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ARCHAEOLOGICAL *watching*  
TOPSOIL STRIPPING ON LAND AT  
STATION ROAD,  
KIRTON  
LINCOLNSHIRE  
(KSR02)



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**ARCHAEOLOGICAL** *watching brief*  
**ON TOPSOIL STRIPPING ON LAND AT**  
**STATION ROAD,**  
**KIRTON**  
**LINCOLNSHIRE**  
**(KSR02)**

Work Undertaken For  
Chestnut Homes

December 2002

Report Compiled by  
Rachael V. Hall BA(Hons)

National Grid Reference: TF 3092 3851<sup>84</sup>


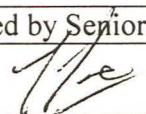
A.P.S. Report No. **184/02**

**ARCHAEOLOGICAL PROJECT SERVICES**



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## 1. SUMMARY

*Archaeological investigations on land at Station Road, Kirton, Lincolnshire were undertaken as earlier evaluation work undertaken at the site revealed a cluster of postholes and a number of ditches containing pottery predominantly of Late Saxon date, indicating a strong likelihood of domestic activity within the vicinity.*

*The investigations revealed several alignments of post holes, ring gullies, a large curvilinear ditch, ditches and large rectangular pits all, dating to between the late 9<sup>th</sup> – mid 10<sup>th</sup> century*

*A small assemblage of Late Saxon pottery was recovered, along with a large amount of animal bone, including a worked example.*

## 2. INTRODUCTION

### 2.1 Planning Background

Planning permission (Application No. B/01/0625/FULL) for the development was subject to a condition requiring topsoil stripping under archaeological supervision followed by sample excavation and recording.

Archaeological Project Services was commissioned by Chestnut Homes to undertake the archaeological investigations of the site in accordance with the requirements of the local planning authority. A specification prepared by APS (Appendix 2) was approved by the Boston Borough Community Archaeologist. The work was undertaken between the 8<sup>th</sup> July and 17<sup>th</sup> July 2001.

### 2.2 Topography and Geology

Kirton is situated 4km southwest of Boston, in the administrative Borough of Boston, within the Fenland of South Lincolnshire (Fig 1). The area of investigation lies to the east of the village centre, off Station Road, at National Grid Reference TF 3092 3851.

The development site is a roughly rectangular block of land, approximately 1.1ha in extent. It is relatively flat, lying at c.4m OD. Within the site, a roughly rectangular block of land c.60m x 50m (c. 0.3 ha) centred upon a dispersed cluster of archaeological deposits identified in an earlier archaeological evaluation (Snee, 2001) was topsoil stripped.

Local soils are typically coarse gleyic brown alluvial soils of the Snargate Series. Many Snargate soils have calcareous subsoil layers suggestive of lime-rich deposits that have leached over a long period of land use. (Robson 1990, 27).

### 2.3 Archaeological Setting

A Neolithic polished greenstone axe, which may be an import into the fens provides the only indication of a prehistoric presence in Kirton parish.

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.

Although the early origins of the village are not fully understood, a number of investigations around the village have identified dispersed archaeological remains of the Late Saxon period. During evaluation in advance of the topsoil stripping, a group of Late Saxon/early

medieval ditches and post holes were identified, probably representing a peripheral agricultural settlement on newly drained fens (Snee 2001a). Furthermore, Saxo-Norman - early medieval ditches and pits associated with dumps of domestic refuse of the same date were revealed to the southwest (Snee 2001b, Thomson 2001). Immediately to the east of the site investigations revealed a group of late Saxon features including the remains of a hearth (Rayner 2001). Figure 3 shows the location of the Late Saxon features identified during archaeological investigations undertaken in Kirton.

Medieval use of the area is well attested. 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 replaced 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 12<sup>th</sup> century although it was substantially altered and reduced in size in the early 19<sup>th</sup> 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 15<sup>th</sup> and 16<sup>th</sup> 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 16<sup>th</sup> century date (Pevsner & Harris 1989).

### 3. AIMS

The aims of the topsoil strip and archaeological recording were:

- to identify, record and excavate as appropriate, the archaeological features exposed.
- to determine the form, function and spatial arrangement of archaeological features encountered.
- to recover dating evidence and establish the sequence of archaeological remains present on the site.



## 4. METHODS

### 4.1 Topsoil Stripping and Recording

Topsoil stripping of the area was undertaken under full archaeological supervision using a mechanical excavator fitted with a toothless ditching bucket. The site was divided into two areas, as no machining could take place beneath an overhead cable which crossed the northeast corner of the area of investigation. Area 1 was located south of the cable and Area 2 to the north.

During the topsoil stripping the exposed surfaces were inspected for archaeological deposits, and where present the areas surrounding the deposits were hand cleaned.

A surface pre-excavation plan of the site identifying the archaeological features was created using a Total Station EDM. At a site meeting between the Boston Borough Community Archaeologist and APS the plan was utilised to determine which features and deposits required further investigations.

Each deposit exposed during the investigation was allocated a unique reference number (context number) with an individual written description. A photographic record was compiled. Sections were drawn at a scale of 1:10 and plans at a scale of 1:20. Recording of deposits encountered was undertaken according to standard Archaeological Project Services' practice.

### 4.2 Post-excavation

Following excavation, all records were checked and ordered to ensure that they constituted a complete Level II archive and a stratigraphic matrix of all identified deposits was produced. Artefacts recovered from excavated deposits were

examined and a period date assigned where possible. A list of all contexts and interpretations appears as Appendix 2. Context numbers are identified in the text by brackets. An equals sign between context numbers indicates that the contexts once formed a single layer or feature. Phasing was based on artefact dating and the nature of the deposits and recognisable relationships between them.

## 5. RESULTS

### 5.1 Description of the results

Three phases of deposits were recognised:

Phase 1: Natural deposits

Phase 2: Late 9<sup>th</sup>–mid 10<sup>th</sup> century Saxon deposits

Phase 3: Modern deposits

### 5.2 Phase 1: Natural deposits

The earliest deposit exposed during the investigations was natural light reddish brown sandy silt (009) and (102) found 0.35m beneath the present ground surface.

### 5.3 Phase 2: Saxon deposits

#### The Ring Gullies (Figs. 5, 7 and 8)

It must be noted that the remains, which have been termed 'ring gullies' in this report, are in fact penannular.

Remains of five ring gullies [075], [025] and [108] were identified across the site. The most complete example, located in the northernmost corner of the site [075]=[077] was 15m in diameter, with a 1m wide causeway in the south side. The gully itself was concave in profile, measured 0.80m wide x 0.18 deep and was filled by mid-light grey sandy silt (076)=(078). Located approximately in the centre of the gully interior was posthole [093] measuring 0.50m wide by 0.15m

deep and filled by light brownish grey sandy silt (094). In the southern half of the ring gully a north-south, 0.50m wide by 80mm deep concave gully [089] was exposed, filled with mid-brownish grey sandy silt (090). Along the southern edge of the gully pit [091] was identified. The fill (092) of this was identical to that of the gully.

Four metres southwest of the northern ring gully were the remains of a second example [108]. The fill of this was identical to that of the northern ring gully, suggesting contemporaneity. The feature was not investigated further.

A third ring gully [021]=[025]=[082] was identified in the southern half of Area 1 extending beyond the southeastern limit of the stripped area. The gully was filled by light brown sandy silt (022)=(028) =(081) containing late 9<sup>th</sup>-early/mid 10<sup>th</sup> century pottery. An entrance was identified in the eastern side of the gully, with three postholes [050], [060] and [064] located in a cluster just inside the interior. The fill of the postholes was identical to that of the ring gully (light brown silty sand) (051), (061) and (065). Two sherds of late 9<sup>th</sup>-late 10<sup>th</sup> century pottery were retrieved from posthole fill (051).

Possible remnants of a fourth ring gully can be seen in the southernmost corner of the site. This was not investigated further.

Located in Area 2 was the fifth ring gully [087]. This measured 0.90m wide by 0.30m deep and was filled with mid-brownish reddish grey silt sand (088). The ditch must complete its diameter underneath the baulk left between areas.

#### **The Ditches** (Figs. 5, 9 and 11)

Truncating the southern ring gully [021] along its northeastern edge was a 10m length of a 1.30m wide northeast-southeast orientated ditch [056]=[024]. The terminal

at the northwestern end of the ditch (Section 55) contained a bluish grey silty sand (107) primary fill, overlain by light grey silty sand (105), dark greyish brown silty sand (104), mid-brown silty sand (103) and dark grey silty sand (032), above which were the dumped remains of hearth (027) and dark grey silty sand (109). Fragments of late 9<sup>th</sup> to late 10<sup>th</sup> pottery were recovered from one of the ditch fills along with a worked bone tool-which has been interpreted as a Lucet used in textile production (Fig 12).

A 1.35m wide by 0.74m deep curvilinear ditch [004]=[006]=[081] recorded in the southern half of the site extended beyond the southwestern and western extent of the stripped area. Within a section dug close to the southern limit of Area 1, the ditch contained a single fill of light reddish brown sandy silt from which nine fragments of late 9<sup>th</sup> -early/mid 10<sup>th</sup> century were retrieved. However, as the ditch progressed further north two fills were identified comprising mid-greyish brown sandy silt (080) and mottled mid-dark grey and mid-brown sandy silt (079). Identified in Section 3 of the ditch was steep sided posthole [007], filled by mid-dark brown silt (008). No archaeological remains were identified to the south of the ditch in Area 1.

Cutting across the southern corner of Area 2 was a 1.08m wide x 0.29m deep northeast-southeast aligned ditch [101], containing mid-reddish brown silt (100). Along its northeastern edge [101] was recut by [086], a 1.86m wide x 0.49m deep ditch, filled by mid-reddish brown silty sand (085), which contained a sherd of late 9<sup>th</sup>- early/mid 10<sup>th</sup> century pottery.

#### **The Postholes** (Figs. 5 and 6)

A group of postholes consisting of two roughly parallel east-west aligned rows were identified in the central part of Area 1 north of ditch [024]. The northernmost

line of postholes [020], [034], [017], [072] and [030] were larger, with an average diameter of 0.50m, than the line *c.* 1m south [074], [059], [014] and [070] which were all 0.20m smaller. All were filled by light-mid reddish brown sandy silt (019), (033), (016), (071), (029), (073), (058), (013) and (069). Two of the postholes [014] and [059] had remains of postpipes consisting of firm mid-reddish brown silty sand (013) and (057). A fragment of late 9<sup>th</sup>- late 10<sup>th</sup> century was recovered from the fill (016) of posthole [017]

An approximate east-west alignment of postholes was present further to the north in the central area of the site. Five of the eleven were excavated [036], [049], [042], [040] and [038]. All were filled by dark greyish brown silt (035), (048), (049), (039) and (037). Parallel, 4.60m south of this alignment were three postholes [055], [053] and [044], again filled by dark greyish brown silt (054), (052) and (043).

### **The Pits** (Figs 5 and 10)

Three large sub-rectangular pits were identified in the central area of the site. Two of these were further investigated, the southernmost [098], measuring 1.80m wide x 5.80m long x 0.68m deep with a flattish base and smooth sides on an east-west alignment. The primary fill was a mid-reddish brown sandy silt with green staining (098) overlain by black silt with organic remains (097), which was sealed by dark grey silt (096). All of the fills contained a large amount of broken mussel shell and two sherds of late 9<sup>th</sup>-10<sup>th</sup> century pottery were retrieved from fill (097), along with a large quantity of animal bone.

Nine metres north of [098] was the second of the excavated pits examined. This was again a sub-rectangular cut [011] measuring 1.40m wide x 4.85m long x 0.45m deep with a stepped base along its northern edge. Filling the pit was black

silty sand (012) and mid-grey sandy silt (031). Truncating the pit at its western end was a modern geotechnical pit. A third pit only 0.50m north of [011] laid on an north-south alignment was identified. This was not further examined, though in plan the pit appeared to be very similar to [011]. Samples taken from the pit fills identified products from domestic hearth waste (Appendix 6).

West of the large rectangular pits were two smaller rectangular pits, of which one was examined in detail. Located closest to the large pits was [066], measuring 0.60m wide x 3.20m long x 0.28m deep with a concave profile. This was filled by mid-grey bluish silt (083), light brownish yellow silty sand (068) and light brownish yellow silty sand (067) from which several sherds of late 9<sup>th</sup>- late 10<sup>th</sup> century pottery were recovered.

South of this was a smaller sub-rectangular shallow sided pit [046] measuring 1.40m x 0.65m wide x 80mm deep and filled by mid-greyish (045).

Located in the northeastern corner of the site was a further ditch [063]. This was not excavated, though a sherd of late 9<sup>th</sup>-mid 10<sup>th</sup> century pottery was retrieved from its upper fill, (062) a dark reddish brown silty sand.

## **6. DISCUSSION**

Archaeological investigations at Station Road, Kirton, Lincolnshire revealed substantial evidence of late 9<sup>th</sup>-10<sup>th</sup> century activity. Features identified ranged from ring gullies, postholes, ditches to large rectangular pits.

The earliest deposits recorded at the site were natural marine silts laid down prior to the late Saxon period. Above this was a subsoil, representing a transformed layer

produced by ploughing and cultivation of deep rooting crops in the post-medieval period (Rackham 1996, 17). Due to the transformation some features were recorded sealed beneath and others cutting through the layer. This would initially seem to imply differing dates, however it more likely suggests a varying amount of transformation occurring across the site partially dependant on the size and fill of the underlying ditches, postholes, pits and gullies.

Late Saxon sites are relatively rare in the Fens, and little investigation of them has previously been undertaken. However, evidence gained from archaeological investigations undertaken within Kirton clearly demonstrates that there was a substantial amount of Late Saxon activity taking place within the village. This appears to be rural in nature; with several of the sites having evidence of farming practices. Certain specific activities have been identified in the village: to the south of the site there is evidence for a smithy; to the southwest of Station Road environmental evidence suggests fermentation is taking place (Fig 3).

The main focus of the Station Road site was in the centre of the investigated area, extending southeastwards until bounded by the southern curvilinear ditch [081]. No archaeological remains were identified south and west of this

The function of the ring gullies is uncertain. Similar features have been identified throughout the Fenland area in the form of cropmarks, and during the excavations undertaken as part of the Fenland Management Project several of these gullies were exposed (Crowson *et al*, forthcoming). It had been suggested by Silvester (1988), that the gullies originated as drainage gullies around haystacks. The ring gullies contained a lighter silt fill, in comparison to the fills contained in the

other features on the site. However, the pottery retrieved from these gullies is similar in date to the rest of the site. This may therefore suggest that the ring gullies were possibly constructed prior to the other features on site, representing a change in land use over a short period of time.

Several alignments of postholes were identified. It seems likely that these represent property boundaries or divisions of different land use rather than domestic structures. However, it must also be considered a possibility that further postholes may have existed, and were destroyed through erosional activities such as ploughing, and soil transformation.

The large sub-rectangular pits identified are something of an enigma. Although, there are no examples of any other such pits in the Fens, similar late Saxon pits were encountered during excavation work undertaken at Whitehouse Lane, Fishtoft. These pits were slightly larger in dimension than the Station Road pits, with the Fishtoft pits measuring an average of 5.35m long x 2.30m wide. The depth of the pits was 0.50m with the fills being of ash and charcoal based deposits and clayey silt. The Fishtoft pits were interpreted as sunken buildings (Palmer-Brown, 1996). It is thought that the pits identified in Kirton however represent a very specific process being undertaken at the site. The pits are of considerable size the largest being 5.80m long x 1.80 wide x 0.68m deep. All were all filled by deposits containing a large amount of mussel shell and animal bone. The environmental samples taken from the pits contained domestic hearth waste.

Due to the large amount of freshwater mussel shell found within the pits and other features, it is possible that the pits may have been used in the processing and cooking of shellfish. The shallower pit may have been used for 'cleaning' for the

shells, with the larger pit serving the function of a refuse pit for later discarded shell and other waste.

Across the site were quantities of burnt silt/clay, found in conjunction with pottery sherds, animal bone and mussel shell. It is likely that the burnt silt/clay may derive from an 'industrial' process as the material did not show any of the wattle-type impressions, nor contain the vegetable temper usually associated with wattle and daub walls. This may be further evidence that the alignments of postholes represent a fence rather than a building.

The pottery assemblage has tightly dated the period of occupation at the site '*...to a short period between the early/mid 10<sup>th</sup> century (c. 900-940)*' (Young, Appendix 3). There was no evidence identified during the course of the archaeological investigations for occupation prior to the late 9<sup>th</sup> - mid 10<sup>th</sup> century or after this period to present day.

The possible reasons as to why the site was occupied only for forty years, may be that whatever the function of the site was no longer required. Or perhaps the resources at the site were exhausted resulting in a shift to a new location within Kirton or elsewhere. There was no evidence at the site for an environmental or a man-made disaster (such as a fire) leading to the abandonment of the site.

Two of the pottery vessels had drill holes, indicating a specialised use of the vessels. It has not been possible to say exactly what that use was, as only a small part of each vessel was recovered. It has however been suggested that three of the pots had probably contained an acidic liquid.

The pottery assemblage demonstrates an economic link between Kirton and Lincoln during the early 10<sup>th</sup> century, with the majority of the pottery being produced at

the kilns in Lincoln. It is quite possible that the Lincoln produced pottery was being traded for products manufactured or processed at the Kirton site.

A comparison may be drawn between the sites at Fishtoft and Kirton. To date both of the present day villages are generally devoid of archaeological remains after the end of the Roman Period and archaeological remains are not recorded again until the late Saxon Period. It was also noted during the Fenland Survey that Wrangle was devoid of archaeological remains during this period. All three of these places are in coastal locations, with Kirton being only 3.5km from the late Saxon dating 'Roman Bank' and Fishtoft 4.5km from the bank. It is therefore possible, as discussed, by Palmer-Brown (1996), that there may be no coincidence between the creation of the silt bank for protection against flooding during the 9<sup>th</sup>-10<sup>th</sup> century and the emergence of late Saxon settlements on land, which is likely to have been previously flooded, as is strongly suggested by the environmental evidence from other sites in Kirton. Another similar feature between the Station Road site and White Chapel Lane was the short period of occupation at the site, though it has been suggested that the cause of abandonment at White Chapel Lane was much more destructive in the form of a fire burning the site to the ground.

## 7. CONCLUSIONS

Archaeological investigations were undertaken on land at Station Road, Kirton, Lincolnshire, as geophysical survey and evaluation of the site had identified several archaeological features indicating a high potential for further archaeological remains to be uncovered more specifically those dated to the late Saxon period.

A large number of features dated between the late 9<sup>th</sup> –mid 10<sup>th</sup> century were identified. The main focus of activity on the site extends from the central area of the site to the southeast and is bounded by the large southern curvilinear ditch. South of this ditch no archaeological remains were identified. Within the main area of settlement several large pits, smaller pits, a ditch and several alignments of postholes were identified. Animal bone and late 9<sup>th</sup>-mid 10<sup>th</sup> century pottery was retrieved from these features. Across the site ring gullies were identified.

The pottery assemblage tightly dates the site to a period of occupation between 900-940AD. No evidence was found for occupation of the site prior to or after this period.

## 8. ACKNOWLEDGEMENTS

Archaeological Project Services wish to acknowledge the assistance of Mr. Neil Kempster of Chestnut Homes who commissioned the fieldwork and this report. The project was coordinated by Dale Trimble; the report was edited by Dale Trimble and Tom Lane, the Boston Community Archaeologist, kindly permitted the examination of the relevant parish files.

## 9. PERSONNEL

Project Coordinator: Dale Trimble  
 Site Supervisor: Rachael Hall  
 Site Assistants: Barry Martin and Peter Watkin  
 Volunteers: Matthew Bennett, Bob Garland and Natalie White  
 Photographic reproduction: Sue Unsworth  
 CAD Illustration: Rachael Hall  
 Post-excavation Analyst: Rachael Hall

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## 11. ABBREVIATIONS

APS Archaeological Project Services

IFA Institute of Field Archaeologists

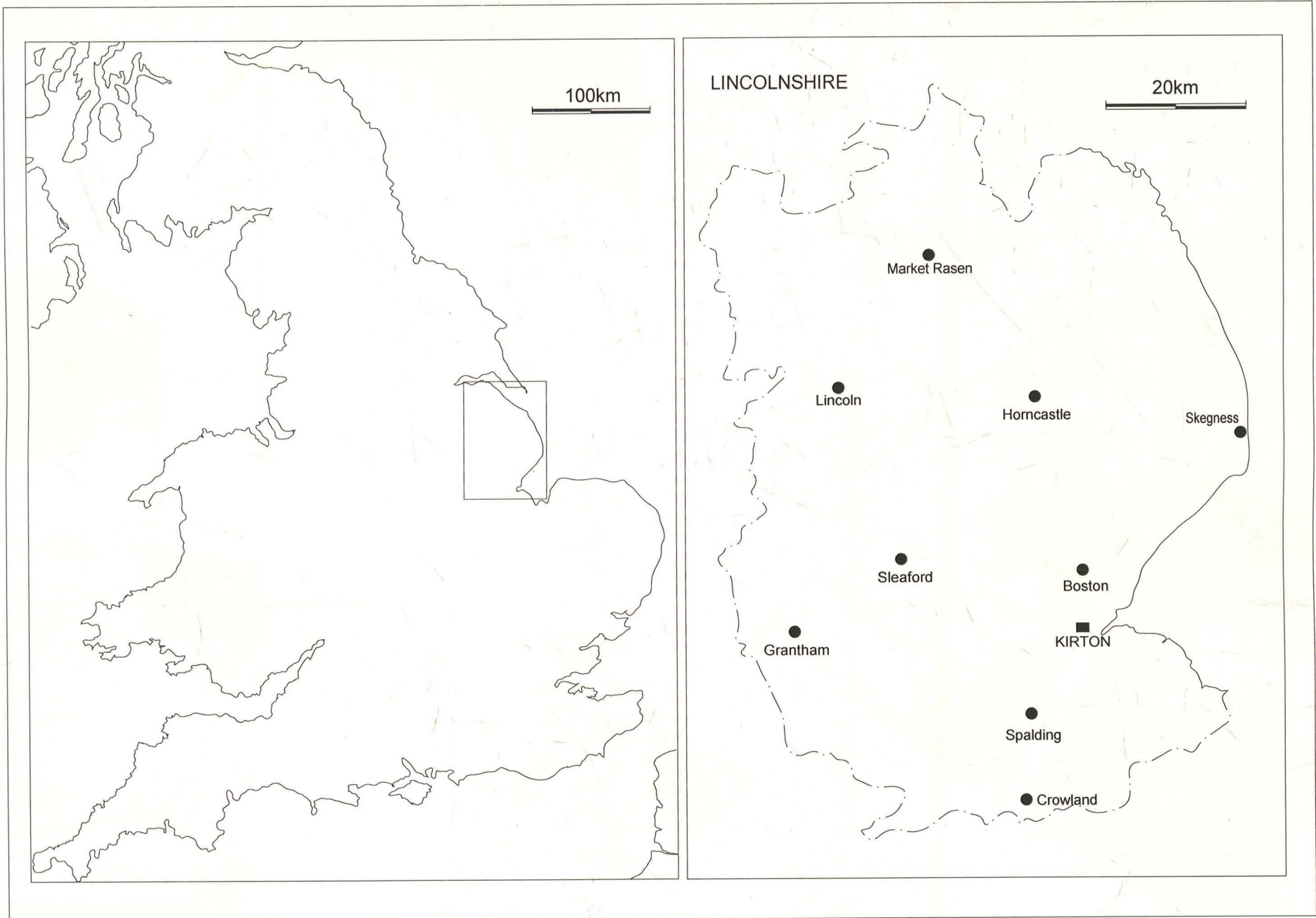


Figure 1: General Location Plan



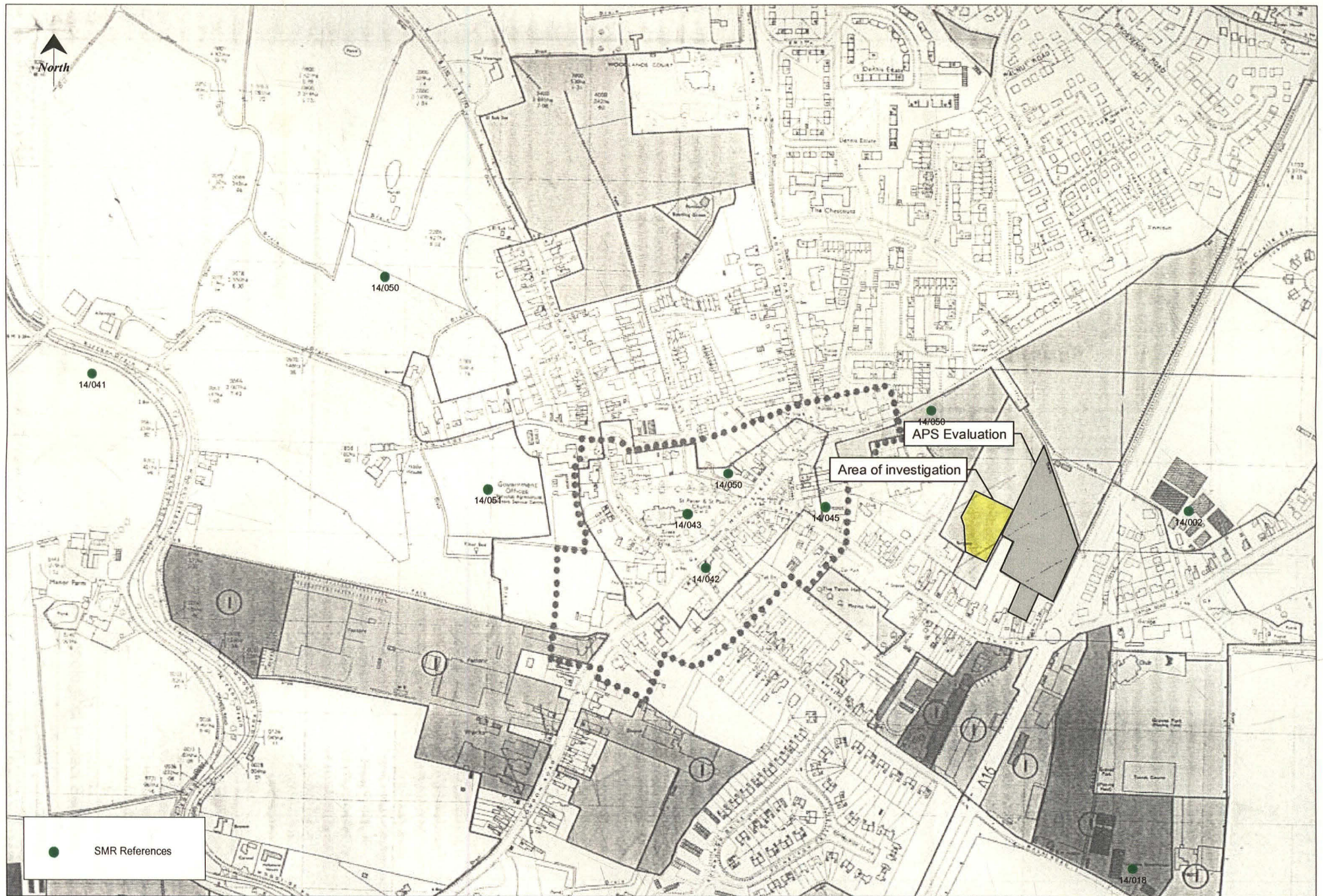
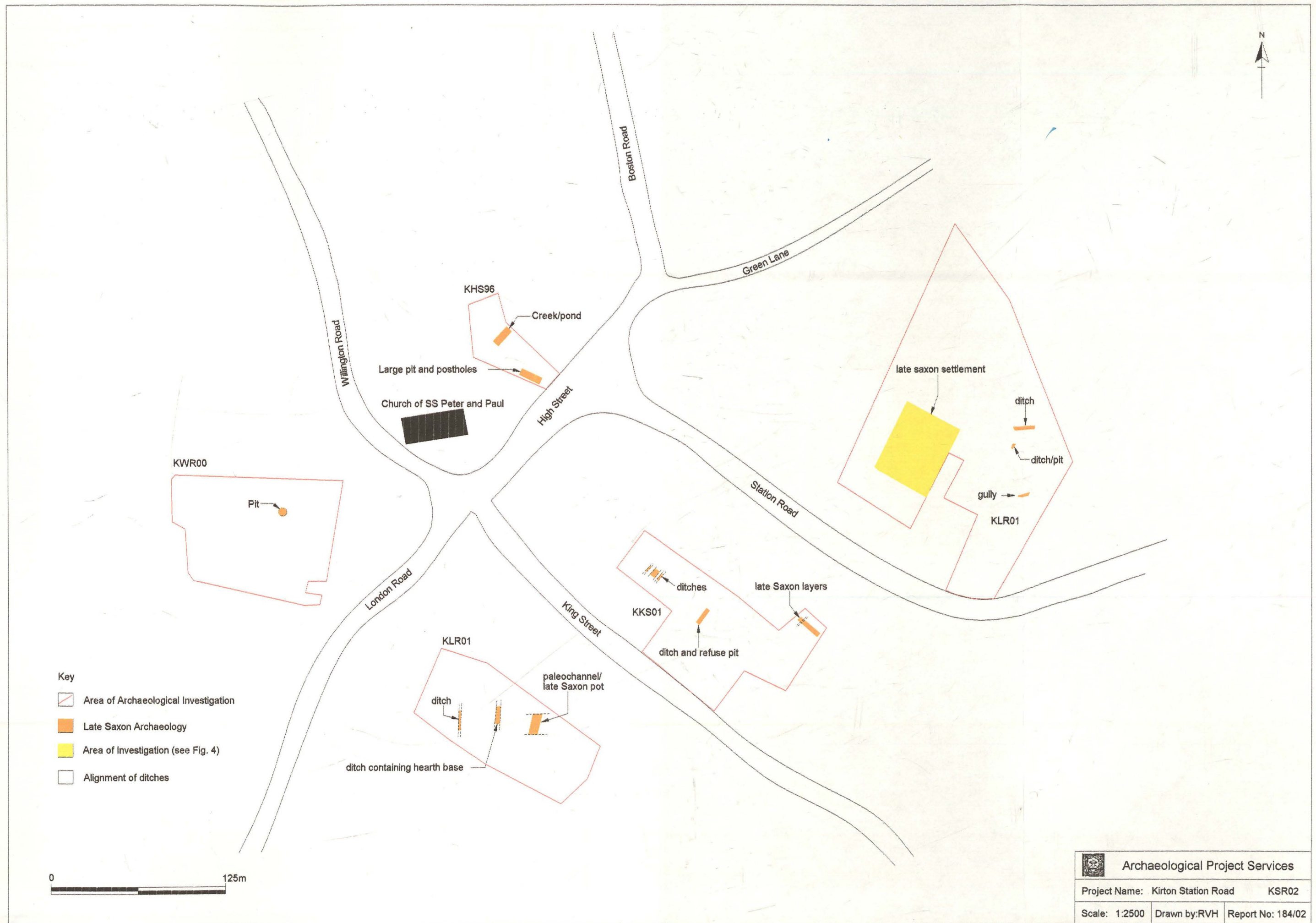


Figure 2 Location plan and archaeological setting




 <b>Archaeological Project Services</b>		
Project Name:	Kirton Station Road	KSR02
Scale:	1:2500	Drawn by:RVH
		Report No: 184/02

Figure 3: Known Saxon Archaeology within Kirton

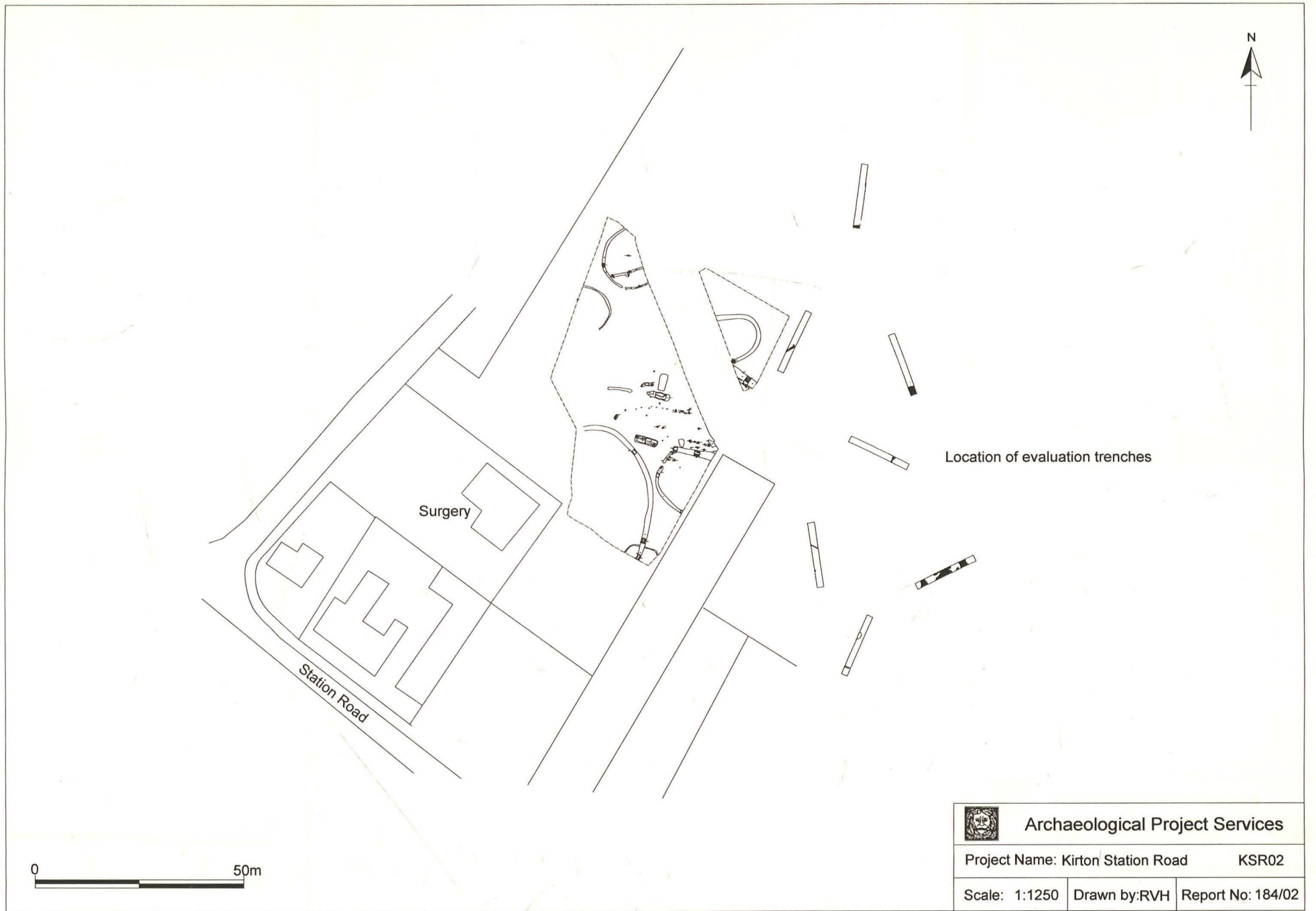
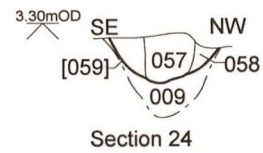
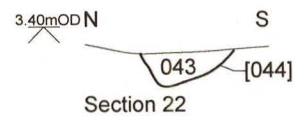
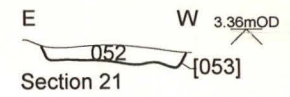
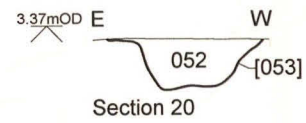
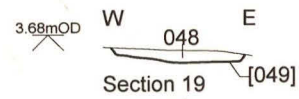
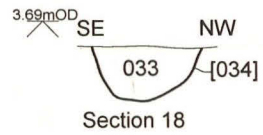
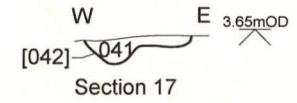
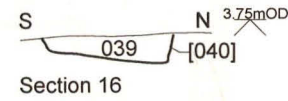
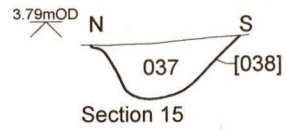
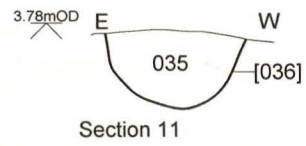
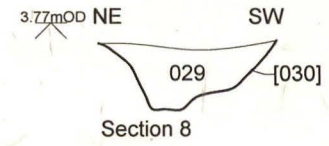
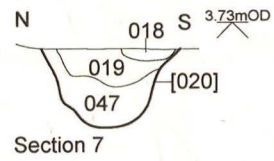
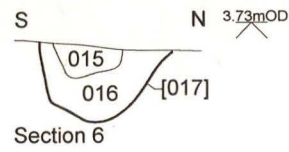
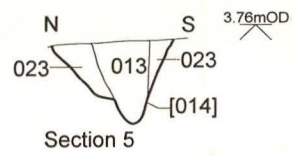


Figure 4 Detailed Site Location Plan






 Archaeological Project Services		
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Figure 6: The Post holes

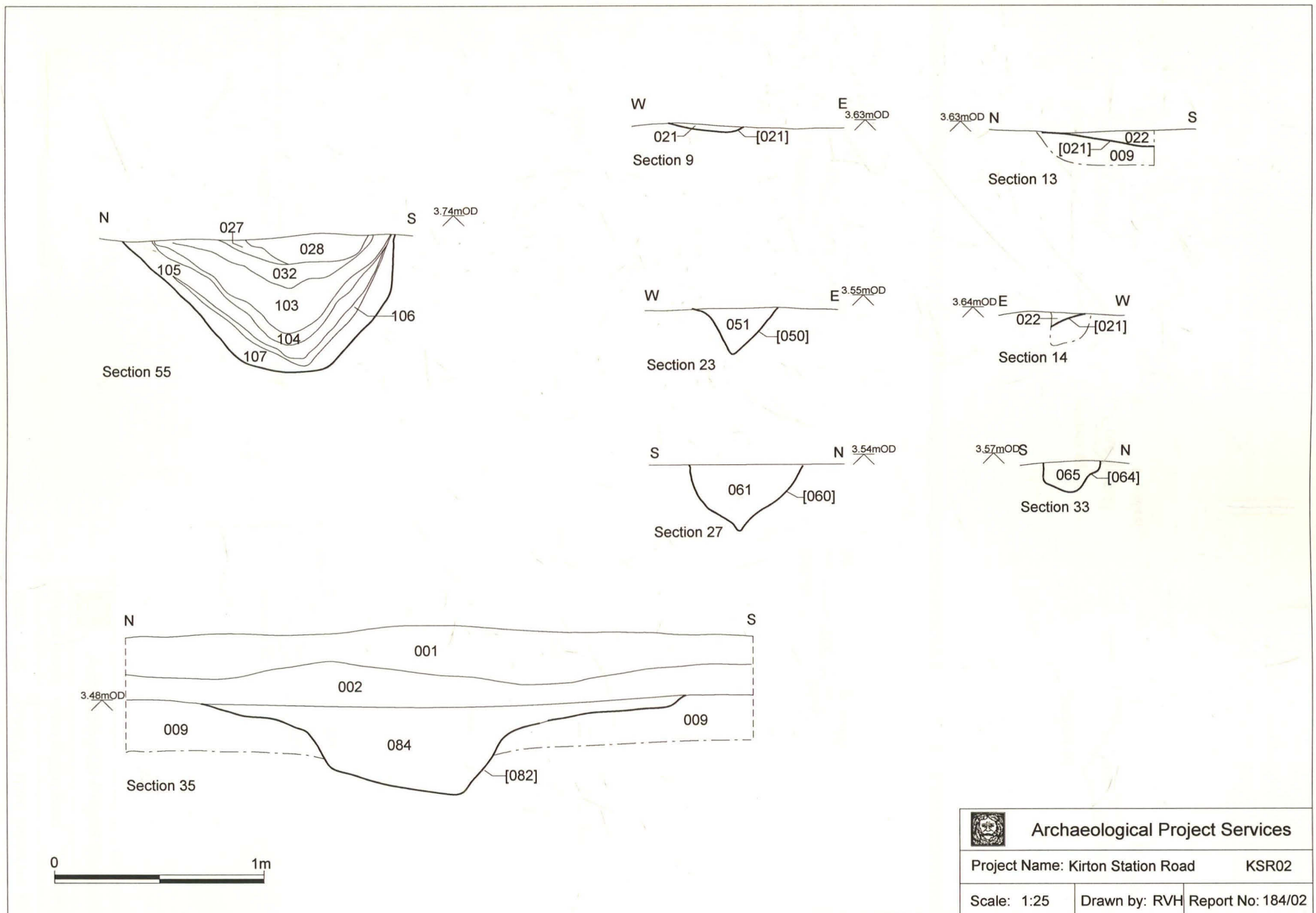
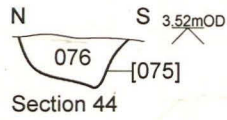
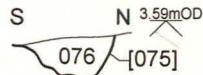


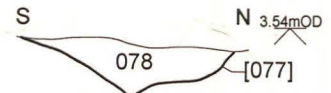
Figure 7: The Southern ring gully and associated features



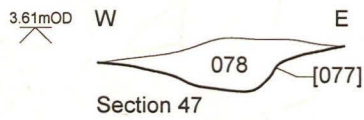
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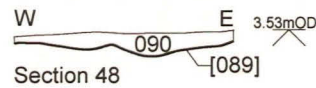
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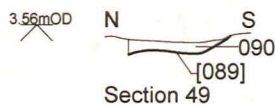
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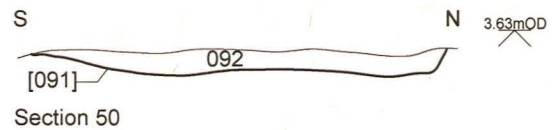
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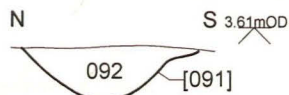
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Section 49



Section 50



Section 51



Section 52



Archaeological Project Services

Project Name: kirton Station Road KSR02

Scale: 1:25 Drawn by: RVH Report No: 184/02

Figure 8: The Northern Ring Gully and associated features

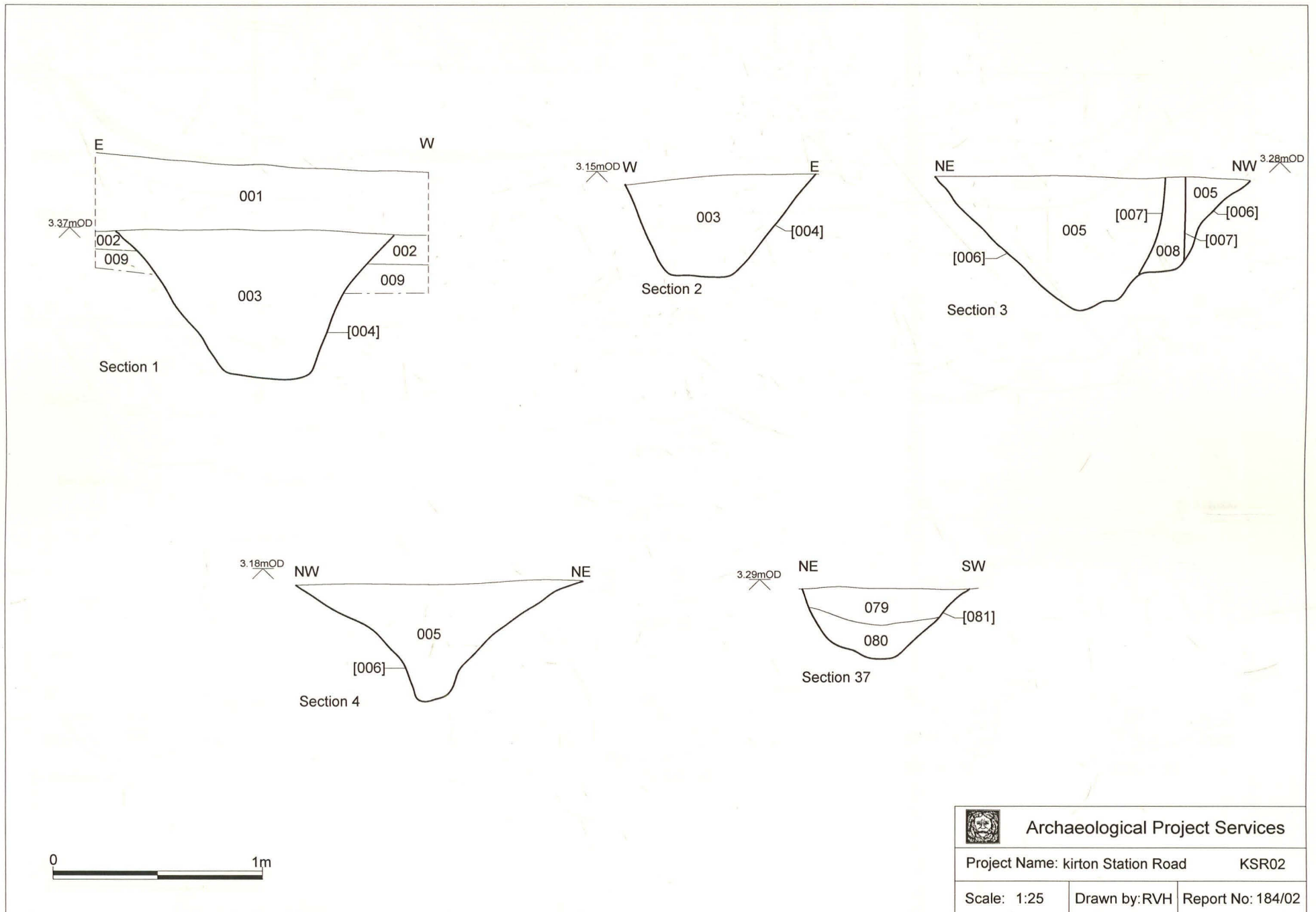


Figure 9: Southern curvilinear ditch



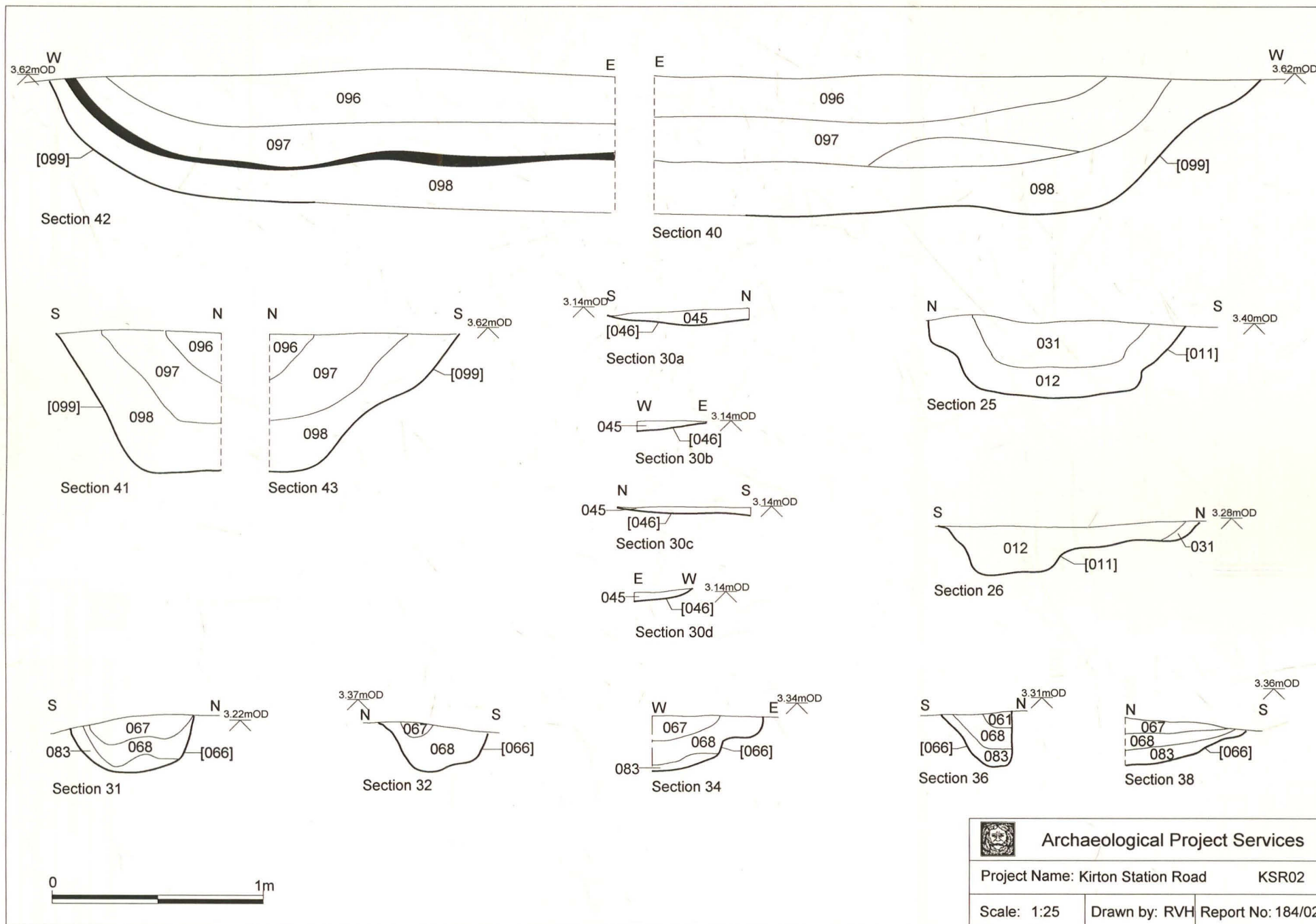
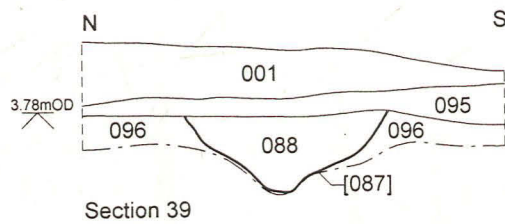
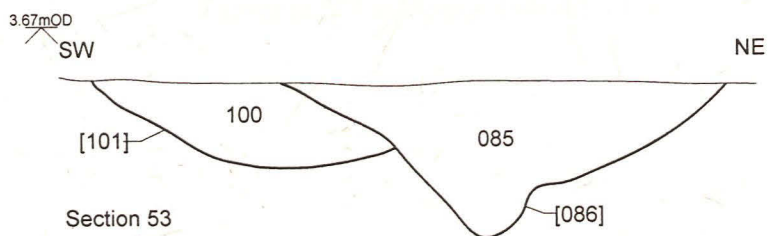
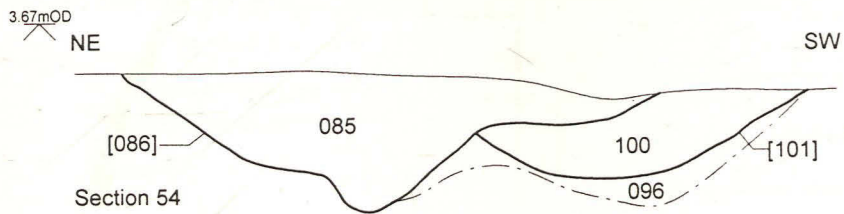


Figure 10 The Pits




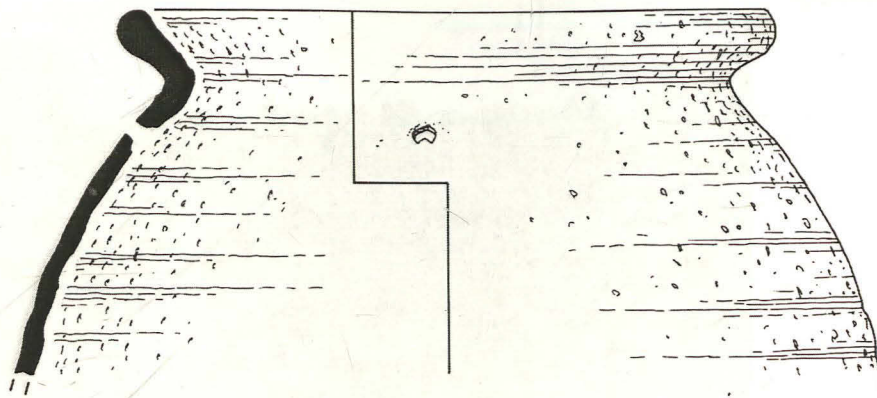
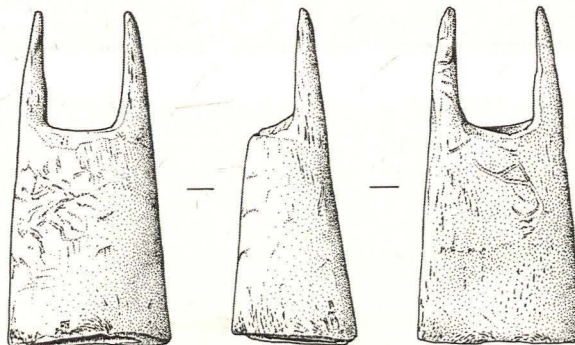
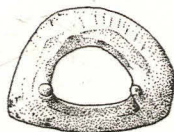
 <b>Archaeological Project Services</b>		
Project Name: Kirton Station Road		KSR02
Scale: 1:25	Drawn by: RVH	Report No: 184/02

Figure 11 Ditches in Area 2



10 cm

Example of late-Saxon (940AD) Pot



5 cm

Bone Tool

Figure 12: Artefacts from Kirton



Plate 1 General view of development area, looking west



Plate 2 View of machining in progress, looking west



Plate 3 General plan view of southeast corner of site

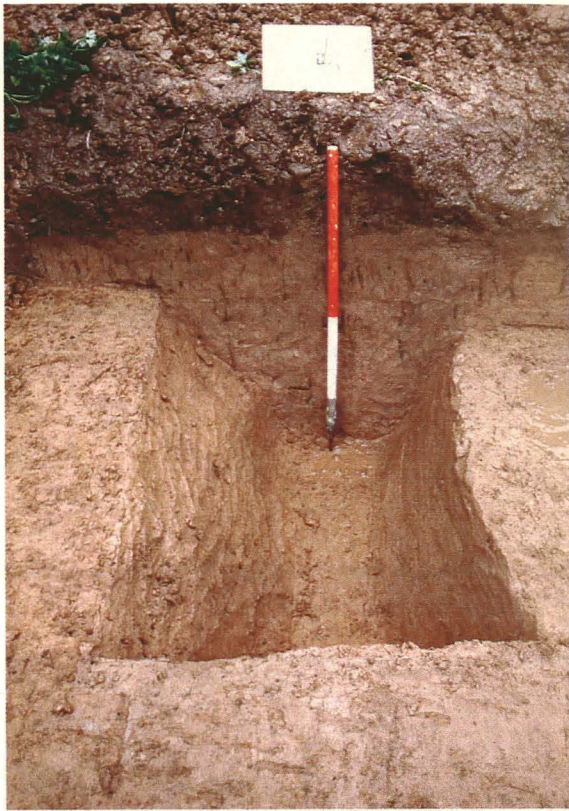


Plate 4 Southern curvilinear ditch [004], looking south



Plate 5 Ditches [086] and [101] in Area 2, looking northwest



Plate 6 Hearth debris seen in terminus of ditch [024], looking north



Plate 7 Section through northern ring gully [077], looking south

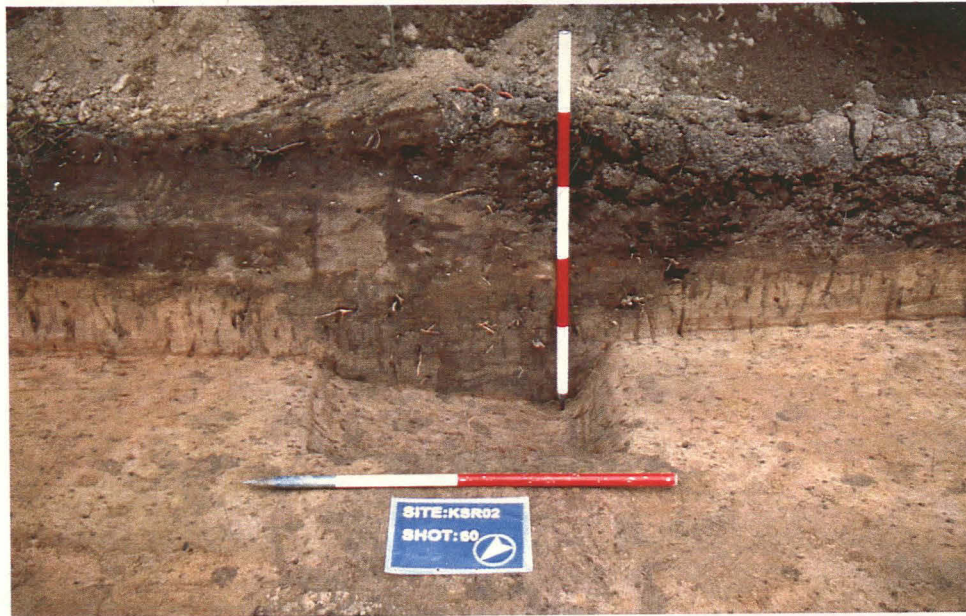


Plate 8 Section through southern ring gully [082], looking east



Plate 9 Pit [011], looking west



Plate 10 Pre-ex view of pit [099], looking west



Plate 11 Post-ex view of pit [099], looking north



Plate 12 Sections of pit [099], looking east

## Appendix 1

### Specification for Archaeological Topsoil Stripping and Recording on land off Station Road, Kirton Lincolnshire Phase 2, Lighton Avenue

#### 1 SUMMARY

- 1.1 *An archaeological scheme of works comprising topsoil stripping and recording is required as a condition of planning on residential development at Station Road, Kirton, Lincolnshire.*
- 1.2 *The area is archaeologically sensitive, lying in an area where Late Saxon remains have been identified during previous archaeological evaluations. The proposed development site is also close to the village core, within 300m of the medieval parish church*
- 1.3 *On completion of the fieldwork a report will be prepared detailing the results of the watching brief. The report will consist of a narrative supported by illustrations and photographs.*

#### 2 INTRODUCTION

- 2.1 This document comprises a specification for a programme of topsoil stripping and archaeological recording on land off Station Road, Kirton, Lincolnshire.
- 2.2 This document contains the following parts:
  - 2.2.1 Overview.
  - 2.2.2 Stages of work and methodologies.
  - 2.2.3 List of specialists.
  - 2.2.4 Programme of works and staffing structure of the project

#### 3 SITE LOCATION

- 3.1 Kirton is located 4km southwest of Boston in the fens of south Lincolnshire. The site is just east of the village centre, off Station Road, about 250m east of the parish church at national grid reference TF 3092 3851.
- 3.2 The development site is a roughly rectangular block of land approximately 1.1ha in extent with access to Station Road to the south. Within this, the area of investigation is centred upon a dispersed cluster of archaeological deposits recorded during the evaluation of the site and forms an approximately rectangular shape measuring c. 60m x 50m

#### 4 PLANNING BACKGROUND

- 4.1 A planning application (B/01/0625/FULL) submitted to Boston District Council for residential development of an approximately 1.1ha. site at Station Road, Kirton, has been granted full permission subject to a condition requiring a scheme of archaeological works. This requires topsoil stripping under archaeological supervision followed by excavation and recording.

#### 5 SOILS AND TOPOGRAPHY

- 5.1 The site and surrounding area is on a gentle slope down to the west at c. 4m OD. Soils at the site are typical alluvial gleys of the Tanvats Association developed on marine alluvium (Hodge *et al.*



1984, 319). Beneath this alluvium is glacial drift that was deposited in a geological basin between the Lincolnshire Wolds and the East Anglian Heights.

## 6 ARCHAEOLOGICAL OVERVIEW

- 6.1 There is little evidence for archaeological remains of prehistoric date in the area and deposits from the earlier part of this period are likely to be deeply buried beneath silts and peats deposited during alternating phases of freshwater and marine flooding in the fen basin.
- 6.2 The earliest evidence for occupation in the area dates to the Roman period and is represented by artefacts of this date recovered along Willoughton road on the northwest edge of the village.
- 6.3 Kirton village was the administrative centre of the Kirton Wapentake at the time of the Domesday survey in 1086 (Morris, 1986), indicating that the settlement was established by at least the Late Saxon period. The survey records the name as *Chirchetune*, derived from Old English and meaning the 'tun' (village) with a church 'cirice' (church). At some point between 1096 and 1155-56 'cirice' was replaced by the Old Norse 'kirkja' (Cameron 1998)
- 6.4 The site lies very close to the medieval village core, about 250m east of the parish church of SS Peter and Paul, built in the 12<sup>th</sup> century but substantially altered and reduced in size in the early 19<sup>th</sup> century (Pevsner, 1989). It is likely that the church was the focus of settlement in the Late Saxon period and investigations immediately east of the church revealed evidence of occupation of the period, perhaps representing the remains of a farmyard. Medieval settlement and evidence of craft working was subsequently established in the area (Cope-Faulkner, 1996).
- 6.5 Evaluation of the proposed development site during February 2001 by Archaeological Project Services identified a cluster of post holes and a number of ditches containing pottery predominantly of Saxo-Norman date. The character of the pottery, animal bone and shell recovered from the post holes indicates domestic activity somewhere in the vicinity (Snee, 2001a). More recent evaluation of the adjacent field to the east also identified remains of Saxo-Norman date, including evidence for the processing of arable crops (Rayner, 2002).
- 6.6 Other investigations, only 100m to the west of the present site on Station Road, also revealed early medieval occupation remains dating to the 13th-14th century (Archaeological Project Services 1994). Settlement here appears to have been interrupted by flooding which laid down silts over the Late Saxon and medieval archaeological remains. Saxon or medieval remains beneath a thick silt layer were also revealed just west of the church on Willington Road (Hambly, 2000). Later medieval and post-medieval occupation was subsequently established on the surface of the flood silts at both sites
- 6.7 Further to the south adjacent to King Street and London Road, two recent archaeological evaluations have recorded evidence for moderately intensive activity during the Saxo-Norman period. In addition to material indicating domestic activity, evidence for iron smithing was also identified. In terms of the development of Kirton, it may be significant that few medieval deposits were recorded at either of these two evaluations, suggesting major topographical changes between the late Saxon and medieval periods (Thomson, 2001 Snee, 2001b)

## 7 AIMS AND OBJECTIVES

- 7.1 The aim of the topsoil strip and archaeological recording will be:
  - 7.1.1 To identify, record and excavate as appropriate, the archaeological features exposed during the topsoil strip.

7.2 The objectives of the project will be to:

- 7.2.1 Determine the form and function of the archaeological features encountered;
- 7.2.2 Determine the spatial arrangement of the archaeological features encountered;
- 7.2.3 As far as practicable, recover dating evidence from the archaeological features, and
- 7.2.4 Establish the sequence of the archaeological remains present on the site.

## 8 SITE OPERATIONS

### 8.1 General considerations

- 8.1.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation and in accordance with the risk assessment prepared for the project. In particular, no machine excavation will be undertaken within six metres, or within any specific limit set with the health and safety policy of the main contractor, either side of an overhead cable which crosses the north edge of the area of excavation.
- 8.1.2 The work will be undertaken according to the relevant codes of practise issued by the Institute of Field Archaeologists (IFA), under the management of a Member of the institute (MIFA). Archaeological Project Services is IFA registered organisation no. 21.
- 8.1.3 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.

### 8.2 Methodology

- 8.2.1 The initial topsoil strip of the approximately 0.3 hectare area will be undertaken under archaeological supervision with topsoil and other overburden removed to a level where archaeological deposits are clearly visible. All machine excavation will be undertaken using a toothless ditching bucket.
- 8.2.2 During the topsoil stripping exposed surfaces will be inspected and any areas containing archaeological deposits marked for later attention. Hand cleaning of exposed surfaces will be undertaken as appropriate and in all areas where discrete clusters of archaeological remains are identified.
- 8.2.3 A pre-excavation surface plan will be created using a Total Station EDM linked to a Psion datalogger. The downloaded data will then be translated into digital plan on a PC using NSS Survpro software.
- 8.2.4 Only after completion of the pre-excavation plan and monitoring by the Boston Borough Community archaeologist will a specific excavation strategy be formulated.
- 8.2.5 Throughout the project a photographic record will be compiled. The photographic record will consist of:
  - the site during work to show specific stages, and the layout of the archaeology within the trench.

- groups of features where their relationship is important

8.2.6 Should human remains be located the appropriate Home Office licence will be obtained before their removal. In addition, the Local Environmental Health Department and the police will be informed.

## 9 POST EXCAVATION

### 9.1 Stage 1

9.1.1 On completion of site operations, the records and schedules produced during the watching brief will be checked and ordered to ensure that they form a uniform sequence forming 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 and labelled, the labelling referring to schedules identifying the subject/s photographed.

9.1.2 All finds recovered during the field work will be washed, marked and packaged according to the 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.

### 9.2 Stage 2

9.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.

9.2.2 Finds will be sent to specialists for identification and dating.

### 9.3 Stage 3

9.3.1 On completion of stage 2, a report detailing the findings of the watching brief will be prepared.

9.3.2 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 of the site.
- Description of the methodologies used during the project.
- A text describing the results of the topsoil stripping and recording exercise.
- A consideration of the local, regional and national context of the identified archaeological remains.
- Plans of the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.
- Sections of the archaeological features.
- Interpretation of the archaeological features exposed, and their chronology and setting within the surrounding landscape.

- Specialist reports on the finds from the site.
- Appropriate photographs of the site and specific archaeological features.

## **10 REPORT DEPOSITION**

- 10.1 Copies of the report will be sent to the Client, the Boston District Community Archaeologist, Boston District Council Planning Department, the County Council Archaeological Sites and Monuments Record.

## **11 ARCHIVE**

- 11.1 The documentation and records generated during the investigation will be sorted and ordered into the format acceptable to the City and County Museum, Lincoln. This will be undertaken following the requirements of the document titled Conditions for the Acceptance of Project Archives for long term storage and curation.

## **12 PUBLICATION**

- 12.1 A report of the findings of the watching brief will be presented as a condensed article to the editor of the journal Lincolnshire History and Archaeology. If appropriate, notes on the findings will be submitted to the appropriate national journals: Britannia for discoveries of Roman date, and Medieval Archaeology and the Journal of the Medieval Settlement Research Group for findings of medieval or later date.

## **13 CURATORIAL RESPONSIBILITY**

- 13.1 Curatorial responsibility for the archaeological work undertaken on the site lies with the Boston Borough Community Archaeologist based at Heritage Lincolnshire. They will be given seven days notice in writing before the commencement of the project.

## **14 PROGRAMME OF WORKS AND STAFFING LEVELS**

- 14.1 The project is scheduled to last eight days with one supervisor and two site assistants present on site throughout.
- 14.2 An archaeological supervisor with experience of similar sites will undertake the work.
- 14.3 Post-excavation analysis and report production will be undertaken by the archaeological supervisor, or a post-excavation analyst as appropriate, with assistance from a finds supervisor, illustrator and external specialists. Ten person days have been allocated for writing the report with separate provision for illustration, finds processing, archiving and pottery and other artefactual specialists.

## **15 VARIATION AND CONTINGENCIES**

- 15.1 Variations to the proposed scheme of works will only be made following written confirmation of acceptance from the archaeological curator.
- 15.2 In the event of the discovery of any unexpected remains of archaeological importance, or of any changed circumstances, it is the responsibility of the archaeological contractor to inform the archaeological curator (Lincolnshire Archaeological Handbook 1998, Sections 5.7 and 18).

- 15.3 Any contingency requirement for additional fieldwork or post-excavation analysis outside the scope of the proposed scheme of works will only be activated following full consultation with the archaeological curator and the client.

## 16 SPECIALISTS TO BE USED DURING THE PROJECT

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

<u>Task</u>	<u>Body to be undertaking the work</u>
Conservation	Conservation Laboratory, City and County Museum, Lincoln
Pottery Analysis	Prehistoric - Trent & Peak Archaeological Trust
Roman	B Precious, Independent Specialist
Anglo-Saxon	J Young, Independent Specialist
Medieval and later	G Taylor, APS in consultation with H Healey, Independent Archaeologist
Non-pottery Artefacts	J Cowgill, Independent Specialist
Animal Bones	Environmental Archaeology Consultancy
Environmental Analysis	J Rackham, Independent Specialist
Human Remains Analysis	R Gowland, Independent Specialist

## 17 INSURANCES

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

## 18 COPYRIGHT

- 18.1 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.
- 18.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.
- 18.3 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.

- 18.4 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.

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Specification: Version 1, 31/06/01

**Appendix 2**  
Context Summary

Context No.	Type	Description	Thck (m)	Interpretation
001	Deposit	Loose, mid-brown silty sand	0.30	Topsoil
002				
003	Deposit	Firm, light reddish brown fine sandy silt, occ. charcoal flecks	0.74	Fill of 004
004	Cut	Curvilinear ditch, steep sided, with flattish base, 1.35m wide	0.74	Ditch
005	Deposit	Firm, pale brown silty sand, occ. shell	0.74	Fill of 006
006	Cut	Curvilinear, steep sided, flattish base	0.74	Ditch
007	Cut	Circular, vertical sided, flat base, 0.15m diameter	0.43	Posthole
008	Deposit	Loose, mid-dark brown silt, occ. sm. pebbles <sup>0</sup>	0.43	Fill of 007
009	Deposit	Firm, light reddish brown fine sandy silt	-	Natural
010		Not Used		
011	Cut	Sub-rectangular east-west aligned cut with rounded corners, base stepped along northern edge tapering into a flat base along southern edge, 1.40m wide by 4.85m wide	0.45	Pit
012	Deposit	Soft, black slightly silty sand, lenses of light brown silt, freq. mussel shell, freq. charcoal	0.45	Fill of 011
013	Deposit	Firm, mid-reddish brown fine silty sand, occ. shell	0.28	Fill of 014
014	Cut	Sub-circular, steep sided, rounded v-shaped profile, 0.38m diameter	0.28	Post Hole
015	Deposit	Firm, mid-reddish brown with mottles of light reddish brown sandy silt, occ. mussel shell	0.10	Fill of 017
016	Deposit	Firm, light reddish brown slightly silty sand, occ. shell	0.26	Fill of 017
017	Cut	Sub-circular, steep sided with rounded base, 0.43 x 0.51m wide	0.26	Post Hole
018	Deposit	Compact, light reddish brown silt	0.04	Fill of 020
019	Deposit	Firm, mid-reddish brown sandy silt, occ. mussel shell	0.12	Fill of 020
020	Cut	Sub-circular, steep sided rounded base, 0.56m x 0.46m wide	0.14	Post Hole
021	Cut	Curvilinear, shallow sided round base, 0.35m wide	0.04	Ring Gully
022	Deposit	Soft, light brown silty sand, occ. shell	0.04	Fill of 021
023	Deposit	Firm, light reddish brown silty sand, occ. shell	0.28	Fill of 014
024				
025	Cut	Curvilinear, concave sided, round base, 0.50m wide	0.10	Ring Gully
026	Deposit	Firm, reddish brown fired clay		Remains of dumped hearth
027	Deposit	Loose, very pale brown fine silty sand, occ. shell, occ. hearth residue		Fill of 032
028	Deposit	Loose brownish yellow silty sand, occ. shell	0.10	Fill of 025
029	Deposit	Firm, mid-reddish brown silty sand, occ. sm. pebbles	0.25	Fill of 030
030	Cut	Elliptical, steep sided, uneven base, 0.62m x 0.50m wide	0.25	Post Hole
031	Deposit	Soft, mid-grey sandy silt, freq. mussel shell	0.20	Fill of 011

032	Deposit	Loose, dark grey silty sand, freq. shell	0.05	Fill of 034
033	Deposit	Firm, light reddish brown silty sand, occ. shell	0.18	Fill of 034
034	Cut	Circular, steep sided round base cut	0.18	Post Hole
035	Deposit	Firm, dark greyish brown silt, freq. fired clay	0.25	Fill of 036
036	Cut	Circular, slightly concave sided and base, 0.45m diameter	0.25	Post Hole
037	Deposit	Firm, light brownish grey sandy silt, mottles of reddish brown sandy silt	0.19	Fill of 038
038	Cut	Sub-circular, steep sided flattish base, 0.46m diameter	0.18	Post Hole
039	Deposit	Firm, light brownish grey sandy silt	0.10	Fill of 040
040	Cut	Sub-rectangular, rounded corners, steep sided flat base, 0.40m x 0.43m wide	0.10	Post Hole
041	Deposit	Firm, light brownish grey sandy silt	0.08	Fill of 042
042	Cut	Sub-circular, smooth sided concave base, 0.45m diameter	0.08	Post Hole
043	Deposit	Firm, mid-reddish brown sandy silt	0.12	Fill of 044
044	Cut	Amorphous, uneven sides and base, 0.40m x 0.31m wide	0.12	Post Hole
045	Deposit	Mid-greyish brown silty sand	0.08	Fill of 046
046	Cut	Sub-rectangular shallow sided, 1.40m long x 0.65m wide	0.08	Pit
047	Deposit	Firm, light reddish brown silty sand, occ. shell	0.26	Fill of 020
048	Deposit	Firm, light greyish brown sandy silt	0.03	Fill of 049
049	Cut	Circular, steep sided flat base, 0.43m diameter	0.03	Post Hole
050	Cut	Sub-circular, steep sided round base, 0.40m diameter	0.23	Post Holes
051	Deposit	Soft, light brown silty sand, occ. shell	0.23	Post Hole
052	Deposit	Firm, mid-brownish grey sandy silt, occ. fired clay and black silt	0.16	Fill of 053
053	Cut	Sub-circular, irregular sided and base, 0.47m wide	0.25	Post Hole
054	Deposit	Firm, light brownish grey sandy silt, occ. shell	0.07	Fill of 055
055	Cut	Sub-circular, vertical sided, irregular base, 0.47m wide	0.07	Post Hole
056	Cut	E-w linear, concave sided, flat base, 1.30m wide	0.30	Ditch
057	Deposit	Firm, mid-reddish brown silty sand, occ. shell	0.16	Fill of 059
058	Deposit	Firm, light reddish brown sand, occ. shell	0.13	Fill of 059
059	Cut	Circular, smooth sided, round base, 0.37m diameter	0.16	Post Hole
060	Cut	Square, vertical sided, irregular base, 0.28m x 0.26m wide	0.14	Post Hole
061	Deposit	Firm, light brown silty sand	0.14	Fill of 060
062	Deposit	Firm, dark reddish brown silty sand, occ. charcoal flecks	-	Fill of 063
063	Cut	E-W aligned unexcavated cut 2.30m+ x 1.20m+ wide	-	Pit
064	Cut	Sub-circular, smooth sided, tapered to a point		
065	Deposit	Firm, light brown silty sand, occ shell	0.32	Fill of 064
066	Cut	Curved elongated, concave sided, flat base cut, 0.60m wide	0.30	Pit
067	Deposit	Loose, light brownish yellow silty sand, occ. shell	0.10	Fill of 066
068	Deposit	Loose, mid-dark grey silty sand, occ shell	0.20	Fill of 067
069	Deposit	Firm, light-mid reddish brown silty sand	-	Fill of 070



070	Cut	Sub-circular, unexcavated, 0.23m diameter		Post Hole
071	Deposit	Firm, light reddish brown silty sand	-	Fill of 072
072	Cut	Oval, not excavated, 0.60m x 0.40m wide	-	Post Hole
073	Deposit	Firm, mid-reddish brown silty sand, occ. charcoal flecks	-	Fill of 074
074	Cut	Circular, not excavated, 0.26m diameter	-	Post Hole
075	Cut	Curvilinear, concave sides flat base, 0.80m wide	0.18	Ring Gully
076	Deposit	Soft, mid-light grey sandy silt	0.17	Fill of 075
077	Cut	Curvilinear, concave sides flat base, 0.80m wide	0.18	Ring Gully
078	Deposit	Soft, light grey sandy silt	0.18	Fill of 077
079	Deposit	Soft, mottled mid-dark grey and mid-brown sandy silt	0.20	Fill of 081
080	Deposit	Soft, mid-greyish brown sandy silt, occ. charcoal flecks, occ. shell	0.17	Fill of 081
081	Deposit	Curvilinear, slightly concave sides, slightly rounded base, 0.96m wide	0.35	Ditch
082	Cut	Curvilinear, gradual sided, slightly concave base, 1.90m wide	0.39	Ditch/Ring Gully
083	Deposit	Loose, mid-grey bluish silty sand	0.06	Natural
084	Deposit	Firm, light brown silty sand	0.39	Fill of 082
085	Deposit	Firm, mid-reddish brown silty sand, occ. shell, occ. charcoal flecks, occ. iron pan	0.49	Fill of 086
086	Cut	NW-SE linear, smooth sided, round base, 1.86m wide	0.49	Recut of 101
087	Cut	Curvilinear, concave sides and base, 0.90m wide	0.30	Ditch
088	Deposit	Loose, mid-brown-reddish grey silty sand	0.90	Fill of 89
089	Cut	E-W linear, concave, 0.40m wide	0.15	Gull
090	Deposit	Soft, mid-brownish grey sandy silt	0.08	Fill of 089
091	Cut	Shallow, concave base, 0.60m wide	0.20	Post hole?
092	Deposit	Soft, mid-brownish grey sandy silt, occ. fired clay, occ. charcoal	0.18	Fill of 091
093	Cut	Sub-circular, irregular sides and base, 0.50m diameter	0.15	Post Hole
094	Deposit	Soft, light brownish grey sandy silt	0.15	Fill of 093
095	Deposit	Loose, mid-brown silty sand, occ. shell	0.12	Subsoil
096	Deposit	Soft, dark grey silt, freq. shell and organic matter	0.99	Fill of 099
097	Deposit	Soft, black silt and organic remains, freq. shell and lenses of brown silt	0.24	Fill of 097
098	Deposit	Soft, mid-reddish brown sandy silt, freq. shell and lenses of organic matter	0.18	Fill of 099
099	Cut	East-west sub-rectangular, smooth sided flat base, 1.80m wide x 5.80m long	0.68	Pit
100	Deposit	Firm, mid-reddish brown sand, occ. shell, occ. iron pan	0.29	Fill of 101
101	Cut	NW-SE linear, smooth sided, round base, 1.08m wide	0.29	Ditch
102	Deposit	Loose, reddish brown sand	-	Natural
103	Deposit	Loose, mid-brown silty sand, occ. shell	0.25	Fill of 024
104	Deposit	Loose, dark greyish brown silty sand, freq. shell	0.10	Fill of 024
105	Deposit	Loose, light grey silty sand, occ. shell	0.10	Fill of 024
106	Deposit	Loose, bluish grey silty sand, freq. shell	0.07	
107	Deposit	Loose, bluish grey silty sand	0.20	

Abbreviations:

Occ. occasional

Mod. moderate

Freq. frequent

Appendix 3

Survey from Boston Road, Adams, Massachusetts

One Young

Geological Survey

## Appendix 3

### Archive Report on the Pottery from Boston Road, Kirton, Lincolnshire.

Jane Young  
Lindsey Archaeological Services

#### Introduction

A total of 65 sherds of pottery representing about 35 vessels was recovered from the site. With the exception of one unidentifiable sherd the material can all be dated to the Late Saxon period. The pottery was examined both visually and using a x20 magnification, then recorded on an Access database using locally and nationally agreed codenames.

#### Condition

The pottery recovered is in a fragmented condition with most sherds showing some small degree of abrasion. The calcareous inclusions of only one vessel have been leached from both surfaces due to depositional conditions (context 002). Five vessels have either been overfired or subjected to a heat beyond the usual firing temperature for shell-tempered fabrics as the shell has begun to decompose, the fabric has become brittle and surfaces are spalling.

Pottery in this assemblage shows considerable evidence for functional use, with almost 50% of the vessels having exterior soot residues and seven examples also having soot on interior surfaces. Unfortunately as only a small part of each vessel was recovered it is not possible to use this evidence to interpret cooking methods used on the site. One vessel has an internal white deposit, probably limescale and the calcareous inclusions have been leached from the interior surface of two other jars, probably caused by an acidic liquid contained within the vessels. This suggests the use of vessels on the site for the storage of liquid. Two jars with small post-firing holes drilled through the walls of the vessels perhaps hint at a more specialised use of some of the ceramics on the site.

#### Overall Chronology and Source

A limited range of three different, identifiable pottery ware types were found on the site together with one unidentifiable vessel, the type and general date range for these wares are shown in Table 1. The assemblage is dominated by late Saxon shell-tempered fabrics produced at kilns in Lincoln. The majority of the vessels are of Lincoln Kiln-type shelly ware (Miles 1989), although a significant number are in other fabrics. Only one bowl could be identified amongst the assemblage, the remaining identifiable vessels are all jars. A suggested date for the deposition of each context is shown in Table 2.

Table 1: Pottery codenames and date range with total quantities by sherd and vessel count

codename	sub fabric	full name	date	sherds	vessels
LKT		Lincoln Kiln-type shelly ware	late 9 <sup>th</sup> to late 10 <sup>th</sup>	32	26
LSH	A	Lincoln Shelly ware	late 9 <sup>th</sup> to late 10 <sup>th</sup>	1	1
LSH	B	Lincoln Shelly ware	late 9 <sup>th</sup> to late 10 <sup>th</sup>	3	2
LSH	C	Lincoln Shelly ware	late 9 <sup>th</sup> to late 10 <sup>th</sup>	1	1
LSH	E	Lincoln Shelly ware	late 9 <sup>th</sup> to late 10 <sup>th</sup>	25	2
MISC		Miscellaneous	-	1	1
THET		Thetford-type ware	late 9 <sup>th</sup> to 12th	2	2

**Table 3: Suggested deposition date of pottery groups from stratified contexts**

context	date	vessels
002	late 9th to late 10th	1
005	late 9th to early/mid 10th	9
016	late 9th to late 10th	1
022	late 9th to early/mid 10th	5
027	late 9th to late 10th	2
051	late 9th to late 10th	2
056	late 9th to late 10th	1
062	late 9th to mid 10th	1
066	late 9th to late 10th	2
067	late 9th to early/mid 10th	5
082	late 9th to late 10th	1
085	late 9th to late 10th	1
097	late 9th to early/mid 10th	2
104	late 9th to late 10th	1
105	late 9th to late 10th	1

### ***The Pottery***

Only one vessel (from context 005) cannot be identified, this sherd in a fine oxidised sandy ware, is so abraded that it could equally well be a fragment of Roman Samian ware or a post-medieval product. The remaining pottery is all late Saxon in date, falling within a general date range of c. 870 to c. 1000. It is difficult to ascribe a tight date to small individual sherds, however several factors argue for the whole assemblage falling within the period between the early and mid 10<sup>th</sup> century.

Thirty-two vessels are of Lincoln manufacture (LSH and LKT), all are shell-tempered. The quality of the manufacture of these vessels suggests that they were all produced before the last quarter of the 10<sup>th</sup> century, more probably in the first half (Miles 1989, 226). Square roller-stamping on the shoulders of two jars is the only evidence for decoration, suggesting that the assemblage does not belong to the earliest period of manufacture in the late 9<sup>th</sup> to early 10<sup>th</sup> centuries when decoration on both the shoulder and rim edge was at its height. No diagnostic forms are present, however, all the rim types can be paralleled on vessels of early to mid 10<sup>th</sup> century date at Flaxengate, Lincoln (Adams Gilmour 1988).

The two Thetford-type vessels (THET) cannot in themselves be dated closer than to the Late Saxon period but are unlikely to be later in date than the shell-tempered Lincoln wares.

### ***Summary and Recommendations***

This is a small but important assemblage of late Saxon pottery, dominated by the products of kilns at Lincoln. The ceramic assemblage suggests that occupation in the immediate area of the site was possibly limited in duration to a short period between the early and early/mid 10<sup>th</sup> century (c. 900-940). Although it is impossible to make precise statements about the status or function of the site due to the limited size of the assemblage it is possible to say that the material is essentially domestic in nature with an absence of any finewares or industrial vessels.

The assemblage should be kept for future study, one vessel could be drawn for the archive record.

**Bibliography**

Adams Gilmour, L 1988. *Early Medieval Pottery from Flaxengate, Lincoln*, The Archaeology of Lincoln 17-2, CBA, London

Miles, P, Young, J, and Wachter, J 1989. *A late Saxon Kiln-Site at Silver Street, Lincoln*, The Archaeology of Lincoln 17-3, CBA, London

## Appendix 4

### The Bone Artefact

Gary Taylor, with comments by Jane Cowgill and Quita Mould

A bone artefact was recovered during investigations at Station Road, Kirton. The object was formed from the distal end of a sheep/goat radius (bone identification by James Rackham) and consists of a short tubular length of bone, with two short prongs projecting from one end.

The object has been identified as a lucet, and these implements are sometimes believed to be used for braid-making. Examples have previously been recovered from Anglo-Scandinavian and medieval levels in York, but there were usually made from cattle nasal bones, though some in antler have also been found (Walton Rogers 1997, 1790). An example in copper alloy has been retrieved from Ickham, Kent and another is known from Richborough (Malcolm Lyne pers. comm.).

Such two-pronged implements can be used to produce square-sections braids. However, the absence of any such lucet-worked braids from the archaeological record of Anglo-Saxon to medieval England means that the functional identity usually applied to these objects is doubtful. Similar objects, though from Iron Age contexts, have been described as tools to inscribe pottery (Walton Rogers, *ibid.*), though could be used to inscribe paired parallel lines or evenly spaced dots into any soft medium such as clay, plaster or wax. As a consequence, the use of these implements in textile crafts remains unproven.

Context (028), sf1: Bone: Body: length 27mm; width max 22mm, min 17mm; thickness max 16mm, min 10mm: Teeth 16mm long.

### Reference

Walton Rogers, P., 1997 *Textile Production at 16-22 Coppergate*, The Archaeology of York, The Small Finds 17/11

## Appendix 5

Station Road, Kirton – KSR02

### The Animal Bone

Excavations conducted by Archaeological Project Services at Station Road, Kirton, uncovered ditches, ring ditches, pits and other features of 10<sup>th</sup> century AD date. During these excavations 249 fragments of animal bone were collected by hand and subsequently submitted to the Environmental Archaeology Consultancy for identification and analysis.

**Table 1:** Number of fragments of each taxa hand excavated from each context.

context	Cattle	Cattle size	Sheep/goat	Sheep	Sheep size	Pig	Dog	Unident.	Chicken	Large bird	Unident. bird
003	1		1		1						
005	4	4	1		7	2		3			
012	17	10	24	2	12			3			
016						1					
022	7	1	2		1	1		2			
027	5	6	3		1	1					
030	1										
032			2		1						
046	1										
056	2	4	1		1						
066		4	1								
067	5		2			1				1	
079					1			1			1
080	2	1	1								
082					1						
084			1					1	1		
085		1	1								
092			1								
097	24	13	26	2	4	3	1	2			
104	2	4	2		2						
<b>Totals</b>	<b>71</b>	<b>48</b>	<b>69</b>	<b>4</b>	<b>32</b>	<b>9</b>	<b>1</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>1</b>

The animal bone was identified with the aid of modern reference skeletons in the collection of the author and recorded directly into an ACCESS database using the recording procedures and codes routinely used by the Environmental Archaeology Consultancy. The details of these codes and the data recorded in each field are given in the key accompanying the attached Bone Catalogue. This report refers to sheep throughout, even though many of the identifications were catalogued as 'sheep or goat'. No goat bones were specifically identified in the assemblage. The bone assemblage is well preserved with little evidence for post-depositional erosion or loss, although 7.5 % of the fragments show evidence of having been chewed by dogs. A few bones were charred, possibly during cooking, while two fragments were calcined indicating that they had been discarded into the fire.

Cattle and sheep bones occur with similar frequency, with pig bones being much less common. Single bones of a dog, chicken and large bird, probably domestic goose, were also identified. The fragmentation index for this whole assemblage is 0.97 (total number of individual zones divided by the total number of fragments) which represents an average of





metapodial			1						
long bone		13			10				1
indeterminate		6			2			11	

Unfortunately the sample size is not sufficient to permit any real interpretation but given the contexts from which the bones have been recovered and their general fragmentation, evidence for butchery and dog gnawing, the assemblage probably represents human food waste. The absence of smaller animals such as the birds, fishes and small mammals is a reflection of the recovery technique. Hand collection will not recover these elements of the fauna and clearly the hand collected bones do not reflect all the animal components of the human diet.

Such closely dated assemblages are unusual and if further excavations are undertaken on this site some effort should be made to recover significantly larger assemblages of animal bone. These might permit a more informed interpretation, particularly concerning the economic role of the farm animals, for instance whether they are bred for draught, milk, wool, hides, meat, etc. Given the limitations of hand recovery for some elements of the fauna soil sampling should also be undertaken to recover fish bones, birds, shellfish and other dietary evidence not routinely recovered during hand collection.

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14<sup>th</sup> November 2002

THE ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY

Key to codes used in the cataloguing of animal bones and marine shells

**SPECIES:**

SPECIES CODE			SPECIES CODE	
MAN	human		DOVE	Dove species
EQU	Horse		FER	Feral dove
EQSZ	Horse size		PART	Partridge
BOS	Cattle		SWAN?	Swan?
BOSL	Cattle-large		WOOD	Woodcock
CSZ	cattle size		CURL	Curlew
SUS	Pig		WADE	wader
OVCA	sheep or goat		CROK	Crow or rook
OVI	Sheep		CORV	Crow or rook
CRA	Goat		JACK	Jackdaw
SSZ	sheep size		OWL	Owl indet.
FEL	Cat		BUZZ	Buzzard
CAN	Dog		GULL	Gull sp.
AUR	Aurochs			
AUR?	Aurochs?		TURD	Turdidae
CER	red deer		BIRD	Identifiable but not id'd
DAM	Fallow deer		PASS	Passerine
CLS	roe deer		LBIRD	Large bird
LEP	Hare		UNIB	Bird indet
ORC	Rabbit			
LAG	Lagomorph		FROG	Frog
CARN	Carnivore		FRTO	Frog or toad
FOX	Fox			
POLE	Polecat/ferret			
WEA	weasel		GAD	Gadid, cod family
BADG	Badger		LING	Ling
SEAL	seal		HADD	Haddock
SQU?	Squirrel?		RAY	ray
BEAV	Beaver		FISH	Fish
ROD	Rodent		UNIF	Fish indet
RAT	Rat			
AGR	Field vole		OYS	oyster
ARV	Water vole		COK	Cockle
MUS	House mouse		MUSS	Common Mussel
SORA	Common shrew		WHELK	Common whelk
MOLE	Mole		HEL	Helix aspersa
SMA	Small mammal		HELIX	Helix sp.
UNI	Unknown		HELN	Helix nemoralis
			SNAIL	snail
CHIK	Chicken			
CHKZ	Chicken size		FOSS	Fossil bone
GOOS	Goose, dom			
GOOS?	Goose, dom.?			
GSSZ	Goose size			
GSSP	Goose species			
GOSZ	Goose, poss. Wild			
DUCK	Duck, domestic sp.			
DUCK?	Duck?			
DKSP	Duck species			
DSP	Duck species indet			
MALL	Duck, dom.			
TURK	Turkey			

### BONE ELEMENT:

BONE CODE		BONE CODE	
SKEL	skeleton	SCP	scapula
SKL	skull	HUM	humerus
ANT	antler	RAD	radius
ANT?	antler?	ULN	ulna
ATT	antler tine	RUL	radius and ulna
HC	horn core	C/T	carpus/tarsus
TEMP	temporal	C23	carpus 2+3
FRNT	frontal	CAR	carpus
PET	petrous	CPA	accessory carpal
PAR	parietal	CPI	intermediate carpal
OCIP	occipital	CPR	radial carpal
ZYG	zygomatic	CPU	ulnar carpal
NAS	nasal	MTC	metacarpus
PMX	premaxilla	MC1-5	metacarpus 1-5
MAN	mandible	MTP	metapodial
MNT	mandibular tooth	MPL	lateral metapodial
DLI	deciduous lower incisor	INN	innominate
DLPM1-4	deciduous lower premolar 1-4	ILM	ilium
LI	lower incisor (and 1-3)	PUB	pubis
LC	lower canine	ISH	ischium
LPM1-LPM4	lower premolar 1-4	FEM	femur
LM1-LM3	lower molar 1 - molar 3	PAT	patella
MAX	maxilla	TIB	tibia
DUI	deciduous upper incisor	FIB	fibula
UI	upper incisor (1-3)	LML	lateral malleolus
UC	upper canine	AST	astragalus
DUPM	deciduous upper premolar	CAL	calcaneum
DUPM1-4	deciduous upper premolar 1-4	CQ	centroquartal
UPM1-UPM4	upper premolar 1-4	TAR3	tarsus 3
UM1-UM3	upper molar 1 - molar 3	T4	tarsus 4
MXT	maxillary tooth	TAR	tarsus
TTH	indeterminate tooth	MTT	metatarsus
INC	incisor	MT1-5	metatarsus 1-5
HYD	hyoid	MTL	lateral metatarsus
ATL	atlas	SES	sesamoid
AXI	axis	PH1	1st phalanx
CEV	cervical vertebra (and 3-7)	PH2	2nd phalanx
TRV	thoracic vertebra (and 1-13)	PH3	3rd phalanx
LMV	lumbar vertebra	PHL	lateral phalanx
SAC	sacrum	LBF	long bone
CDV	caudal vertebra	UNI	unidentified
VER	vertebra		
STN	sternum	CLV	clavicle
CC	costal cartilage	COR	coracoid
RIB1	first rib (2 etc)	CMP	carpo-metacarpus
RIB	rib	CMC	carpo-metacarpus
		WPH1-3	wing phalanges 1-3
URO	urostyle	WPH	wing phalanx
		LSA	lumbosacrale
DENT	dentary		
CLEI	cleithrum		
RAY	fin ray		
SHELL	shell		
UV	upper valve		
VAL	valve		

**NUMBER:** number of fragments in the entry

**SIDE:** W - whole L - left side R - right side F - fragment

**FUSION:** records the fused/unfused condition of the epiphyses  
P - proximal; D - distal; E - acetabulum; N - unfused; F - fused; C - cranial; A - posterior

**ZONES:** records the part of the bone present.  
The key to each zone on each bone is on page 4

**BUTCHERY:** records whether a bone has been chopped (CH), cut (KN), worked (W), burnt (C)

**GNAWING:** records if a bone has been gnawed by dogs (DG), cats (FEL) or rodents (RG)

**TOOTH WEAR** - Codes are those used in Grant, A. 1982 *The use of tooth wear as a guide to the age of domestic animals*, in B. Wilson, C. Grigson and S. Payne (eds) *Ageing and sexing animal bones from Archaeological sites*, 91-108.

Teeth are labelled as follows in the tooth wear column:

Deciduous	Permanent
f ldpm2/dupm2	F lpm2/upm2
g ldpm3/dupm3	G lpm3/upm4
h ldpm4/dupm4	H lpm4/upm4
	I lm1/um1
	J lm2/um2
	K lm3/um3

**MEASUREMENTS** :Any measurements are those listed in A. Von den Driesch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA

Some measurements have been taken on juveniles. Measurements marked L1 are the greatest length of long bones lacking one unfused epiphysis – the measurement being taken from the epiphyseal junction. Measurements marked L2 are the greatest length of the long bones between epiphyseal junctions when both epiphyses are unfused.

**PATHOLOGICAL:** A 'P' indicates that the bone fragment carries a pathology

**COMMENTS:** This may include a short description of the fragments, any pathologies, butchery or gnawing evidence

**PRESERVATION:** records the condition of the bone in the following manner

- 1- enamel only surviving
- 2- bone very severely pitted and thinned, tending to break up; teeth with surface erosion and loss of cementum and dentine
- 3- surface pitting and erosion of bone, some loss of cementum and dentine on teeth
- 4- surface of bone intact, loss of organic component, material chalky, calcined or burnt
- 5- bone in good condition, probably with some organic component

**ZONES** - codes used to define the zones on each bone

SKULL	1. paraoccipital process	METACARPUS	1. medial facet of proximal articulation, MC3	
	2. occipal condyle		2. lateral facet of proximal articulation, MC4	
	3. intercornual protuberance		3. medial distal condyle, MC3	
	4. external acoustic meatus		4. lateral distal condyle, MC4	
	5. frontal sinus		5. anterior distal groove and foramen	
	6. orbitale		6. medial or lateral distal condyle	
	7. entorbitale			
	8. temporal articular facet		FIRST PHALANX	1. proximal epiphysis
	9. facial tuber			2. distal articular facet
	0. infraorbital foramen			
MANDIBLE	1. Symphyseal surface	INNOMINATE	1. tuber coxae	
	2. diastema		2. tuber sacrale + scar	
	3. lateral diastemal foramen		3. body of illium with dorso-medial foramen	
	4. coronoid process		4. iliopubic eminence	
	5. condylar process		5. acetabular fossa	
	6. angle		6. symphyseal branch of pubis	
	7. anterior dorsal ascending ramus posterior M3		7. body of ischium	
	8. mandibular foramen		8. ischial tuberosity	
			9. depression for medial tendon of rectus femoris	
VERTEBRA	1. spine	FEMUR	1. head	
	2. anterior epiphysis		2. trochanter major	
	3. posterior epiphysis		3. trochanter minor	
	4. centrum		4. supracondyloid fossa	
	5. neural arch		5. distal medial condyle	
SCAPULA	1. supraglenoid tubercle		6. lateral distal condyle	
	2. glenoid cavity		7. distal trochlea	
	3. origin of the distal spine		8. trochanter tertius	
	4. tuber of spine	TIBIA	1. proximal medial condyle	
	5. posterior of neck with foramen		2. proximal lateral condyle	
	6. cranial angle of blade		3. intercondylar eminence	
	7. caudal angle of blade		4. proximal posterior nutrient foramen	
HUMERUS	1. head		5. medial malleolus	
	2. greater tubercle		6. lateral aspect of distal articulation	
	3. lesser tubercle		7. distal pre-epiphyseal portion of the diaphysis	
	4. intertuberal groove	CALCANEUM	1. calcaneal tuber	
	5. deltoid tuberosity		2. sustentaculum tali	
	6. dorsal angle of olecranon fossa		3. processus anterior	
	7. capitulum			
8. trochlea	METATARSUS	1. medial facet of proximal articulation, MT3.		
9.		2. lateral facet of proximal articulation, MT4		
0.		3. medial distal condyle, MT3		
		4. lateral distal condyle, MT4		
RADIUS	1. medial half of proximal epiphysis		5. anterior distal groove and foramen	
	2. lateral half of proximal epiphysis		6. medial or lateral distal condyle	
	3. posterior proximal ulna scar and foramen			
	4. medial half of distal epiphysis			
	5. lateral half of distal epiphysis			
	6. distal shaft immediately above distal epiphysis			
ULNA	1. olecranon tuberosity			
	2. trochlear notch- semilunaris			
	3. lateral coronoid process			
	4. distal epiphysis			

## Archive Catalogue of Animal Bone from Station Road, Kirton – KSR02

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	003	BOS	SKL	1	R								POST HALF ZYGOMATIC ARCH	4
KSR02	003	OVCA	RAD	1	R				DG				MIDSHAFT-BOTH ENDS CHEWED	4
KSR02	003	SSZ	LBF	1	F								SHAFT FRAGMENT	3
KSR02	005	BOS	FEM	1	R		4						DISTAL SHAFT FRAGMENT	4
KSR02	005	BOS	MAN	1	R		12378			J17K16		P	HORI RAMUS AND PARTS ASC RAMUS- 4 PIECES- EXOSTOSIS ON ASC RAMUS	4
KSR02	005	BOS	RAD	1	L		3						SHAFT-SMALL-CALF	4
KSR02	005	BOS	RIB	1	L								MOST OF SHAFT	4
KSR02	005	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	005	CSZ	RIB	2	F								SHAFT FRAGMENT	4
KSR02	005	CSZ	UNI	1	F			C					INDET-CHARRED	4
KSR02	005	OVCA	ULN	1	R		3						DISTAL PART PROX ARTIC	4
KSR02	005	SSZ	CEV	1	F	CN	2						ANT EPIPHYSIS	3
KSR02	005	SSZ	FEM	1	F				DG				MIDSHAFT FRAGMENT	4
KSR02	005	SSZ	LBF	2	F								SHAFT FRAGMENT	4
KSR02	005	SSZ	LMV	1	F	CNAN	45						CENTRUM AND ARCH	4
KSR02	005	SSZ	RIB	1	F								SHAFT FRAGMENT#	3
KSR02	005	SSZ	TIB	1	F								DISTAL SHAFT FRAGMENT	4
KSR02	005	SUS	MAN	1	L		6						ANGLE	4
KSR02	005	SUS	SKL	1	L		8		DG				TEMPORAL FACET-CHEWED	4
KSR02	005	UNI	UNI	3	F								INDET	4
KSR02	012	BOS	FEM	1	L	PC	123				Bp-102.4 DC-41.4		PROX HALF	4
KSR02	012	BOS	FEM	1	R		4						SPLIT DISTAL MIDSHAFT FRAGMENT	4
KSR02	012	BOS	HUM	1	R		0						MID-DISTAL SHAFT	4
KSR02	012	BOS	INN	1	R								ANT MIDSHAFT OF ILIUM	4
KSR02	012	BOS	MAN	1	F								LATERAL FRAG HORI RAMUS	4
KSR02	012	BOS	MAN	1	L								VENTRAL FRAG HORI RAMUS	4
KSR02	012	BOS	MAN	1	L			CH					POST PART ASC RAMUS-CHOPPED DORS- VENTRALLY THRU ANT CONDYLE	4
KSR02	012	BOS	RIB	1	L								PROX SHAFT FRAGMENT	4
KSR02	012	BOS	SCP	1	L								DISTAL CRANIAL BLADE FRAGMENT	4
KSR02	012	BOS	SCP	1	R		1	CH					GLENOID-CHOPPED JUST BEHIND GLENOID	4
KSR02	012	BOS	SKL	1	F								MAXILLA FRAGMENT	4
KSR02	012	BOS	SKL	1	F		3						AKROKRANION	4
KSR02	012	BOS	SKL	1	F								DORSAL FRAG CRANIUM	4
KSR02	012	BOS	SKL	1	R		9			FGH12I15 J15K14			MAXILLA WITH INTACT TOOTH ROW	4
KSR02	012	BOS	TIB	1	R	DF	567	CH			Bd-62.5 Dd-44.4		DISTAL END-CHOPPED FROM SHAFT	4
KSR02	012	BOS	TRV	1	F	CNAN	245	CH					CENTRUM & PART ARCH-CHOPPED DOWN LEFT SIDE AND TRANS ACROSS POST CENTRUM-2 PIECE	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	012	BOS	TRV	1	F	CNAN	45	CH					CENTRUM AND ARCH-CHOPPED DOWN LEFT SIDE	4
KSR02	012	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	012	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	012	CSZ	RIB	1	F								SPLIT PROX SHAFT FRAGMENT	4
KSR02	012	CSZ	RIB	1	F								MIDSHAFT FRAGMENT	4
KSR02	012	CSZ	RIB	1	L								PROX HALF SHAFT	4
KSR02	012	CSZ	RIB	1	R			CH					MIDSHAFT-PROX END CHOPPED	4
KSR02	012	CSZ	SKL	3	F								DORSAL RAGS-FRONTAL?	4
KSR02	012	CSZ	TRV	1	F								BASE OF SPINE	4
KSR02	012	OVCA	ATL	1	W		12345						COMPLETE-POSS SPINE OF SHEEP IN THIS CONTEXT	4
KSR02	012	OVCA	AXI	1	F	AN	1245	CH					LARGELY INTACT-CHOPPED TRANS THROUGH POST ARCH AND EPIPHYSIS	4
KSR02	012	OVCA	CEV	1	F	AF	34	CH					CHOPPED TRANS THROUGH ANT CENTRUM AND ARCH	4
KSR02	012	OVCA	CEV	1	W	CNAN	145	CH					EPIS LOST-CHOPPED TRANS THROUGH POST CENTRUM	4
KSR02	012	OVCA	CEV	1	W	CNAN	145						COMPLETE-EXCEPT FOR EPIS	4
KSR02	012	OVCA	CEV	1	W	CFAF	12345						COMPLETE-LAST CERVICAL VERT	4
KSR02	012	OVCA	HUM	1	R		60						DISTAL MIDSHAFT	4
KSR02	012	OVCA	LM3	1	R								CUSP BROKEN	4
KSR02	012	OVCA	MAN	1	R		123			fg14			ANT HALF HORI RAMUS	4
KSR02	012	OVCA	MTC	1	F								SPLIT SHAFT	4
KSR02	012	OVCA	MTC	1	R	DN	25				L1-108 SD-13.6		SHAFT WITH DAMAGED PROX END	4
KSR02	012	OVCA	MTT	1	R				DG				MIDSHAFT-BOTH ENDS CHEWED	4
KSR02	012	OVCA	MTT	1	R	DF	4						SPLIT DISTAL END	4
KSR02	012	OVCA	MTT	1	R		12	C					PROX END AND SHAFT-CHARRED	4
KSR02	012	OVCA	RAD	1	F			C					PROX SHAFT FRAGMENT-CHARRED	4
KSR02	012	OVCA	RAD	1	L			C					SPLIT MIDSHAFT FRAGMENT-CHARRED	4
KSR02	012	OVCA	RAD	1	R			C					SPLIT LATERAL HALF SHAFT-CHARRED	4
KSR02	012	OVCA	TIB	1	F								SPLIT DISTAL HALF SHAFT	4
KSR02	012	OVCA	TIB	1	L		47						SHAFT- 2 PIECES	4
KSR02	012	OVCA	TIB	1	R	PN	123						PROX EPIPHYSIS	4
KSR02	012	OVCA	TRV	1	F	AN	3						POST EPIPHYSIS	4
KSR02	012	OVCA	TRV	1	F	CJAN	245						CENTRUM AND ARCH	4
KSR02	012	OVCA	TRV	1	W	CFAF	12345						1ST OR 2ND THORACIC-COMPLETE	4
KSR02	012	OVCA	TRV	1	W	CFAF	12345						COMPLETE EXCEPT FOR DORSAL SPINE	4
KSR02	012	OVI	SKL	1	F			CH					FRONTAL FRAG WITH PART BASE HORN CORE-CHOPPED AXIALLY AND TRANSVERSELY	4
KSR02	012	OVI	SKL	1	L		8						PARTS OF PAR-FRNT-TEMP AND OCCIP-HORNED	4
KSR02	012	SSZ	FEM	1	F								MIDSHAFT FRAGMENT-SL POROUS	4
KSR02	012	SSZ	FEM	1	F								MIDSHAFT FRAGMENT	4
KSR02	012	SSZ	FEM	1	F								PROX MIDSHAFT FRAGMENT	4
KSR02	012	SSZ	LBF	1	F								SHAFT FRAGMENT	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	012	SSZ	RIB	1	F			CH					MIDSHAFT FRAGMENT--DISTAL END CHOPPED-SMALL	4
KSR02	012	SSZ	RIB	1	F							P	DISTAL HALF SHAFT-REPAIRED RIB FRACTURE	4
KSR02	012	SSZ	RIB	1	F								MOST OF SHAFT-SMALL	4
KSR02	012	SSZ	RIB	1	L								MOST OF SHAFT	4
KSR02	012	SSZ	RIB	1	L								PROX HALF OF SHAFT	4
KSR02	012	SSZ	TIB	1	F								DISTAL SHAFT FRAGMENT	4
KSR02	012	SSZ	TIB	1	F								DISTAL SHAFT FRAGMENT	4
KSR02	012	SSZ	TRV	1	F	AN	3						POST EPIPHYSIS	4
KSR02	012	UNI	UNI	1	F								INDET	4
KSR02	012	UNI	UNI	1	F								INDET	4
KSR02	012	UNI	UNI	1	F			C					CALCINED-INDET	4
KSR02	016	SUS	MAN	1	F					K7			POST FRAG TOOTH ROW- 3 PIECES	4
KSR02	022	BOS	FEM	1	L	DC	467		DG				DISTAL HALF WITH EPI CHEWED AND ONE CONDYLE BROKEN OFF	4
KSR02	022	BOS	FEM	1	L		4		DG				DISTAL THIRD OF SHAFT-DISTAL END CHEWED OFF	4
KSR02	022	BOS	INN	1	R		2						ANT FRAG ILIUM WITH SCAR	4
KSR02	022	BOS	MAN	1	L		237			fgh813			HORI RAMUS WITH SYMPHYSIS BROKEN OFF	4
KSR02	022	BOS	MTT	1	L	DF	345				Bd-49.3 Dd-27.5		DISTAL HALF	4
KSR02	022	BOS	MTT	1	R		125		DG				PROX END AND SHAFT-DISTAL END CHEWED-SMALL	4
KSR02	022	BOS	RAD	1	L				DG				SPLIT DISTAL SHAFT FRAGMENT-DISTAL END CHEWED	4
KSR02	022	CSZ	LMV	1	F								PART NEURAL ARCH AND POST ZYGAPOPHYSES	4
KSR02	022	OVCA	RAD	1	L		3						PROXIMAL MIDSHAFT	4
KSR02	022	OVCA	RAD	1	R	PF	123		DG				PROX END AND SHAFT-DISTAL END CHEWED	4
KSR02	022	SSZ	LBF	1	F								SHAFT FRAGMENT-SUS HUM?	4
KSR02	022	SUS	SCP	1	L		35		DG				DISTAL HALF BLADE-NECK CHEWED	4
KSR02	022	UNI	UNI	2	F								INDET	4
KSR02	027	BOS	ATL	1	L		4		DG				LEFT SIDE-WING CHEWED	4
KSR02	027	BOS	MAN	1	L		123			FGH12			ANT HALF HORI RAMUS	4
KSR02	027	BOS	MTC	1	L	DF	345				Bd-66.4 Dd-33.2 SD-35.9		DISTAL HALF-BROAD-MALE?	4
KSR02	027	BOS	RAD	1	L	DF							SPLIT FRAGMENT OF DISTAL END WITH DISTAL ULNA	4
KSR02	027	BOS	TIB	1	R			CH					SPLIT PROX SHAFT FRAGMENT-MIDSHAFT CHOPPED	4
KSR02	027	CSZ	CEV	1	F								PART NEURAL ARCH WITH ANT AND POST ZYGAPOPHYSES	4
KSR02	027	CSZ	LBF	3	F								SHAFT FRAGMENT	4
KSR02	027	CSZ	MAN	1	F								LATERAL FRAGMENT	4
KSR02	027	CSZ	RIB	1	F								PROX SHAFT FRAGMENT	4
KSR02	027	OVCA	FEM	1	R	PF	3	CH					PROX AND MIDSHAFT-PROX EPI CHOPPED OFF OBLIQUELY	4
KSR02	027	OVCA	UM2	1	L					J10			COMPLETE	4
KSR02	027	OVCA	UM3	1	R					K10			COMPLETE	4
KSR02	027	SSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	027	SUS	MC3	1	L	DN	12						DISTAL EPI LOST	4



site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	030	BOS	SKL	1	L		90			FGH12I15 J15K13			MAXILLA WITH WHOLE TOOTH ROW	3
KSR02	032	OVCA	DUP4	1	W					h12			ROOTS BROKEN	4
KSR02	032	OVCA	MAN	1	L		45						DORSAL HALF ASC RAMUS	4
KSR02	032	SSZ	UNI	1	F								INDET	4
KSR02	046	BOS	INN	1	L								POST ISCHIAL SHAFT	4
KSR02	056	BOS	SKL	1	F								PALATAL FRAG	4
KSR02	056	BOS	SKL	1	L		48						TEMPORAL FRAGMENT	4
KSR02	056	CSZ	MAN	1	F								MEDIAL FRAG HORI RAMUS	4
KSR02	056	CSZ	MAN	1	F								MEDIAL FRAGMENT OF HORI RAMUS	4
KSR02	056	CSZ	RIB	1	F								MIDSHAFT FRAGMENT	4
KSR02	056	CSZ	UNI	1	F				DG				INDET-CHEWED	4
KSR02	056	OVCA	CPI	1	W		1						COMPLETE	4
KSR02	056	SSZ	LBF	1	F								MIDSHAFT FRAGMENT	4
KSR02	066	CSZ	LBF	1	F			C					CALCINED SHAFT FRAGMENT- 2 PIECES	4
KSR02	066	CSZ	RIB	1	F								SHAFT FRAGMENT	4
KSR02	066	CSZ	TRV	1	F		5						BASE OF SPINE	4
KSR02	066	CSZ	UNI	1	F								? SCP BLADE FRAG	4
KSR02	066	OVCA	MTP	1	F								POST SHAFT FRAGMENT	4
KSR02	067	BOS	HC	1	L		1				MAXD-42.8 MIND-32.6 OC-130		COMPLETE	4
KSR02	067	BOS	MAN	1	L					FGI17J16			PART HORI RAMUS WITH PART TOOTH ROW	4
KSR02	067	BOS	RAD	1	L		3						SPLIT PROX SHAFT FRAGMENT	4
KSR02	067	BOS	TIB	1	R	PFDF	1234567				GL-362 Bp-97 Dp-98.5 SD-37.9 Bd-64.6 Dd-46.9		COMPLETE-PROX FUSION STILL VISIBLE	4
KSR02	067	BOS	TRV	1	F		5						BASE SPINE AND NEURAL ARCH	4
KSR02	067	LBIRD	ULN	1	F								SHAFT-?LARGE SWAN -SEA EAGLE SIZE	4
KSR02	067	OVCA	CEV	1	F	CNAN	145						SL DAMAGE-EPIS LOST	4
KSR02	067	OVCA	LMV	1	F	CNAN	45						CENTRUM AND ARCH	4
KSR02	067	SUS	SKL	1	R		9			FGH			MAXILLA WITH CANINE-MALE	4
KSR02	079	SSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	079	UNI	UNI	1	F								INDET-SCP?	4
KSR02	079	UNIB	LBF	1	F								SHAFT FRAGMENT	4
KSR02	080	BOS	FEM	1	L	DC	6						DISTAL CONDYLE	4
KSR02	080	BOS	MTT	1	R		1						SPLIT PROX END	4
KSR02	080	CSZ	RIB	1	F				DG				SHAFT-DISTAL CHEWED	4
KSR02	080	OVCA	MAN	1	F		4						CORONOID	4
KSR02	082	SSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	084	CHIK	SKL	1	F								POST HALF	4
KSR02	084	OVCA	MTT	1	R				DG				MIDSHAFT- 2 PIECES-PORX CHEWED	4
KSR02	084	UNI	SKL	1	F				DG				FRONTAL-POROUS-IMM-TOOTH MARKS	4
KSR02	085	CSZ	RIB	1	F								SHAFT FRAGMENT- 3 PIECES	3
KSR02	085	OVCA	MTT	1	F								SPLIT SHAFT FRAGMENT	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	092	OVCA	SKL	1	R					H12I13J12 K8			LOOSE MAXILLARY TEETH	4
KSR02	097	BOS	FEM	1	L	DF	467	KN					DISTAL END WITH CONDYLE LOST-CUTS ACROSS POST SHAFT-LARGE	4
KSR02	097	BOS	FEM	1	L	PF	13		DG		DC-43.4		PROX END WITH TROCH MAJOR CHEWED OFF	4
KSR02	097	BOS	FEM	1	R		4						DISTAL SHAFT FRAGMENT	4
KSR02	097	BOS	HUM	1	F		0						PROX MIDSHAFT FRAGMENT-IMM?	4
KSR02	097	BOS	HUM	1	L	DF	6790	CH					DISTAL HALF WITH CONDYLE CHOPPED THRU	4
KSR02	097	BOS	HUM	1	R		0						SPLIT MIDSHAFT	4
KSR02	097	BOS	INN	1	F								ANT ILIUM	4
KSR02	097	BOS	INN	1	L	EF	359						ACETAB AND PART ILIAL SHAFT-FEMALE?	4
KSR02	097	BOS	INN	1	R	EF	4	CH					PUBIC FRAG ACETAB-CHOPPED THRU ACETAB- MALE?	4
KSR02	097	BOS	INN	1	R		2	CH					ANT ILIUM-CHOPPED THRU SHAFT POST	4
KSR02	097	BOS	LM3	1	R					K12			COMPLETE	4
KSR02	097	BOS	MAN	1	L		45						DORSAL HALF ASC RAMUS	4
KSR02	097	BOS	MAN	1	L		68						ANGLE	4
KSR02	097	BOS	MAN	1	L		5	CH					CONDYLE AND PART ASC RAMUS-CHOPPED VENTRALLY	4
KSR02	097	BOS	RAD	1	R	PF	123	CH					PROX END AND SHAFT-CHOPPED THRU PROX ARTIC- SMALL-IMM	4
KSR02	097	BOS	RIB	1	L								PROX SHAFT	4
KSR02	097	BOS	RIB	1	R			CH					PROX SHAFT-MIDSHAFT CHOPPED	4
KSR02	097	BOS	RIB	1	R			CHKN					MOST OF SHAFT-PROX END CHOPPED DISTAL CUT	4
KSR02	097	BOS	SCP	1	R	DF	12345				GLP-61.8 LG-53.3 BG-39.7 SLC-39		COMPLETE-SLIGHT PROXIMAL DAMAGE	4
KSR02	097	BOS	SKL	1	L								NASAL	4
KSR02	097	BOS	SKL	1	L		90			H12I15J15 K13			MAXILLA WITH MOLAR ROW	4
KSR02	097	BOS	SKL	1	R		90	CH					MAXILLA WITH ALVEOLI FOR M1 AND M2-CHOPPED- 2 PIECES	4
KSR02	097	BOS	TIB	1	L		4						PROX SHAFT FRAGMENT	4
KSR02	097	BOS	UM1	1	R					I16			COMPLETE	4
KSR02	097	CAN	MAN	1	L								COMPLETE-LARGE DOG	4
KSR02	097	CSZ	INN	1	F								ANT ILIAL FRAGMENT	4
KSR02	097	CSZ	LBF	1	F								SHAFT FRAGMENT	5
KSR02	097	CSZ	LBF	2	F								SHAFT FRAGMENT	4
KSR02	097	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	097	CSZ	RIB	1	F			CH					SHAFT FRAGMENT-ONE END CHOPPED	4
KSR02	097	CSZ	RIB	2	F								SHAFT FRAGMENT	4
KSR02	097	CSZ	RIB	2	F								SHAFT FRAGMENT	4
KSR02	097	CSZ	RIB	1	F								SHAFT FRAGMENT	4
KSR02	097	CSZ	UNI	1	F								PROBABLY INN	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	097	CSZ	UNI	1	F								INDET	4
KSR02	097	OVCA	CAL	1	L	PF	123				GL-56.9 Bp-14.1		COMPLETE	4
KSR02	097	OVCA	FEM	1	R		4		DG				DISTAL HALF SHAFT-DISTAL END CHEWED OFF	4
KSR02	097	OVCA	HUM	1	L		0						MIDSHAFT FRAGMENT	4
KSR02	097	OVCA	INN	1	L		39						ILIUM-MALE?	4
KSR02	097	OVCA	INN	1	L	EF	579						ACETAB AND PART ISCHIAL SHAFT	4
KSR02	097	OVCA	INN	1	L		23						ANT ILIAL SHAFT-SMALL	4
KSR02	097	OVCA	LM2	1	L					J11			COMPLETE	4
KSR02	097	OVCA	LM3	1	L								CUSPS BROKEN	4
KSR02	097	OVCA	MAN	1	L		237			GH12I12 J12K10			HORI RAMUS WITH TOOTH ROW	4
KSR02	097	OVCA	MAN	1	L		2345678			F3G3H3I12 J10K3			COMPLETE-SOME DAMAGE- 2 PIECES	4
KSR02	097	OVCA	MAN	1	L		123						MEDIAL SIDE HORI RAMUS-INCISORS ERUPTING-CHEEK TEETH LOST BUT M3 UP- 2 PIECES	4
KSR02	097	OVCA	MAN	1	L		1235678			GH14I17 J15K13			OLD ANIMAL-POST RAMUS DAMAGED	4
KSR02	097	OVCA	MAN	1	R		47						ANT PART ASC RAMUS- 2 PIECES	4
KSR02	097	OVCA	MAN	1	R		7						HORI RAMUS- 2 PIECES-M3 UP NUT LOST	4
KSR02	097	OVCA	MAN	1	R								MEDIAL SIDE HORI RAMUS-M3 UP BUT LOST	4
KSR02	097	OVCA	MTT	1	F								DISTAL HALF SHAFT	4
KSR02	097	OVCA	MTT	1	L	DN	5						DISTAL HALF SHAFT	4
KSR02	097	OVCA	MTT	1	R	DNP	5						SHAFT-UNFORMED-LAMB	4
KSR02	097	OVCA	RAD	1	F								SPLIT SHAFT FRAGMENT	4
KSR02	097	OVCA	RAD	1	L	PF	123						PROX END AND HALF SHAFT	4
KSR02	097	OVCA	RAD	1	R	PF	123						PROX END AND SHAFT	4
KSR02	097	OVCA	RIB	1	R			CH					PROX HALF SHAFT-PROX END CHOPPED	4
KSR02	097	OVCA	SKL	1	F								PALATAL FRAG	4
KSR02	097	OVCA	SKL	1	R		90			F3G4h14 I12			ANT MAXILLA	4
KSR02	097	OVCA	TIB	1	R	DN	47						VERY SMALL SHAFT-LAMB	4
KSR02	097	OVCA	UM	1	F								FRAGMENTED-6 PIECES	3
KSR02	097	OVI	HC	1	R		1						MOST OF CORE-RAM	4
KSR02	097	OVI	INN	1	R	EF	234579		DG				MALE-ANT AND POST CHEWED	4
KSR02	097	SSZ	RIB	1	R			CH					PROX HALF SHAFT-PROX END CHOPPED OFF	4
KSR02	097	SSZ	SKL	1	F								INDET	4
KSR02	097	SSZ	SKL	1	F								INDET	4
KSR02	097	SSZ	UNI	1	F								INDET-SUS SCP?	4
KSR02	097	SUS	SCP	1	L		35		DG				DISTAL PART BLADE-NECK CHEWED	4
KSR02	097	SUS	SKL	1	L								PAREITAL-SUTURES OPEN	4
KSR02	097	SUS	SKL	1	L		4						POST TEMPORAL	4
KSR02	097	UNI	UNI	1	F								INDET	4
KSR02	097	UNI	UNI	1	F								INDET	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
KSR02	104	BOS	HC	1	L		1	CH			MAXD-55.8 MIND-41.9 OC-160		COMPLETE-CHOPPED FROM SKULL	4
KSR02	104	BOS	MAN	1	R		4						CONDYLE	4
KSR02	104	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	104	CSZ	LBF	1	F								SHAFT FRAGMENT	4
KSR02	104	CSZ	RIB	1	F								DISTAL END	4
KSR02	104	CSZ	UNI	1	F								INDET	4
KSR02	104	OVCA	MAN	1	R		1235678			GH12I12 J12K11			2 PIECES-SOME DAMAGE	4
KSR02	104	OVCA	MAN	1	R								FRAGMENT WITH MOLAR ROW-CUSPS BROKEN BUT M3 UP AND IN WEAR	4
KSR02	104	SSZ	LBF	1	F								SHAFT FRAGMENT-POROUS-JUV	4
KSR02	104	SSZ	RIB	1	F								SHAFT FRAGMENT	4

## Appendix 6

### CHARRED PLANT MACROFOSSILS AND OTHER REMAINS FROM LATE SAXON CONTEXTS AT STATION ROAD, KIRTON, LINCOLNSHIRE (KSR 02): AN ASSESSMENT.

Val Fryer, Church Farm, Sisland, Loddon, Norwich, Norfolk, NR14 6EF

September 2002

#### Introduction

Excavations at Station Road, Kirton were undertaken by Archaeological Project Services. Features of Late Saxon date were recorded including a ring gully, three ditches and a pit. Samples for the extraction of the plant macrofossil assemblages were taken from across the excavated area and eight were submitted for assessment.

#### 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 magnifications up to x 16 and the plant macrofossils noted are listed on Table 1. Nomenclature within the table follows Stace (1997). All plant remains were preserved by charring. Modern contaminants including fibrous roots and seed/fruits were present in all samples.

The non-floating residues were collected in a 1mm mesh sieve and will be sorted when dry. Any artefacts/ecofacts will be removed for further specialist study.

#### Results of assessment.

##### Plant macrofossils

Cereal grains/chaff and/or seeds of common weed species were noted at low to moderate densities in all samples. Preservation was generally very poor; a high proportion of the cereal grains and seeds were very puffed and distorted, probably as a result of either combustion at an extremely high temperature or repeated episodes of burning.

##### **Cereals and other food plants**

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded with barley being predominant. Asymmetrical lateral grains of six-row barley (*H. vulgare*) were noted in samples 10 and 11 and barley rachis nodes were present in samples 2 and 10. Chaff elements of other cereals were rare, but bread wheat (*T. aestivum/compactum*) type rachis nodes were recovered from samples 7 and 12. A possible rounded pea (*Pisum sativum*) seed was found in sample 4 and a larger more angular legume (probably a field bean (*Vicia faba*)) was noted in sample 11.

##### **Wild flora**

Seeds/fruits of common weed species were rare and were especially poorly preserved. Segetal taxa including orache (*Atriplex* sp.), black bindweed (*Fallopia convolvulus*), indeterminate grasses (Poaceae), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.), were predominant. Wetland plants macrofossils were extremely rare, but sedge (*Carex* sp.) nutlets were noted in samples 4, 9 and 10 and a single possible lesser spearwort (*Ranunculus flammula*) seed was recovered from sample 7.

##### **Other plant macrofossils**

Charcoal fragments and pieces of charred root, rhizome or stem were present or common throughout. Charred culm fragments and culm nodes were noted in sample 7 but were especially common in sample 10. Other plant macrofossils included mineral replaced root channels and indeterminate inflorescence fragments and seeds.

### Molluscs

Although specific sieving for molluscan remains was not undertaken, burnt shells were noted in three samples. Only two species were present, *Carychium* sp. (poorly preserved but probably *C. minimum*) and *Anisus leucostoma*, both of which are frequently found in marshland habitats.

### Other materials

The fragments of black porous 'cokey' material, black tarry material, the siliceous globules and possibly the pieces of vitrified material are all probably derived from the combustion of organic remains, including cereals and straw/grass, at very high temperatures. Possible domestic residues included small fragments of mammal bone, fish bone and eggshell.

### Discussion

The overall composition of these samples may have been affected by the high temperatures at which the material appears to have been burnt (i.e. a greater loss on ignition of delicate chaff elements as opposed to robust grains). However, the assemblages which remain appear to be consistent with deposits of domestic hearth waste, including cereal grains and pulses derived from accidental spillages during food preparation. Other possible dietary remains include the fragments of mammal bone, fish bone and eggshell. The weed seeds may be indicative of the use of cereal processing waste and/or dried plant material for kindling or fuel for the fires. The burnt mollusc shells, wetland plant seeds and indeterminate culm fragments in samples 4, 7 and 10 are of particular interest as they may be derived from the use of peat as fuel. Evidence for the latter is rare, but similar assemblages, interpreted as peat burning waste, are known from early medieval deposits in Norwich (Murphy, forthcoming).

### Conclusions and recommendations for further work

In summary, the assemblages all appear to have a common source, namely domestic hearth waste. Dietary remains include cereals, pulses, mammal bone, fish bone and eggshell. Fuel residues may also be present including cereal processing waste and/or dried plant material. The burnt mollusc shells, wetland plant macrofossils and indeterminate culm fragments may be derived from the burning of peat.

Although the material is of interest, the density of macrofossils recovered is very small, and quantifiably viable assemblages (i.e. 200+ specimens) are not present. As the preservation of the material is also very poor, no further analysis is recommended at present.

### References

- Murphy, P., forthcoming                      'Plant macrofossils' in Shepherd, L., 'Excavations at Castle Mall, Norwich (777N). In *East Anglian Archaeology*.
- 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    b = burnt

Sample No.	2	4	7	8	9	10	11	12
Context No.	O22	O56	O67	O85	O96	O97	O98	O26
<b>Cereals and other food plants</b>								
<i>Avena</i> sp. (grains)			x		x		x	
Cereal indet. (grains)	xx	xx	xx		xx	xx	x	x
(detached embryos)						x		
Large Fabaceae indet.					x			
<i>Hordeum</i> sp. (grains)	x	x	xx	x	xx	x	x	
(rachis nodes)	x					x		
<i>H. vulgare</i> L. (asymmetrical lateral grains)						x	x	
<i>Pisum sativum</i> L.		xcf						
<i>Triticum</i> sp. (grains)	x	x	x		x		xcf	
(rachis internodes)			x					
<i>T. aestivum/compactum</i> type rachis nodes			xx					xcf
<i>Vicia faba</i> L.							xcf	
<b>Herbs</b>								
<i>Atriplex</i> sp.			x			x		
<i>Brassica</i> sp.						xcf		
Chenopodiaceae indet.			x			x		
Fabaceae indet.			xcotyfg			x		
<i>Fallopia convolvulus</i> (L.)A.Love						xcf		
<i>Medicago/Trifolium/Lotus</i> sp.						xcf		
Small Poaceae indet.			x	x		x		
Large Poaceae indet.				x				
Polygonaceae indet.								x
<i>Rumex</i> sp.					x			
<i>Vicia/Lathyrus</i> sp.		x						
<b>Wetland plants</b>								
<i>Carex</i> sp.		x			x	x		
<i>Ranunculus flammula</i> L.			xcf					
<b>Other plant macrofossils</b>								
Charcoal <2mm	xx	xx	x	xx	xx	xx	xx	xx
Charcoal >2mm				x		x		
Charred root/rhizome/stem	x	x		x	x	xx	xx	x
Mineral replaced root channels				xx				
Indet.culm frags.			x			xxx		
Indet.culm nodes		x	x			xx	x	
Indet.inflorescence frags.						xx		
Indet.seeds	x		x		x			x
<b>Molluscs</b>								
<b>Terrestrial species</b>								
<i>Carychium</i> sp.		xb				xb		
<b>Freshwater species</b>								
<i>Anisus leucostoma</i>		xb	xb					
<b>Other materials</b>								
Black porous 'cokey' material	x	x	x	x	x		x	x
Black tarry material	x		x					
Bone	x				x			xb
Fish bone	x xb		x xb	x	x	x	x xb	
Eggshell			x	x	x			
Siliceous globules		x	xxx		x	xx	x	
Small coal frags.				x				
Small mammal/amphibian bone	x			x		x		
Vitrified material		x	xx		x			
Sample volume (litres)	10.5	15	11.5	10	10	10	4	10
Volume of flot (litres)	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	100%	100%	100%

Table 1. Charred plant macrofossils and other remains from Late Saxon contexts at Station Road, Kirton, Lincolnshire

## Appendix 7

### GLOSSARY

<b>Anglo-Saxon</b>	Pertaining to the period when Britain was occupied by peoples from northern Germany, Denmark and adjacent areas. The period dates from approximately AD 450-1066.
<b>Context</b>	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, <i>e.g.</i> [004].
<b>Crop mark</b>	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
<b>Cut</b>	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, <i>etc.</i> Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
<b>Domesday Survey</b>	A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD.
<b>Fill</b>	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).
<b>Layer</b>	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
<b>Medieval</b>	The Middle Ages, dating from approximately AD 1066-1500.
<b>Natural</b>	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
<b>Prehistoric</b>	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.



## Appendix 8

### The Archive

The archive consists of:

- 107 Context records
- 30 Drawing sheets
- 6 Context record sheets
- 1 Section record sheet
- 1 Plan record sheet
- 4 Photographic record sheets
- 8 Level sheets
- 1 Sample record sheet
- 12 Environmental sample sheets
- 1 Boxes of finds
- 1 Stratigraphic matrices

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 Council Museum Accession Number: 2001.426

Archaeological Project Services Site Code: KSR02

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.

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