London Road, Kirton, Lincolnshire* Unpublished report 7900/2/0**

**WYAS, Archaeological Services (2001) *Geophysical Survey at Fossit & Thorne, London Road, Lincolnshire* Unpublished report 898 (AC archaeology report 7900/3/0)**

9. Further contact addresses:

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Lincoln
LN2 5AL

Jim Bonner
Senior Built Environment Officer
Lincolnshire County Council
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City Hall
Lincoln
LN1 1DN

Jacqui Mulville
Regional Science Adviser (East Midlands)
Oxford University Museum
Parks Road
Oxford
OX1 3PW
Telephone: 01865 272996

Appendix 2

# LAND AT
# LONDON ROAD
# KIRTON
# LINCOLNSHIIRE

## SPECIFICATION FOR
## ARCHAEOLOGICAL EVALUATION

**PREPARED FOR**
**RPS CHAPMAN WARREN**

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

**SEPTEMBER 2001**

## TABLE OF CONTENTS

# 1 SUMMARY

*1.1 This document comprises a specification for the archaeological field evaluation of land east of London Road, Kirton, Lincolnshire.*

*1.2 The area is archaeologically sensitive, lying close to the centre of the medieval town, and the Church. Previous investigations a short way to the north have produced late Saxon and early medieval pottery.*

*1.3 A planning application has been submitted for development of the site. The archaeological works are being undertaken to assist the determination of that application. Desk-top assessment and geophysical survey have already been undertaken. Trial-trenching is now required in order to clarify the nature of the geophysical responses.*

*1.4 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 the Fossit & Thorne site, London Road, Kirton, Lincolnshire. The site is located at National Grid Reference TF 305 383.

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 situated approximately 6km southwest of Boston in the Boston district of Lincolnshire. The proposed development area, approximately 2.5ha in extent lies on the south side of the village centre, to the east of London Road at National Grid Reference TF 305 383. The site is partly occupied by outbuildings and storage areas, but there is grassed open space on the north and west sides (zones

A and D).

## 4 PLANNING BACKGROUND

4.1 A planning application (B/01/0269/OUTL) has been made for residential development on the site. The archaeological works are being undertaken in order to assist the determination of the application.

## 5 SOILS AND TOPOGRAPHY

5.1 The site lies at *c.* 3m OD in the fens of south Lincolnshire. Soils at the site are typical alluvial gleys of the Rockcliffe 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 ARCHAEOLOGICAL BACKGROUND

6.1 The origins of Kirton go back to the late Saxon period. Archaeological excavations have revealed evidence of occupation from this period onwards within the village. The village is mentioned in the Domesday Book and was an important market town in the medieval period, probably extending beyond its modern boundaries.

6.2 The proposed development site lies close to the centre of the town, 150m south of the parish church of St Peter and St Paul. Late Saxon and medieval activity has previously been identified on the High Street east of the church and medieval activity on Station Street to the northeast. Further late Saxon activity has been identified on King Street to the north and east (APS 2001).

6.3 Desk-top assessment of the archaeological potential of the site (AC Archaeology 2001) concluded that the early settlement was probably located in the immediate vicinity of the church with later expansion to the north and east. There is at present no evidence for occupation south of King Street. Geophysical survey undertaken in zones A and D (WYAS 2001) does not suggest a significant level of early settlement but identified a number of anomalies of possible archaeological origin. Trial trenching is being undertaken to clarify the nature of these anomalies.

## 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 curator 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 Trial trenching will be undertaken in the relatively undisturbed areas, zones A and D, and will consist of the excavation of nine (9) trenches, measuring 20m x 1.6m. 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 investigation.

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 necessarily be excavated. However, the investigation 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:

- the site before the commencement of field operations.
- the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.
- individual features and, where appropriate, their sections.
- groups of features where their relationship is important.
- 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 investigation 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 investigation 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 investigation will be prepared. This will consist of:

- A non-technical summary of the results of the investigation.
- A description of the archaeological setting of the site.
- Description of the topography and geology of the investigation area.
- Description of the methodologies used during the investigation and discussion of their effectiveness in the light of the results.

- A text describing the findings of the investigation.
- 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.
- Sections of the trenches and archaeological features.
- Interpretation of the archaeological features exposed and their context within the surrounding landscape.
- Specialist reports on the finds from the site.
- Appropriate photographs of the site and specific archaeological features or groups of features.
- 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 investigation 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 investigation report will be sent to: the client; 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 investigation 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.

| Task | Body to be undertaking the work |
|---|---|
| Conservation | Conservation Laboratory, City and County Museum, Lincoln. |
| Pottery Analysis | Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust<br><br>Roman: B Precious, independent specialist<br><br>Anglo-Saxon: J Young, independent specialist<br><br>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 3 assistants, and to take seven (7) days.

18.2 Post-excavation analysis and report production is expected to take 12.5 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 (may be necessary); Anglo-Saxon pottery (small amount allowed for); Medieval pottery - large quantities (moderate amount expected and allowed for); faunal remains - large quantities (moderate amounts 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

AC Archaeology *2001 Proposed Development at Fossit & Thorne, London Road, Kirton, Lincolnshire: Archaeological Desk-Based Study*

APS 2001 *Archaeological Evaluation at The Old School Site, King Street, Kirton* APS client report 54/01

Hodge, CAH, Burton, RGO, Corbett, WM, Evans, R, and Seale, RS, 1984 *Soils and their use in Eastern England*, Soil Survey of England and Wales **13**

WYAS 2001 *Geophysical Survey at Fossit & Thorne, London Road, Kirton, Lincs* WYAS report 898

Specification: Version 1, 17th September 2001

## Appendix 3

Context Summary

| Context Number | Trench Number | Section Number | Description | Interpretation |
|---|---|---|---|---|
| 101 | 1 | 1 | Loose, blackish brown clayey silt, c. 0.4m thick. | Topsoil. |
| 102 | 1 | 1 | Firm, dark brown sandy clayey silt, c. 0.25m thick. | Natural. |
| 103 | 1 | 1 | Loose, light brown silty sand (with clay). | Natural. |
| 104 | 1 | 2 | Linear cut, 0.9m wide and c. 0.25m deep, concave sides and rounded base, oriented northeast-southwest. | Ditch. |
| 105 | 1 | 2 | Loose, mid grey sandy silt with mid brown and black lenses. | Fill of (104). |
| 106 | 1 | 3 | Irregular cut, concave sides and an irregular flattish base. | Possible pit. |
| 107 | 1 | 3 | Loose, black silt with occasional shell fragments. | Fill of (106) |
| 201 | 2 | 4 | Loose, blackish brown clayey silt, with occasional CBM fragments, c. 0.6m thick. | Topsoil. |
| 202 | 2 | 4 | Loose, light brown silty sand. | Natural. |
| 203 | 2 | 5 | Linear cut, c. 1.9m wide and 0.5m deep, concave sides and a rounded base, oriented north-south. | Ditch. |
| 204 | 2 | 5 | Loose, light to mid brown clayey silt with occasional pebbles and charcoal fragments. | Fill of (203). |
| 205 | 2 | - | Truncated cut, quarter circle visible, c. 0.3m radius, concave sides and flat base. | Possible pit or ditch terminus. |
| 206 | 2 | - | Loose, mid greyish brown clayey silt and sand, with occasional flecks of CBM. | Fill of (205). |
| 300 | 3 | 6 | Friable, mid to light brown silty clay, 0.3m thick. | Topsoil. |

| | | | | |
|---|---|---|---|---|
| 301 | 3 | 6 | Friable, mid brown sandy silt, up to 0.70m thick. | Upper fill of (309). |
| 302 | 3 | 6 | Soft, mid greyish brown sandy silt, with occasional shell fragments, up to 0.2m thick. | Fill of (309). |
| 303 | 3 | 6 | Soft, mid to light brown sandy silt, up to 0.40m thick. | Fill of (309). |
| 304 | 3 | 6 | Friable mid to light brown silty sand, up to 0.32m thick. | Fill of (309). |
| 305 | 3 | 6 | Soft, mid brownish grey clayey sandy silt with frequent shell fragments, up to 0.15m thick. | Tip layer in (309). |
| 306 | 3 | 6 | Soft, light grey (slightly mottled) silty sand up to 0.06m thick. | Fill of (309). |
| 307 | 3 | 6 | Firm, mottled mid brown, clayey sandy silt, up to 0.28m thick. | Fill of (309). |
| 308 | 3 | 6 | Soft, mid to dark grey mottled sandy silt (slightly clayey), with frequent shell fragments, up to 0.12m thick. | Tip layer in (309). |
| 309 | 3 | 6 | Linear, extends beyond the trench in all directions, irregular convex sides, oriented northeast-southwest (possibly curving). | Palaeochannel |
| 310 | 3 | 6 | Firm, mid brown sandy silt, greater than 0.2m thick. | Natural. |
| 311 | 3 | 6 | Firm, mid to light brown silty sand, greater than 0.42m thick. | Natural. |
| 401 | 4 | 7 | Soft, dark grey brown clayey silt, up to 0.2m thick. | Topsoil. |
| 402 | 4 | 7 | Firm, mid brown silt, greater than 0.7m thick. | Natural. |
| 500 | 5 | 15 | Firm, dark grey-brown silt, c. 0.30m thick. | Topsoil. |
| 501 | 5 | 15 | Friable, orange-brown silt, c. 0.45m thick. | Natural. |
| 502 | 5 | 15 | Firm/stiff, dark brown clay, c. 0.50m thick. | Natural. |

| | | | | |
|---|---|---|---|---|
| 503 | 5 | 15 | Firm, mid brown silt, with occasional sand layers, greater than 0.30m thick. | Natural. |
| 600 | 6 | 10 | Firm, dark grey-brown silt, c. 0.40m thick. | Topsoil. |
| 601 | 6 | 10 | Firm, very dark grey brown silt, with frequent CBM, pottery and refuse fragments. | Fill of (602). |
| 602 | 6 | 10 | Linear cut, 0.88m wide and 0.45m deep, with sloping sides and a V-shaped base. | Ditch. |
| 603 | 6 | 10 | Friable, orange-brown silt, c. 0.20m thick. | Natural. |
| 604 | 6 | 11 | Firm/stiff, dark brown clay, c. 0.20m thick. | Natural. |
| 605 | 6 | 11 | Firm, mid brown silt, with occasional sand layers, c. 0.20m thick. | Natural. |
| 606 | 6 | 11 | Firm, grey-brown sand, greater than 0.35m thick. | Natural. |
| 700 | 7 | 14 | Firm, dark grey-brown silt, c. 0.34m thick. | Topsoil. |
| 701 | 7 | 14 | Firm, laminated orange-brown silt, c. 0.45m thick. | Natural. |
| 702 | 7 | 14 | Firm, brown clayey silt, greater than 0.15m thick. | Natural. |
| 800 | 8 | 9 | Friable, dark grey-brown silty sand, with occasional CBM, c. 0.40m thick. | Topsoil. |
| 801 | 8 | 8 & 9 | Soft, dark brown sandy silt. | Fill of (802). |
| 802 | 8 | 8 & 9 | Linear cut, c. 2m wide and 0.6m deep, with sloping sides and a flat base, oriented northeast-southwest. | Ditch. |
| 803 | 8 | 9 | Firm, pale orange-brown sand, greater than 0.8m thick. | Natural. |
| 901 | 9 | 12 & 13 | Friable, dark grey-brown silt with occasional pebbles and CBM fragments, c. 0.30m thick. | Topsoil. |

## Appendix 4

THE FINDS
Jane Cowgill, Rachael Hall, Hilary Healey,
Tom Lane and Gary Taylor

**Provenance**
The material was recovered from ditch fill (105), (204), (601), (801) & (902), possible pit fill (107), and tip layers (304) and (308).

The great majority of the Saxo-Norman pottery was retrieved from Trench 3, while late post-medieval artefacts were concentrated in Trenches 6 and 8. All the industrial waste was recovered from a single context, (204) in Trench 2.

Most of the earlier pottery is relatively local, probably made in the Bourne area about 25km to the southwest of Kirton. However, the later ceramics were probably made in Staffordshire.

**Range**
The range of material is detailed in the following table. Pottery formed the largest component of the assemblage, and this aspect of the collection was dominated equally by pieces of Saxo-Norman date and fragments of the 18th-19th century. Brick and tile, glass, clay pipe and industrial waste was also retrieved, together with faunal remains.

*Table 1: The Pottery and other artefacts*

| Context | Description | Weight (g) | Latest Date |
|---|---|---|---|
| 105 | 1x Stamford ware, spouted pitcher, abraded | 75g | early 12th century |
| 107 | 2x burnt clay, amorphous lumps, soft fired, light brown colour. One piece has voids (all *c*. 5mm across) from possible burning out of plant remains during firing. | 74g | |
| 204 | 2x shelly ware, oxidized, abraded, link; ?South Lincs. Shelly ware, ?10th- 12th century | 7g | ?10th- 12th century |
| | 1x soft fired clay fragment. Reddy Brown. No visible inclusions. | 3g | |
| | 9x iron slag, incl parts of 3 plano-convex hearth bottoms | 1025g | |
| | 6x iron slag with vitrified hearth lining | 46g | |
| 304 | 3x South Lincs. shelly ware, probably 3 separate vessels, 2 cooking pot rims, 1 encrusted internally. 1 very abraded, 10th- 12th century | 56g | 10th- 12th century |
| | 3x burnt clay. 2 x small and 1 x large fragments. Larger fragment (*c*. 80mm x 45mm x 40mm) is reddy brown in colour with some plant imprints on external surfaces. One smoothed surface. Seed/plant impressions also on smaller pieces which are of similar fabric. | 189g | |
| 308 | 10x South Lincs shelly ware, 2 link, probably all hollow ware, minimum of 2 separate vessels; 1 cooking pot has rouletted decoration on shoulder; 2 sherds encrusted; 2 abraded, 10th- 12th century | 93g | 10th- 12th century |
| | 1x Niedermendig lava quern | 185g | |

| | | | |
|---|---|---|---|
| 601 | 1x white earthenware, overglaze red paint, hollow ware, registration mark, 1878 or later | 27g | late 19th-early 20th century |
| | 1x blue and white transfer printed tableware, plate, 19th century | 54g | |
| | 2x lead glazed stoneware, jar, 19th-early 20th century | 469g | |
| | 1x green sponged ware, 19th century | 9g | |
| | 1x soft-paste porcelain, mould-made jug, 19th-early 20th century | 132g | |
| | 1x pearlware, hollow ware, 19th century | 13g | |
| | 1x white tableware, blue painted, hollow ware, coated with tarry material, 19th-early 20th century | 6g | |
| | 1x colourless rectangular bottle glass, iridescence, late 19th century | 3g | |
| | 1x green bottle glass, modern | 2g | |
| | 1x colourless glass, ?light bulb, modern | <1g | |
| | 2x slate | 2g | |
| 801 | 3x red painted earthenware, black-glazed, 2 link, hollow ware, 18th century | 176g | 18th-early 19th century |
| | 2x red painted earthenware, brown-glazed, hollow ware, 18th century | 44g | |
| | 1x Staffordshire-type feathered slipware, flat ware, 18th century | 10g | |
| | 2x Humber ware, linked, hollow ware, abraded, 13th- 14th century | 48g | |
| | 1x clay pipe stem, bore 4/64", late 18th- 19th century | 1g | |
| | 1x handmade brick, 60mm wide, post-medieval | 273g | |
| | 1x pantile, post-medieval | 158g | |
| | 1x ceramic flat roof tile, post-medieval | 102g | |
| | 2x dark green wine bottle glass, bases with square profile push up, early 19th century | 126g | |
| 902 | 1x Bourne ware jug, applied rouletted strip, abraded | 35g | 13th-14th century |

A vessel from (601) has a trade and a patent office registration mark on the base. The trade mark is of the Minton factory of Stoke and the patent mark was registered on the 10th April 1878 (Cushion 1986, 359).

All the iron slag, 15 piece weighing a total of 1071g, was recovered from (204).Some of the pieces of slag are cindery and have burnt clay from the hearth lining attached. Some of these fragments are glassy. The remaining pieces of slag include three plano-convex hearth bottoms. These have occasional impressions of charcoal, the fuel used in the industrial process, and hammerscale loosely adhering. One piece of slag incorporates abundant fragments of off-white stone, apparently flint and limestone, which may be unused fluxing materials. All this industrial waste is likely to derive from iron smithing.

Three contexts, (107), (204), (304), produced fragments of fired clay. All the pieces appear to be made from local marine clays and have a soft 'soapy' feel. Only the larger piece from (307) has a definite smoothed surface. No function can be suggested for any of the pieces.

**Condition**
Although several pieces of the earlier pottery are abraded, all of the material is in good condition and presents no long-term storage problems. Archive storage of the material is by material class.

**Documentation**
Archaeological investigations have been undertaken in Kirton previously, including in close proximity to the present investigation site, and are the subject of reports (Hambly 2000; Thomson 2001). Records of archaeological remains and finds are maintained in the files of the Boston Community Archaeologist and the County Sites and Monuments Record.

**Potential**
The Late Saxon/early medieval aspect of the assemblage has high local potential and significance. Although material of this date is not extensive, the present collection is now the third such group found within a short distance, less than 400m apart, on the south side of Kirton village centre (Snee 2001; Thomson 2001). Like the other sites, which lie a little to the east, the early pottery from the present investigation is essentially single phase, with only 2 piece of high medieval material, both of which are abraded. As a single site collection this material indicates activity, probably settlement, on the site or in immediate proximity during the 10th- 12th century , and in association with the previously discovered pottery assemblages, suggests that much of Kirton village core south of the church was occupied initially in the Late Saxon period but with habitation terminating in the 12th century and the land being given over to agriculture. As with the previous investigations in the vicinity, the small quantity and abraded nature of the medieval pottery suggests that it is a component of manuring scatter, which in turn indicates an agricultural use of the land in the 13th- 14th centuries.

A fragment of quern in Niedermendig lava, recovered in association with the Saxo-Norman pottery, indicates crop processing activity in the 10th- 12th century, and this also concurs with previous discoveries in the proximity (Thomson 2001, 1). Additionally, there is an assemblage of iron slag and hearth lining that indicates the presence of an iron smithy.

The 18th century and later material is of limited significance but does indicate re-occupation of the site from that period.

**References**

Cushion, J. P., 1986 *Pocket Book of British Ceramic Marks* (3rd ed, revised)

Hambly, J., 2000 *Archaeological Evaluation of land off Willington Road, Kirton, Lincolnshire (KWR00)*, Archaeological Project Services Report **31/00**

Healey, H., Lane, T. and Taylor, G., 2001 'The Finds', in S. Thomson, *Archaeological Evaluation, The Old School Site, King Street, Kirton, Lincolnshire (KKS01)*, Archaeological Project Services Report **54/01**

Snee, J., 2001 *Archaeological Evaluation of land at Station Road, Kirton, Lincolnshire (KSR01)*, Archaeological Project Services Report **48/01**

Thomson, S., 2001 *Archaeological Evaluation, The Old School Site, King Street, Kirton, Lincolnshire (KKS01)*, Archaeological Project Services Report **54/01**

## Appendix 5

### Field study of the sedimentary sequence at London Road, Kirton

This site was visited on 4th October upon the request of Archaeological Project Services and the trenches and their sediments briefly studied in the field. No field notes were taken at the time and this account has been written, subsequently, with the aid of a site plan and diagrammatic sections of the deposits in each trench supplied by APS.

Three basic sequences were observed in the series of trenches opened for the evaluation. The north end of Trench 6 contained the most characteristic of the first sequence.

This was a sequence of marine sediments in the base of the trench, mainly sandy silts and silty sands, fining upwards into finer silts and finally silt/clays. Augering through the floor of the trench continued the sequence downwards into silty sands and sands. This sequence was interpreted in the field as representing a change from intertidal sand flat and mudflat environments, through middle and into upper saltmarsh environments, the latter reflected by the finest sediments and equated with Shennan's Zone 7 (Shennan 1986). There is a possibility that these finest sediments although they are presumed to have formed in brackish water, may have included a freshwater element but without detailed microscopic analysis of the sediments this could not be established. This sequence was overlain by a return to sandy silts representing a new inundation by the sea. The boundary between the clays and upper silts was quite sharp. On the basis of the OD heights for the trench this boundary may represent the ground or marsh surface in the late Roman period, with the subsequent marine sediments reflecting a post-Roman incursion.

The second sequence was identified in trenches 8 and 9. In these trenches the deposits appeared to be composed almost exclusively of fine and medium sands with occasionally a small silt component. All these deposits are interpreted as marine and intertidal in origin and may have formed in or along the edges of a tidal creek or intertidal channel or, more probably, have been an intertidal sand flat or bank (Shennan, Zone 11). Augering through the floor of trench 8 established that the sands continued downwards for a further 1.5 metres at least. Their relationship to the sequence in Trench 6 cannot be ascertained without a direct stratigraphic relationship and this 'bank' may pre or post-date the deposits encountered in Trenches 5, 6 and 7, although arguably with an upper surface at 3 m OD or above they may represent sand flats associated with a post-Roman period of marine incursion.

The relationship of the clay deposits on the floor of the eastern end of Trench 9 could not be ascertained during the site visit.

In Zone A (northern portion of the site, Fig. 3) the sediment sequence was primarily of sands and silty sands fining upwards into silts, but only in Trench 4 did this lead to silt deposits with very little sand in their upper levels. This is interpreted as a stage in the progression from mudflat (Shennan Zone 10) to mean high water spring tide (Shennan Zone 9). The silty clay deposits characteristic of Shennan's Zone 7 which appear in trenches 5 and 6 are absent in this area of the site, although they may have been incorporated into the present topsoil.

In Zone A one trench, 3, contains a wide channel. This clearly represents a creek and its relatively shallow but broad extent and the fact that it appears to be cut from a height of approximately 2.5m OD through sediments similar to those in adjacent trenches implies a creek through Shennan's Zone 9 (op cit) deposits. The lower fills of the channel include a layer of fine grained sediments with coarser upper sediments. The uppermost sequence of sediments may represent an episode of infilling under terrestrial conditions when the channel had formed a topographic feature after reclamation, possibly as a result of agricultural activity. It is certainly likely to have been seasonally full of water while the land was used as grazing, but would have rapidly filled and leveled under cultivation. A band rich in mussel shells and other debris might mark the start of the period when this channel was no longer tidal, but, alternatively, could reflect a stage of use of the tidal channel when boats could still access the sea and marshes and shellfish catches were processed and discarded into the channel. Clarification of the environmental sequence would require detailed examination of the sediments and their contained microfauna and flora, perhaps combined with dating of the shell rich layer.

In general the sediments at this site exhibit some interest. The defined horizon in sequence 1, which represents the standstill phase between an upper saltmarsh or terrestrial episode and the subsequent marine inundation, would be a useful level for studying sea level change and the availability of the local fenland region for occupation or grazing. If it could be dated and this interpretation confirmed by detailed analysis of the microfauna and flora within the sediments this would be an important horizon. Likewise the study of the sequence in the channel fills and the dating of the horizon with shells and archaeological material in it would be of considerable interest. If it could be shown that the creek was still open and tidal at this time it would indicate that it might represent an access point by boat to the sea. Dating of the former of these two may be a problem but it seems likely that the deposits in the channel can be dated. A Saxo-Norman date has been advanced for deposits that may be relateable to this layer, and pottery of similar date has been recovered from deposits above (Gary Taylor, pers comm.). Under these circumstances a palaeoenvironmental analysis of the sediments would therefore be warranted.

**Bibliography**

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**Appendix 6**

# CHARRED PLANT MACROFOSSLS AND OTHER REMAINS FROM AN EVALUATION EXCAVATION AT LONDON ROAD, KIRTON, LINCOLNSHIRE (KLR 01): AN ASSESSMENT.

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## Introduction

Evaluation excavations at London Road, Kirton were undertaken by Archaeological Project Services. Various features of probable medieval date were recorded and four samples for the extraction of plant macrofossils were taken from two dumped deposits ([305] and [308]) and two feature fills ([105] and [107]).

## Methods

The samples were processed by manual water flotation/washover, collecting the flots in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at low power and the plant macrofossils and other materials noted are listed on Table 1. Tabulated material was preserved by charring unless otherwise stated. Nomenclature within the table follows Stace (1997). Modern contaminants including fibrous roots and seeds/fruits were present in all samples.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. Pottery, bone, marine mollusc shell fragments and pieces of burnt or fired clay were extracted for further specialist study.

## Results of assessment

### Plant macrofossils

Cereal grains/chaff and seeds/fruits of common weed species were present at varying densities in all samples. Preservation of the material was generally poor to moderate; the majority of the cereal grains were puffed and distorted as a result of high temperatures during combustion and a high percentage of the macrofossils were fragmented.

**Cereals and other food plants**
Oat (*Avena* sp.), barley (*Hordeum* sp.), rye (*Secale cereale*) and wheat (*Triticum* sp.) grains were recorded with barley being predominant in sample 1 and wheat in sample 3. Small fragments of barley rachis with very short internodes (probably *H. vulgare* var. *hexastichum* (dense-eared six-row barley)) were noted in samples 1 and 3 and bread wheat (*T. aestivum/compactum*) type rachis nodes were present in samples 3 and 4. A single large angular legume found in sample 1 is probably a field bean (*Vicia faba*).

**Wild flora**
Seeds/fruits were present in all samples although sample 4 only produced a single specimen. Segetal taxa were predominant and included stinking mayweed (*Anthemis cotula*), orache (*Atriplex* sp.), fat hen (*Chenopodium album*), indeterminate grasses (Poaceae), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.). Wetland plant macrofossils were also present in all four samples and included sedge (*Carex* sp.) and spike-rush (*Eleocharis* sp.) nutlets. A single fragment of hazel (*Corylus avellana*) nutshell was recorded in sample 1.

**Other plant macrofossils**
Charcoal fragments and pieces of charred root, rhizome or stem were present in all samples. Other plant macrofossils included indeterminate culm nodes, inflorescence fragments and seeds. Mineral replaced root channels were common in sample 1.

## Molluscs

Although specific sieving for molluscan remains was not undertaken, shells, including burnt specimens, were noted at a low density in samples 1 and 3. The un-burnt examples from sample 1 may be modern in origin. However the shells in sample 3 were all burnt and are probably contemporary with the assemblage. With the exception of a single shell of *Pupilla muscorum*, which is an open country mollusc, all specimens were of freshwater obligate species including *Anisus leucostoma*, *Bithynia* sp., *Planorbis* sp. and *Valvata piscinalis.*

## Other materials

The fragments of black tarry material and the siliceous globules may be derived from the combustion of organic remains, including straw/grass, at very high temperatures. Possible dietary residues included fragments of burnt mammal and fish bone and numerous fragments of marine mollusc shell, most notably *Mytilus edulis* (mussel).

## Discussion

The assemblage from sample 1 contains abundant cereal grains, rare chaff elements and weed seeds and common dietary residues including mussel shell fragments and burnt bone/fish bone fragments. It appears most likely that this material is derived from a low density deposit of domestic refuse, possibly hearth waste.

Although cereal grains are also common in sample 2, oats are predominant and these may be derived from a wild variety. The presence of wild oats would be consistent with the remainder of the assemblage where segetal and grassland weed seeds and culm and inflorescence fragments are common or abundant. The entire assemblage appears to be derived from grasses and dried plant material which may have been used as kindling or fuel for a fire.

Sample 3 is almost certainly derived from cereal processing debris. Cereal grains (principally bread wheat), chaff elements and segetal weed seeds are present in approximately equal quantities and this may indicate that an early stage of processing is represented. The presence of seeds of stinking mayweed (a species of heavy clay soils) and sedge and spike-rush nutlets may suggest that the cereals were being produced on damp marginal soils. This hypothesis is supported by the burnt mollusc assemblage which also appears to indicate that the crops were being grown close to freshwater and/or areas of marsh.

The assemblage from sample 4 contains insufficient material to be conclusively interpreted.

## Conclusions and recommendations for further work

In conclusion, the assemblages appear to be derived from diverse sources including domestic refuse, fuel waste and cereal processing debris. Such rubbish would probably not have been transported far from it's point of origin before deposition, and it would, therefore, appear that the samples were taken from an area in reasonably close proximity to domestic and/or agricultural features. All assemblages are consistent with a medieval date.

At this stage, further analytical work is not necessary, but should further samples become available, quantitative analysis may be recommended on samples 1, 2 and 3.

The potential for plant macrofossil analysis from samples taken at this location is very high. Information related to local domestic activities, land use and agricultural development would greatly supplement existing data, especially as material of medieval date is currently somewhat under represented. It is, therefore recommended that, prior to further excavation work, a comprehensive environmental sampling policy should be discussed with the relevant specialists.

**References**

Stace, C., 1997 New Flora of the British Isles. Second edition.

**Key to Table**

x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
coty = cotyledon fg = fragment tf = testa fragment m = mineral replaced b = burnt

| Sample No. | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **Context No.** | **308** | **105** | **107** | **305** |
| **Cereals and other food plants** | | | | |
| *Avena* sp. (grains) | x | xx | xx | |
| (awn frags.) | | | x | |
| (floret base) | | x | | |
| Cereal indet. (grains) | xxx | xx | xxx | x |
| Large Fabaceae indet. | xcotyfg | | | |
| *Hordeum* sp. (grains) | xx | x | x | xcf |
| (rachis nodes) | x | | x | x |
| (rachis internodes) | x | | | |
| *H. vulgare* var. *hexastichum* (rachis frags.) | xcf | | xcf | |
| *Secale cereale* L. (grain) | | | xcf | |
| *Triticum* sp. (grains) | xcf | x | xxx | |
| (rachis internodes) | | | x | |
| *T. aestivum/compactum* type (rachis nodes) | | | xxx | x |
| *Vicia faba* L. | xcf | | | |
| **Herbs** | | | | |
| *Anagallis arvensis* L. | | | x | |
| *Anthemis cotula* L. | | x | x | |
| *Atriplex* sp. | x | | xx | |
| Brassicaceae indet. | x | | x | |
| *Bromus* sp. | | x | | |
| *Chenopodium album* L. | x | | x | |
| Chenopodiaceae indet. | x | xx | | |
| *Fallopia convolvulus* (L.)A.Love | | | xtf | |
| *Medicago/Trifolium/Lotus* sp. | | x | xcf | |
| Large Poaceae indet. | x | x | xxx | |
| Small Poaceae indet. | | | xxx | |
| Poaceae indet. (rachis frags.) | | x | | |
| *Polygonum aviculare* L. | | x | | |
| Polygonaceae indet. | | | x | |
| *Ranunculus acris/repens/bulbosus* | | | x | |
| *Rumex* sp. | | x | xx | x |
| *Rumex/Carex* sp. | | | xm | |
| *Sinapis* sp. | xcf | | | |
| *Vicia/Lathyrus* sp. | | x | xx | |
| **Wetland plants** | | | | |
| *Carex* sp. | x | x | xx | |
| *Eleocharis* sp. | | | xx | x |
| *Sparganium erectum* L. | xcf | | | |
| **Trees/shrubs** | | | | |
| *Corylus avellana* L. | x | | | |
| **Other plant macrofossils** | | | | |
| Charcoal <2mm | xx | xx | x | x |
| Charcoal >2mm | | x | x | x |
| Charred root/rhizome/stem | x | xx | x | x |
| Indet.culm nodes | xx | | x | x |
| Indet.inflorescence frags. | x | xx | xx | |
| Indet.seeds | x | x | x | |
| Mineral replaced root channels | xx | | | |
| **Molluscs** | | | | |
| **Open country species** | | | | |
| *Pupilla muscorum* | | | xb | |
| *Vallonia pulchella* | x | | | |
| **Catholic species** | | | | |
| *Cochlicopa* sp. | x | | | |
| **Marsh/freshwater slum species** | | | | |
| *Vertigo* sp. | x | | | |
| **Freshwater obligates** | | | | |
| *Anisus leucostoma* | | | xb | |
| *Bithynia* sp. | | | xb | |
| *Planorbis* sp. | | | xb | |
| *Valvata piscinalis* | | | xb | |
| **Other materials** | | | | |
| Black tarry material | | | x | x |
| Bone | x xb | | | |
| Burnt organic concretions | x | | x | |
| Fish bone | x xb | | | |
| Marine mollusc shell frags. | xxx | | | x |
| Siliceous globules | x | | xxx | |
| **Sample volume (litres)** | **10.5** | **10.5** | **10.5** | **10.5** |
| **Volume of flot (litres)** | **<0.1** | **<0.1** | **0.2** | **<0.1** |
| **% flot sorted** | **100%** | **100%** | **50%** | **100%** |

Table 1. Plant macrofossils and other remains from London Road, Kirton, Lincolnshire.

## Appendix 7

## GLOSSARY

| | |
|---|---|
| **Bronze Age** | A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC. |
| **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. |
| **Domesday Survey** | A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD. |
| **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) that 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** | 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 |
| **Neolithic** | The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500-2250 BC. |
| **Post hole** | The hole cut to take a timber post, usually in an upright position. The hole may have been dug larger than the post and contain soil or stones to support the post. Alternatively, the posthole may have been formed through the process of driving the post into the ground. |
| **Post-medieval** | The period following the Middle Ages, dating from approximately AD 1500-1800. |
| **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. |
| **Romano-British** | Pertaining to the period dating from AD 43-410 when the Romans occupied Britain. |
| **Saxon** | Pertaining to the period dating from AD 410-1066 when England was largely settled by tribes from northern Germany |
| **Saxo-Norman** | Pertaining to the period either side of the Norman conquest, and dating to between AD 950-1150. |

## Appendix 8

## THE ARCHIVE

The archive consists of:

| | |
|---|---|
| 3 | Context register sheets |
| 50 | Context records |
| 24 | Sheets of scale drawings |
| 7 | Daily Record sheets |
| 1 | Plan record sheet |
| 1 | Section record sheet |
| 1 | Photographic record sheets |
| 1 | Stratigraphic matrix |
| 12 | Bags of finds |

All primary records and finds 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 Museum Accession Number: 2001.266

Archaeological Project Services Site Code: KLR01

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.