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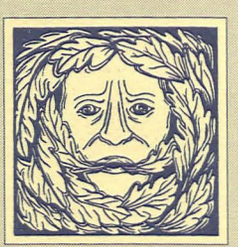
ARCHAEOLOGICAL EVALUATION OF LAND AT THE HOPLANDS, SLEAFORD, LINCOLNSHIRE (THSA01)



APS
ARCHAEOLOGICAL
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SERVICES

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Source LI 7268
LI 7269

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61948.
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MON LI 82421
61950.
MON. LI 82422 RIV.
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ARCHAEOLOGICAL EVALUATION OF LAND AT THE HOPLANDS, SLEAFORD, LINCOLNSHIRE (THSA01)

Work Undertaken For
Pygott and Crone

August 2001

Report compiled by
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National Grid Reference: TF 0787 4624
Planning Application No's: N/28/0838/91
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REGISTERED IFA ORGANISATION

A.P.S. Report No:**114/01**

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earth (1801, 1820), looking south

1. SUMMARY

An archaeological evaluation was undertaken to determine the archaeological implications of development at The Hoplands, off Boston Road, Sleaford, Lincolnshire. A Roman road, Mareham Lane, borders the site and previous investigations in the immediate proximity have revealed Late Iron Age settlement with evidence of major coin production, extensive Romano-British habitation with burials, and Saxon and medieval remains. In particular, a Bronze Age axe, Roman pottery and coins, and burials have been found at the site in the past and geophysical survey of the area revealed magnetic anomalies suggestive of buried ditches.

The evaluation revealed that many of the geophysical anomalies were produced by Roman features.

Pre-Iron Age evidence was identified through the remains of a ditch terminal containing a broken leaf shaped arrowhead.

Agricultural-based activity in the form of ditches, pits and post holes dating to the Late Iron Age/Early Roman period was recorded in the eastern half of the site and may be associated with late Iron Age occupation previously recorded to the west of the site.

A shift from the eastern side to the western area of the site during the 2nd - 3rd century was noted with the metalling of Mareham Lane and extensive agricultural land use, probably in the form of stock rearing.

The sub-rectangular earthwork previously recorded in the southwest corner of the site was revealed during the evaluation and has been dated to the later 3rd - 4th century appearing to initially encompass a cemetery. Human burials and remains also dated to the later 3rd - 4th century were recorded suggesting an extensive cemetery.

A probable 'high status' stone building was also revealed within the southwest corner of the site suggesting limited occupation after the cemetery fell in to disuse. Further agricultural use of the area was revealed in the form of further field boundary and drainage ditches, pits and post holes.

Roman pottery retrieved from the southwest corner of the site included imported Samian wares, wine and olive oil amphorae, local Lincolnshire wares and wares from Oxfordshire, Much Hadham, Mancetter Hartshill and Doncaster or Dorset.

The occupation of the site appears to have declined in the post Roman period with the continued formation of a 'dark earth' and usage of the land being generally limited to an agricultural based activity.

Modern ploughing of the site and the levelling of earthworks has caused some damage to the underlying deposits. However, archaeological remains were generally well-preserved and environmental evidence survived in good condition both through waterlogging on the flood plain and charring on the terrace.

2. INTRODUCTION

2.1 Definition of an Archaeological Evaluation

An archaeological evaluation is defined as *'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structure, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and*

extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate' (IFA 1997).

2.2 Planning Background

Between the 12th and 30th March 2001, an archaeological evaluation was undertaken on land at The Hoplands, Sleaford, Lincolnshire. The evaluation was requested prior to the determination of planning permission (planning application no. N/28/0838/91), in order to assess the presence and character of the archaeological resource within the proposed development site. The archaeological investigation was commissioned by Pygott and Crone. Archaeological Project Services carried out the work in accordance with a specification designed by Archaeological Project Services and approved by the North Kesteven Heritage Officer (Appendix 1).

2.3 Topography, Geology and Soils

Sleaford is situated 27km south of Lincoln and 10km west of Ancaster, in North Kesteven District, Lincolnshire (Fig.1). The town stands on the River Slea and its tributaries which flow northeastward to join the Witham.

Located at a height of *c.* 12m OD, the investigation area is situated north of Boston Road and east of St. Giles' Avenue, on land to the north and northeast of the NKDC Hoplands Depots, bordering the Old River Slea to the north and bounded on the east side by the Lincoln-Spalding railtrack. Lying within the parish of Ewerby and Evedon, the site is approximately 1km east of Sleaford town centre, as represented by the parish church of St. Denys, and covers an area of *c.* 3.24ha, centred on national grid reference TF 0787 4624 (Figs.2). Currently the site is open ground.

Although as an urban fringe the investigation area has not been fully mapped by the Soil Survey, it is probable that three soil regimes occur on the proposed development site. At the extreme north of the area, alongside the Old River Slea, is a strip of Clayhythe Series calcareous humic gley soils over calcareous sandy gravelly glaciofluvial drift. (George and Robson 1978, 101-2). To the south, but still in the northern half of the site, are St. Lawrence Series stagnogleyic brown calcareous earths over calcareous loamy drift (*ibid.*, 84) The southern part of the site probably consists of Newsleaford Series gleyic brown calcareous sand on calcareous Fen sand and gravel (*ibid.*, 86-7).

2.4 Archaeological Background

Archaeological remains and artefacts of prehistoric and later date have previously been found on, or in close proximity to, the investigation area (Fig.2).

Prehistoric

A Bronze Age metal palstave is reported from the site and prehistoric flints have also been found in close proximity (Taylor 1996). Along the western side of the site is a trackway that marks the line of the Roman road, Mareham Lane. This is thought to have originated as a prehistoric route (May 1976, 8) and investigations about 800m to the north established that the Roman road was on the line of a Middle Iron Age trackway (Herbert 1998).

Evidence for Iron Age settlement is recorded south, west and north of the investigation site. This evidence includes both cropmarks and remains recorded by previous archaeological observation and excavation. Approximately 600m to the south of The Hoplands, excavations have previously revealed part of a substantial Middle Iron Age palisaded enclosure with internal corn-

drying hearths, pits and post-built structures which may represent granaries (Elsdon 1997, 30).

A second Middle Iron Age ditched enclosure lies approximately 1.2km to the north. This enclosure probably defined a stock-rearing farmstead and was located near to a north-south ditched track, later a Roman road (Herbert 1998). Similarly aligned, though undated, ditches exist just to the west of this farmstead on the opposite side of the Roman road (Herbert 1997b). A third Middle Iron Age enclosure has also been found about 500m southwest of the Hoplands, off Stephens Way (Rayner 1999). None of the aforementioned sites continued to be occupied into the later Iron Age.

Late Iron Age occupation is attested by other excavations conducted within 250m of the site. South of Boston Road, pits and gullies containing pottery dated to this period, have been revealed (Elsdon 1997, 26; Fig.3 nos. 1-5). Further west, investigations have recorded both circular and rectangular buildings, trackways and enclosures of Late Iron Age date (*ibid.*, 30; Fig.3 nos. 7-9).

Excavation, conducted in the vicinity of Old Place recovered over 4,000 coin pellet-mould fragments. Most of these fragments were concentrated toward the northeast of the site (Fig.3 no. 10), though other pieces of mould have also been recorded further east (Fig.3 nos. 11, 13 and 18). This is the largest collection of such material found in northern Europe and strongly suggests the presence of a mint within the later Iron Age settlement.

Excavations on the route of a water pipeline trench to the west of the site, on St. Giles' Avenue, identified late Iron Age gullies and ditches (Trimble 1997, 15; Fig.2 no. 20).

Small-scale investigations, conducted just south of the present site found a very limited quantity of Late Iron Age or late pre-Roman Iron Age pottery (Johnson and Palmer-Brown 1995, 13). The dearth of prehistoric material suggests that the main focus of the later Iron Age and pre-Roman settlement was situated near Old Place, to the west (Fig.2).

Roman

Romano-British remains occur across a large area at the eastern side of the modern town and include buildings, metalled tracks, ritual deposits and burials. Although the focus of settlement appears to shift away from the pre-Roman settlement, continuity of occupation into the Romano-British period has been recorded during the excavations south of Boston Road (Elsdon 1997, 26; Fig.3 nos. 1-5).

Bounding the western side of the investigation area is a track that perpetuates the line of the Roman road, Mareham Lane. Intensive Romano-British occupation is recorded immediately west of the present investigation area, on the opposite side of the Roman route. Remains of stone buildings with paved yards, one with a corn-drier, have been identified fronting onto the west side of the Mareham Lane (*ibid.*, 34; Fig.3 no. 11 and 12).

A stone-built well and timber post building (Fig.3 nos. 18 and 28) of 3rd or 4th century date stood south of the River Slea during this period. The timber building (Fig.3 no. 22) was associated with a small corn-drier (*ibid* 1997, 34), suggesting it may have served an agricultural purpose. Another building is hinted at by a raised stone platform associated with fragments of daub and plaster (Fig.3 no.21) discovered west of a group of masonry finds (Fig.3 no. 6). Although undated, these are suggested as being of Romano-British date on the basis of surface finds collected in the near vicinity

(*ibid.*, 36).

Part of a wall and a possible bedding trench for a timber beam, found just south of the present investigation area, are interpreted as evidence for buildings east of Mareham Lane, and dated to the mid to late 3rd centuries (Johnson and Palmer 1995, 7 and 10; Fig.3 nos. 17 and 24). Similar remains, interpreted as part of a 2nd or 3rd century building, were found to the west during the pipeline excavation at St. Giles' Avenue (Trimble 1997, 16; Fig.3 no. 20).

Slightly further south, at the new Police Station, previous archaeological investigations revealed the remains of several Romano-British buildings, both of timber and stone, dating from the later 2nd to later 4th century AD. One of the stone buildings had deep, substantial foundations suggesting that it was two-storeys high. Several infant burials were found within this building. A dump of painted plaster indicates a Romano-British building with decorated internal walls nearby (Fig. 3). Gravel and limestone surfaces were also revealed and represent yards and east-west trackways (Jarvis 1997, fig.4; Herbert 1999).

Several sections have been excavated across the route of Mareham Lane, a Roman route that passes outside the western edge of the site (Fig.3 nos. 1, 11, 13 and 16). Investigations suggest that the Roman road consists of an approximate 4m wide strip of metalling incorporating limestone, pebbles, gravel and sand (Elsdon 1997, 36). North and south of the modern town limits, this surface is poorly metalled and becomes difficult to trace (Herbert 1997a; 1997b).

Remains of Romano-British enclosures and ditches are recorded both east and west of Mareham Lane, within 400m of the site (Fig.3 nos. 7-9, 14-15 and 20). To the west several enclosures of probable 3rd century date have been identified (Elsdon 1997, 39; Fig.3 nos. 7-9). Aerial photography has recorded similar enclosures further east from Mareham Lane, a little east of the railtrack, in the fields that lie between Sleaford and Heckington (Pickering 1995). Fieldwalking and metal detecting has retrieved substantial quantities of Roman pottery, coins and other items from these fields (Kate Orr *pers comm*). A sub-rectangular earthwork, formerly located in the western part of the present investigation site, is believed to be of similar date to these features (*ibid.*; Fig.3 no. 25).

Romano-British ritual features are also recorded in proximity to the site. On present evidence, it seems likely that human burial was practised west of Mareham Lane, within enclosures dug behind the main roadside buildings (Fig.3 no. 9). Although poorly dated, excavation here uncovered eight human and two canine burials, deliberately placed on the same alignment as surrounding enclosure ditches (Oetgen 1997, 45-6). One of these human burials contained several pottery vessels that had been placed around the head of the individual. Possible ritual practice was also attested during the pipeline excavation at St. Giles' Avenue where the skeleton of a new-born lamb, placed in association with a complete pottery beaker, was found (Trimble 1997, 7; Fig.3 no. 20). Dispersed adult human remains were also found at the new Police Station, to the south (Herbert 1999).

Geophysical survey has previously been undertaken on the site. Numerous magnetic anomalies, probably representing buried ditches and mostly aligned north-south were recorded by the survey, predominantly in the southern part of the site. Some east-west orientated anomalies were also identified (EAS 1996, Fig.4)).

Saxon and Medieval

Part of a substantial early and middle Saxon settlement has been excavated at Quarrington, southwest of Sleaford town (Walker and Lane 1996). A contemporary pagan Saxon cemetery, containing almost 600 burials, lies about 1km to the southwest of the investigation area (Elsdon 1997, 11). The position of these remains suggests that the focus of occupation shifted away from the Roman settlement during this period.

A few pieces of pottery, of probable 6th century date, were recovered from a ditch during excavations south of Boston Road (*ibid*; Fig.3 nos. 1-5). Part of a Middle Saxon ditch was exposed during excavation north of the new Police Station (Johnson and Palmer 1995, 10; Fig.3 no. 19).

Later Saxon religious or ritual activity is evidenced by a single piece of carved masonry, found in proximity to the site of the former church of St. Giles, just to the southwest of the present investigation area. This church is a probable Late Saxon foundation, indirectly referred to in the Domesday Book of 1086 (Elsdon 1997, 43; Fig.3 no. 13). The east end of the chancel is known to have been dug into the surface of the Mareham Lane road, while the west wall of the church tower is located toward the west side of St. Giles' Avenue. Its last incumbent has been traced to *c.*1553, suggesting it became redundant some time during the early post-medieval period (*ibid.*, 43).

Human burials, some in stone-lined graves of medieval date, have been revealed in the vicinity of St. Giles' church (Trimble 1997, 17; Fig.3 no. 20 also Johnson and Palmer-Brown 1995, 18; Fig.3 nos. 19 and 23). Several graves were dug into the remains of underlying Romano-British buildings (Elsdon 1997, 43).

Previous investigations just south of the investigation area at the new Police Station indicated that the Roman remains were overlain by a probable medieval and later ploughsoil that contained pottery of 12th to 14th century date (Jarvis 1997, 10; Herbert 1999).

West of St. Giles' Avenue is a medieval manorial complex that lies beneath Old Place (Fig.3). It would appear unlikely that the precinct of this manor house complex extended as far as Mareham Lane. However, medieval masonry has been unearthed in proximity to the track. Remains of a building and road, interpreted as part of a monastic grange, have previously been revealed south of Boston Road (Elsdon 1997, 43; Fig.3 nos. 1-5).

Although the manor house at Old Place continued into the post-medieval period, most of Old Sleaford (Fig.2) was probably deserted around 1500. From this time settlement shifted toward St. Denys' Church and the castle, on land known as 'New Sleaford'. The site at Old Sleaford then reverted to fields until the construction of the Lincoln-Spalding railtrack in the late 19th century and the post-war expansion of the town (*ibid.*, 44).

3. AIMS

The requirements of the evaluation were to gather information to establish the presence or absence, extent, condition, character, quality and date of any archaeological deposits to enable the North Kesteven Heritage Officer to formulate an appropriate policy for the management of the archaeological resource of the site.

4. METHODS

The trial trenching consisted of the excavation of 2% sample of the 3.24ha proposed development area, as requested by the North Kesteven Heritage Officer. This was achieved by the excavation of 20 trenches, each 20m x 1.6m in extent. The locations of 19 of the 20 trial trenches were specified in a supplement to the brief for works prepared by the North Kesteven Heritage Officer. Positioning of the 20th trench was decided upon during machine excavation and was placed to further investigate the eastern area of the site (Fig. 4).

Removal of the topsoil was undertaken by mechanical excavator using a toothless ditching bucket to the level of the archaeological deposits or the undisturbed natural. The exposed surfaces of the trenches were then cleaned by hand and inspected for archaeological remains. Where present, features were excavated by hand in order to retrieve dateable artefacts and other remains. A metal detector survey was undertaken of all the trenches and spoil.

In several of the trenches, where 'dark earth' deposits were encountered, excavation was undertaken by machine, in thin spits. This was necessary due to the homogenous nature of the deposit. As specified in the brief for works, 25% of the designated trenches in the southern part of the site were fully excavated to natural, apart from Trench 19 were the discovery of structures and burials necessitated a cursory recording enabling the features to remain *in situ*.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description. A photographic record was compiled, and 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.

The site was visited by the project environmentalist, James Rackham, who advised on the sampling strategy.

Surveying of the excavated trenches and existing reference points was completed using a Geodolite Total Station in conjunction with a Psion Datalogger. A river terrace observed in the field was also plotted in using an EDM.

5. RESULTS

5.1 The Stratigraphic Sequence

Finds recovered from the deposits identified during the evaluation were examined and a date assigned where possible (Appendices 3 - 8). Records of the deposits encountered were also examined. A list of all contexts and interpretations appears as Appendix 2. Phasing was based on the nature of the deposits and recognisable relationships between them, supplemented by artefact dating where relevant. Eight phases were identified:

Context numbers appear in brackets, and these refer to the individual cut and deposit description recorded during excavation.

5.2 Phase 1: Natural deposits (Figs.6 - 25)

Trench 1: Recorded at the base of the trench was a mottled silty sand with frequent small gravel inclusions (102).

Trench 2: A sequence of natural silty sand alluvial deposits (215, 216, 217, 218, 219, 220, 221) was the earliest layers recorded within the trench.

Trench 3: The earliest recorded deposit was a mottled dark brownish grey clayey silt with frequent limestone and chalk fragments (308). Sealing this deposit, at the southern end of the trench, was a dark reddish brown peaty clayey silt (307).

Trench 4: Recorded at the base of the trench, centrally and to the west, was a mid yellowish red gravel and sand (403), whilst at the eastern end was a mottled mid brown and light brownish yellow sand with occasional gravel (402).

Trench 5: A light yellow sand with frequent gravel (524) was the earliest deposit revealed within the trench. Overlying this natural, at the east end of the trench, were two other deposits (525 and 526), a dark brown silt with sand lenses and a light yellowish grey sand respectively. Two animal burrows (510 and 511) were also recorded cutting the natural within the trench.

Trench 6: The earliest deposit recorded in the trench was a mottled dark red brownish grey/yellowish white clayey silt (606). Overlying this layer was a 0.70m thick sequence of natural deposits, a clayey silt, a sand and a clayey silt, (603), (604) and (605) respectively. An environmental sample (no. 4) was taken from deposit (605), see Appendix 9.

Trench 7: Recorded at the base of the trench was a light yellow and reddish brown sand with frequent gravel (705). Cutting this deposit was a naturally formed hollow (713) containing a sequence of silty sand alluvial deposits (703), (704), (711) and (712). The skull of a large cow was retrieved from the primary fill (712). Sealing the natural hollow and (705) were two further silty sand alluvial deposits (702) and (710).

Trench 8: A light brownish yellow sandy gravel (803) was the earliest deposit recorded at the base of the trench. Cutting this layer were two natural hollows (811) and (821/823) containing sandy silt fills (810) and (820/822) respectively.

Trench 9: The earliest natural deposits recorded in the trench were a mid yellowish brown sand with frequent gravel (908) and a similar deposit with red staining (911), both located at the western end of the trench. Also situated at the western end, cutting the natural, was a tree throw (909) with a mid brownish grey silt fill (910).

Trench 10: Exposed at the base of the trench was a light yellowish brown sand and gravel (1010).

Trench 11: A natural layer of mid brownish yellow sandy gravel (1116) was recorded at the base of the trench. Overlying this deposit was a 0.17m thick mottled dark brown/mid brownish yellow silty sand (1117) which has been interpreted as a transformed soil.

Trench 12: Recorded at the base of the trench was a mid reddish brown sand and gravel (1218). At the western end of the trench were two other natural deposits (1216) and (1217) consisting of silty clays. An animal burrow (1208) was recorded cutting the natural in the centre of the trench.

Trench 13: A natural layer of light yellowish brown and reddish brown sand with frequent small limestone inclusions (1322/1323/1357) was recorded at the base of the trench.

Trench 14: The earliest deposit recorded within the trench was a light brownish yellow sand and gravel (1407).

Trench 15: At the base of the trench was a mid reddish yellow sand and gravel

(1505/1506/1507/1521/1523/1525/1526/1531/1532/1533). Centrally located within the trench, cutting the natural deposit, was a large tree throw hole (1545/1546/1547/1548/1552/1555/1557). A sheep/goat bone and coal was retrieved from the dark brown silty fill (1534/1535/1536/1537/1538/1539/1540/1551/1556/1558).

Trench 16, 17 and 18: Light yellowish brown sandy gravels (1611), (1721) and (1819) were the earliest deposits recorded within the trenches.

Trench 20: A mid brown and light brownish yellow sand with occasional gravel (2011) and a mid yellow reddish brown sand and gravel (2010) were the earliest deposits recorded within the trench.

5.3 Phase 2: Undated deposits (Figs.6, 7, 9, 10, 13, 15 - 17, 19 - 23 and 25)

Trench 2: Located at the eastern end of the trench, within a sondage, was a dark grey silty sand with frequent gravel and organic remains (208). Retrieved from this deposit were several pieces of worked wood (Fig.28, Appendix 5). Radiocarbon dating of unworked wood from the same deposit indicated a date between 8730 to 8560 BC, placing them firmly within the Mesolithic period (Appendix 8). However, the nature of the organic remains (environmental sample no.3, see Appendix 9) and the horse and domestic cattle bones retrieved from this deposit makes the radiocarbon date suspect and therefore this deposit must remain undated. Sealing deposit (208) was a 0.52m thick sequence of river gravels and alluvial deposits (204, 205, 206 and 207).

Trench 4: Located at the western end of the trench, cutting the natural, was a N-S ditch (409) containing a mid brown clayey sand fill (408) and measuring at least 1.18m long by 0.64m wide and 0.22m deep.

Trench 5: A NW-SE linear (503), measuring at least 1.60m long by 1.96m wide and 0.5m deep, was recorded at the western end of the trench and contained two silt fills (501) and (502). An environmental sample (no. 6) was taken from deposit (502), see Appendix 9. Adjacent to ditch (503), to the east, was a similarly aligned linear (512). Recorded within this 0.93m wide feature was a single dark grey silt fill (522) which measured 0.17m thick and contained cattle bone. Further east, within the centre of the trench, were two pits (508) and (509). Feature (508) contained two fills, a sand and a sandy silt (519) and (518) respectively, whilst (509) contained a single dark grey silt (521). A shallow pit (505) measuring at least 0.70m by 0.43m was recorded to the east and contained two fills, a sandy silt (527) and a silty sand (528). A NE-SW linear (504) was recorded at the eastern end of the trench. Measuring at least 1.60m long by 2.50m wide this ditch contained a single dark greyish brown silt fill (523).

Trench 8: Truncating feature (811) at the eastern end of the site was a N-S gully (809/813) containing a dark yellowish brown sandy silt (808/812) and a N-S ditch (815/819) also containing a silty sand fill (814/818).

Trench 10: Located at the western end of the trench was a N-S linear ditch (1027) filled with a silty clayey sand (1028). Situated to the east of this ditch was a series of inter-cutting ditches, pits and post holes. The earliest feature was a N-S linear (1027) measuring at least 1.60m long by 1.32m wide and 0.35m deep. This ditch was cut on its eastern side by a 0.38m wide post hole (1022) which in turn was truncated by a NW-SE linear (1019). A second post hole (1029) was recorded south of (1022). Measuring 0.28m wide by 0.22m deep this

feature contained a mid brown sandy silt fill (1030).

To the east of ditch (1019), and cutting it, was an E-W aligned, 0.52m wide shallow linear (1003/1017). Cattle bone was retrieved from the dark brown sandy silt fill (1007/1018). Situated to the south of (1003/1017) was a partially exposed oval feature (1001). Measuring at least 1.98m long by 0.53m wide and 0.37 m deep this pit or ditch terminus contained five sandy silt and silty sand fills (1004), (1005), (1013), (1014) and (1015). An environmental sample (no. 13) was taken from deposit (1004), see Appendix 9. A semi-circular pit (1002), located in the centre of the trench, was recorded cutting ditch (1003/1017) and feature (1001).

Situated to the east of ditch (1003/1017) was another series of inter-cutting features. The earliest was a N-S linear (1038) with steep concave sides and base. This ditch was truncated by another N-S linear (1008) which contained four backfilled deposits (1009), (1033), (1034) and (1035), from which sheep bone was retrieved. Cutting (1008) was a 0.50m wide E-W curvilinear ditch (1031) which was filled by (1032) containing human, horse and cattle bones. Feature (1031) was in turn cut by an E-W ditch (1038) which contained two fills (1039) and (1040). Feature (1038) was re-cut by a 0.66m wide E-W linear (1044). To the east of this re-cut ditch was another E-W linear (1041). Measuring at least 6.00m long by 1.07m wide and 0.47m deep this feature was filled by a single dark brown silty sand (1042) containing cattle sized bone.

Trench 11: An undated pit or hollow (1112) was recorded at the western edge, centrally within the trench. This feature measured at least 0.60m long by 0.18m wide and contained a 0.19m thick grey sandy silt (1111).

Trench 12: Located at the western end of the trench, cutting the natural, was a N-S linear (1210). Measuring at least 1.60m long by 1.50m wide this ditch contained four fills (1209), (1213), (1214) and (1215). An environmental sample (no. 2) was taken from deposit (1209), see Appendix 9.

Trench 14: Recorded at the western end of the trench was a N-S linear (1401). Measuring at least 1.60m long by 0.76m wide this ditch contained a single dark brown silty sand (1410). A second undated feature, post hole (1422), was recorded at the eastern end of the trench.

Trench 15: A series of inter-cutting N-S linear ditches (1514), (1517) and (1519), recorded cutting the natural, was located at the western end of the trench. Horse, cattle, cattle sized and sheep/goat bones were recovered from the silt fills. Located adjacent to these features was a 0.10m diameter post hole (1503) containing two dark brown silt fills (1502) and (1504) from which cattle and cattle sized bones were retrieved.

Trench 16: Recorded at the northern end of the trench were two undated features, a small NE-SW linear gully (1604) measuring 0.60m wide and a 0.40m diameter post hole (1608).

Trench 17: Partially exposed at the southern end of the trench was a grave cut (1724) containing human skeletal remains (1722) and filled with a mid brown silty sand (1723). A possible second grave cut (1726) was recorded adjacent to (1724), however the location of the cut beside the trench edge makes the interpretation only tentative. A N-S linear (1712) was recorded to the east of the graves and contained dark greyish brown silty sand (1713).

At the northern end of the trench was a N-S

linear (1704) which measured at least 1.60m long by 0.70m wide and 0.25m deep. Contained within this ditch was a dark greyish brown silty sand (1705) from which human bone was recovered. The butt end of a NE-SW ditch was recorded adjacent to (1704) and contained a similar silty sand fill (1720).

Trench 18: Recorded within the sondage, west of centre in the trench, was a sequence of E-W inter-cutting linears, (1818) being truncated by (1814). Interpreted as gullies they measured at least 1.90m long by 0.50m wide and 0.20m deep and contained silty sand fills (1817) and (1813) respectively. A third undated gully (1815) was also recorded within the sondage and was aligned N-S. Containing a mid brown silty sand fill (1816) this feature measured 0.68m wide and 0.10m deep.

Trench 20: Recorded at the eastern end of the trench against the southern edge was a semi-circular pit (2005) with concave sides and base. Measuring 0.78m wide and 0.20m deep this feature contained a mid brown clayey sand fill (2004). Located to the west of (2005) was a N-S ditch (2003) filled with a similar mid to dark brown clayey sand deposit (2002). Centrally located against the southern edge of the trench were two pits (2007) and (2009) containing similar mottled brown and black clayey sand (2006) and (2008) respectively.

5.4 Phase 3: Prehistoric and Post Prehistoric deposits (Fig.10)

Trench 5: A NE-SW linear (506) measuring at least 1.00m long by 1.35m wide was recorded to the east of pit (508). Interpreted as a ditch (506) contained two fills (513) and (529). A leaf shaped arrowhead (Fig. 26) dated to the Neolithic period was retrieved from deposit (513). An environmental sample (no. 5) was taken from this deposit, see Appendix 9.

Truncating feature (506) was a 3.50m wide ditch or pit (507) which contained two fills, a sandy silt and a silt, (516) and (517) respectively. An oyster shell was retrieved from deposit (516).

5.5 Phase 4: Iron Age/Early Roman to 3rd century deposits (Figs.7, 9, 13, 14, 16 - 21 and 23)

Trench 2: The earliest recorded deposit at the western end of the trench was a 0.07m+ thick mottled mid white/yellowish brown sand with frequent gravel (210). Retrieved from this river gravel were several sherds of pottery and human, horse, cattle and sheep/goat bones and a sherd of glass. An environmental sample (no. 11) was taken from this deposit, see Appendix 9.

Trench 4: Recorded cutting the natural in the western half of the trench was a N-S linear with gradual sides and a flat base (407). Measuring at least 1.68m long by 0.86m wide and 0.24m deep this ditch contained a mid brown clayey sand (406) from which pottery sherds dated to the Iron Age or Earlier Roman period and an iron nail was retrieved.

Cutting ditch (407) at the western end of the trench was a 1.68m+ long by 2.37m wide sub-circular pit (405). Measuring 0.42m deep this feature contained two fills, a sand and gravel (414) and a mid brown clayey sand (404) from which mid to late 2nd century pottery was retrieved.

Trench 8: The butt end of a N-S linear (833), with steep sides and a flat base, was recorded at the western end of the trench cutting the natural. Measuring at least 1.15m long by 0.80m wide and 0.50m deep this ditch contained a single dark reddish brown sandy silt (832) from which pottery dated to

the early to mid 2nd century was retrieved.

Truncating features (833) and (821/823), at the western end of the trench, was a E-W linear (825/829/831). Measuring at least 7.50m long by 1.60m wide and 0.35m deep this ditch contained a single dark reddish brown sandy silt (824/828/830) from which mid to late 2nd century pottery and a cattle bone was retrieved.

Trench 9: Cutting the natural within the eastern half of the trench was a 1.60m+ long by 3.86m wide and 0.90m deep N-S linear (905) with concave sides and base. Contained within the ditch were two similar dark brown silt fills (906) and (907). Pottery dated to the Iron Age/Early Roman period and cattle sized bone were retrieved from the primary deposit (907). An environmental sample (no. 10) was also taken from deposit (907), see Appendix 9.

Trench 11: Located at the southern end of the trench was a N-S linear (1105) which measured at least 2.40m long by 0.83m wide. Filling the concave sided and flat based feature was a silty sand (1101) containing cattle sized bone and brick.

Trench 12: Recorded centrally within the trench cutting the natural was the butt end of a ditch (1206) measuring at least 1.20m long by 0.55m wide. Contained within this feature was a greyish brown silty sand (1205) from which 2nd - 3rd century pottery, cattle and cattle sized bones were retrieved. A compact surface of small to medium pebbles and limestone (1204) was recorded overlying (1205).

Trench 13: Overlying the natural was a mottled dark olive brown and light brown silty sand layer (1314/1321/1344/1347/1348) which possibly represents a previous ground surface.

Located east of central, in the trench was a sequence of silty sand surfaces with frequent limestone inclusions (1320) and (1319) and a dumped dark green greyish brown silty sand layer (1318). To the west of these deposits was a metalled surface (1325) comprising a light grey/yellowish brown sandy silt with frequent limestone. All these layers were truncated by later features.

A N-S linear (1342) was recorded cutting the undated layer (1314/1321/1344/1347/1348) at the eastern end of the trench. Measuring at least 1.50m long by 0.50m wide and 0.22m deep this ditch contained two sandy silt fills (1341) and (1345).

At the western end of the trench a N-S linear (1343/1336) was recorded containing a single mottled light grey/reddish brown silty sand deposit (1335). This feature probably represents a road side ditch. Overlying this was a surface (1328/1329/1330/1331/1332/1333/1354) constructed from small limestone and pebble within a mottled mid to dark brown/greyish brown silty sand matrix. This surface represents Mareham Lane. Layer (1328) appeared to be in a cut and possibly defines the eastern limit of the road. A dark greyish brown silty sand (1301) containing an iron object, cattle sized and sheep/goat bones and tiles overlay (1328) and was in turn sealed by (1353) a dark greyish brown silty sand layer, possibly an old compacted topsoil.

At the western end of the trench overlying layer (1332) was another metalled surface (1334), probably indicating repairs to the road. Intrusive 19th - 20th century brick and tile, and cattle sized bone was retrieved from this deposit probably suggesting modern disturbance.

Although no firm dating evidence was recovered for the above surfaces and

features, earlier archaeological excavations along the route of Mareham Lane have firmly dated the metalled road within the Roman period.

Trench 14: A 0.80m+ wide E-W ditch (1417) was recorded at the eastern end of the trench cutting the natural. Pottery dated to the mid 2nd - 3rd century and cattle, cattle sized, sheep/goat and sheep sized bones were retrieved from the dark brown sandy silt secondary fill (1418). Cutting (1417) was a sub-circular pit (1419). Measuring 2.20m in diameter this feature was filled with three silty sand and sandy silt deposits (1420), (1425) and (1426) containing mid 2nd - 3rd century pottery, sheep/goat and sheep sized bones and oyster shell. Two environmental samples (no. 1 and 15) was taken from deposit (1425), see Appendix 9.

Trench 15: Cutting the natural at the eastern end of the trench was a N-S linear (1543). Measuring at least 1.60m long by 1.80m wide this feature was filled by a dark brown silt (1528/1529) from which mid 2nd - 3rd century pottery and a cattle bone was retrieved. An environmental sample (no. 9) was taken from deposit (1529), see Appendix 9.

Trench 16: Cutting post hole (1608) was an E-W gully (1606). Measuring at least 0.30m long by 0.34m wide and 0.16m deep this linear contained a single mid reddish brown silty sand fill (1605) from which Iron Age/Early Roman pottery was obtained. Located adjacent to gully (1606) was a similarly dated ditch (1617) which measured at least 1.60m long by 0.56m wide and contained a silty sand fill (1616/1618).

Located at the southern end of the trench was an E-W linear (1613) with steep sides and an uneven base. Pottery dated to the 2nd century, fired clay, and horse, cattle sized, sheep/goat, sheep sized and pig bones were retrieved from the reddish brown silty sand fill (1612).

Trench 18: Located within the sondage, cutting feature (1814), was an E-W linear (1822). Interpreted as a floor beam this feature measured 0.36m wide and 0.21m deep and contained a mid brownish grey silty sand fill (1812) from which 2nd - 3rd century pottery was retrieved. An environmental sample (no. 8) was taken from deposit, see Appendix 9.

5.6 Phase 5: Later 3rd to 4th century deposits (Figs.12 - 24)

Trench 7: Located at the eastern end of the trench, cutting the natural was a N-S linear (709). Measuring at least 1.60m long by 1.42m wide this ditch contained three silty sand fills (706), (707) and (708). Cattle bones were retrieved from deposit (708) and an environmental sample (no. 12) was also taken, see Appendix 9.

Trench 8: Cutting the two undated features (809/813) and (815/819), at the eastern end of the trench, was an E-W linear (805/807/817) with shallow sides and a flat base. Measuring at least 6.60m long by 1.65m wide and 0.20m deep this feature contained a single mid greyish brown sandy silt fill (804/806/816) from which 3rd - 4th century pottery was retrieved. A second ditch (827), also containing 3rd - 4th century pottery, was recorded at the western end of the trench cutting feature (825/829/831). Aligned N-S this linear was filled with a mid brownish grey sandy silt (826) containing horse and cattle bone.

Metal detecting of the base of the trench and spoil revealed a Roman coin dated 335-41 AD (Appendix 4).

Trench 9: Metal detecting of the base of the trench and spoil revealed two Roman coins

dated between 346-92 AD (Appendix 4).

Trench 10: Metal detecting of the base of the trench and spoil revealed three Roman coins dated between 337-75 AD (Appendix 4).

Trench 11: Truncating linear (1105) at the southern end of the trench was an E-W ditch (1108) and two E-W gullies (1106) and (1107). Pottery dated to the 3rd - 4th century was retrieved from the silty sand fills (1104), (1102) and (1103) respectively. Cattle, sheep and sheep sized bones were also recovered from deposit (1104).

Metal detecting of the base of the trench and spoil revealed Roman coins dated between 330-83 AD (Appendix 4).

Trench 12: A N-S linear (1203) was recorded in the eastern end of the trench cutting the natural. Measuring at least 1.60m long by 1.40m wide this ditch contained a single greyish brown silty sand (1202) from which mid to late 4th century pottery and cattle, cattle sized, sheep/goat and sheep bones were retrieved.

Trench 13: A NNE-SSW probable boundary or drainage ditch (1338) was recorded centrally within the trench. Mid 3rd to 4th century pottery was retrieved from the 0.45m thick mid olive grey silty sand fill (1340). The colour of the fill may possibly suggest a cess rich nature to the fill.

Overlying ditch (1342) was a, 0.06m thick, surface (1315), consisting of a dark greyish brown silty sand with frequent small limestone inclusions.

Trench 14: Two post holes (1403) and (1404), from which 3rd - 4th century pottery was retrieved, were recorded at the western end of the trench cutting the undated ditch (1401). Adjacent to these features was a 1.30m+ wide N-S ditch (1400) containing two fills (1408) and (1409). Dog bone was retrieved from deposit (1408). A second ditch (1402), measuring at least 1.70m long by 0.65m wide and aligned NW-SE, truncated (1403) and (1404) and contained two dark brown silty sand fills (1412) and (1413). A third post hole (1415), also dated to the 3rd - 4th century, was recorded at the eastern end of the trench.

Metal detecting of the base of the trench and spoil revealed Roman coins dated between 346-75 AD (Appendix 4).

Trench 15: A grave (1542) was recorded cutting into ditch (1543) at the eastern end of the trench. Measuring at least 2.00m long by 0.60m wide this feature contained human skeletal remains (1549), which were only partially exposed. Pottery dated to the 3rd - 4th century and an iron object was retrieved from the dark brownish grey silt grave fill (1527).

Metal detecting of the base of the trench and spoil revealed two Roman coins dated between 337-75 AD (Appendix 4).

Trench 16: Recorded at the northern end of the trench, cutting gully (1604) was an E-W linear (1602) with steep sides and an uneven base. Measuring at least 2.00m long by 1.15m wide and 0.65m deep this ditch contained a dark yellowish brown silty sand (1601) from which 2nd century pottery and a coin dated to the mid 4th century was retrieved.

Located at the southern end of the trench was a N-S linear (1615). Measuring at least 2.00m long by 2.00m wide and 0.70m deep this ditch was filled with a reddish brown silty sand (1614) and contained 4th century pottery, an iron strip, and cattle, cattle sized, pig and dog bones. An environmental sample (no. 14) was also taken from this

deposit, see Appendix 9.

Metal detecting of the base of the trench and spoil revealed a further Roman coin dated 325-28 AD (Appendix 4).

Trench 17: At the northern end of the trench was a grave (1702). Measuring at least 0.95m long by 0.42m wide this feature contained human skeletal remains (1718), which were only partially exposed. Pottery dated to the 3rd - 4th century and human, cattle sized, sheep/goat and dog bones were retrieved from the dark greyish brown silty sand grave fill (1703).

Cutting feature (1712), at the southern end of the trench, was an E-W linear (1708) with steep sides and a rounded base. Measuring at least 1.60m long by 1.18m wide and 0.50m deep this ditch was filled by a dark greyish brown silty sand (1709) from which human bone and 3rd - 4th century pottery was obtained.

Overlying all the features was a 0.75m thick dark greyish brown silty sand 'dark earth' (1701) containing 3rd - 4th century pottery, tile and horse, cattle, dog and fox? bones.

Trench 18: Overlying the earlier dated features was a 0.32m thick layer of mid to dark greyish brown silty sand (1801/1820). Interpreted as a 'dark earth' this deposit contained mid 4th century pottery, a clay mould fragment (Fig.26), fired clay and human, horse, cattle, cattle sized, sheep/goat, sheep sized, pig, goose and bird bones. Cutting layer (1820) within the sondage was a grave (1810). Measuring 2.38m long by 1.40m wide this feature contained human skeletal remains (1811). Radiocarbon dating of the skeleton gave a date range between 130 - 400 AD, whilst pottery dated to the mid to late 3rd century, nails and human, cattle, cattle sized, sheep/goat and sheep sized bones were retrieved from the mid greyish brown silty sand grave fill (1809). A secondary burial (1807) contained the skeletal remains of an infant (1806). The mid brown silty sand fill (1805) contained mid 3rd to 4th century pottery, iron nails and objects and human, cattle, cattle sized and sheep sized bones. Interestingly, several of these human bones had been burnt and probably suggests the practice of cremation.

At the western end of the trench was a N-S linear (1804) measuring at least 1.40m long by 1.00m wide and 0.25m deep and interpreted as a foundation wall cut. A single course of roughly hewn limestone fragments (1824) and a back filling of dark brownish grey clayey sand (1803) containing late 3rd to 4th century pottery lay within (1804).

Metal detecting of the base of the trench and spoil revealed Roman coins dated between 337-41 AD (Appendix 4).

Trench 19: A light greyish brown sandy silt with ashy inclusions (1912) was recorded at the eastern end of the trench underlying the 'dark earth' (1901) and possibly represents a surface. An environmental sample (no. 17) was taken from deposit (1912), see Appendix 9.

Sealing deposit (1912) was a dark greyish brown sandy silt 'dark earth' (1901). Within this deposit were several structural remains, a large quantity of pottery, including several sherds of medieval pottery, window glass, tile, iron nails and objects, human and animal bones, oyster shells and a shard of glass from a wine bottle. Two environmental samples (no. 16 and 18) were taken from deposit (1901), see Appendix 9. At the western end of the trench were two N-S roughly finished dry bonded limestone walls (1908) and (1909) both measuring at least 1.60m long by 0.80m wide. Possibly associated with these walls was another,

similarly constructed, rough finished dry bonded limestone L-shaped wall (1910) was recorded in the centre of the trench. Located to the northeast of this feature was a dry bonded limestone wall constructed in a semi-circle, possibly representing a well (1911). However, the location of this feature adjacent to the trench edge makes this interpretation only tentative.

Located at the eastern end of the trench within the 'dark earth' was a grave (1905) measuring at least 1.10m long by 0.30m wide. The skeleton was not fully exposed, however, no hand bones were present and the recovery of nails from within the fill (1904) probably suggest a coffin burial. Several human and animal bones including cattle, sheep and pig and oyster and mussel shells were also retrieved from deposit (1904). The recovery of a single sherd of 16th -17th century pottery from (1904), compared to 31 sherds of Roman pottery, would suggest that the later sherd was intrusive. The definition between the cut and the 'dark earth' was difficult to ascertain. A pit (1906) measuring 0.80m long by 0.40m wide was recorded cutting the grave and contained a single dark brown sandy silt fill (1903) from which late 3rd - 4th century pottery, an iron nail and catle, sheep and pig bones and mussel shell were obtained.

Metal detecting of the base of the trench and spoil revealed Roman coins dated between 337-75 AD (Appendix 4).

5.7 Phase 6: Post Roman and Saxo-Norman deposits (Figs.7, 8 and 17 - 19)

Trench 2: Overlying the Iron Age/Early Roman to 3rd century dated river gravel (210) was a 0.25m thick alluvial deposit (209) which in turn was sealed by another alluvial deposit (214). Layer (209) was also cut by an E-W linear (212). Measuring at least 1.60m long by 1.40m wide this ditch or earlier river channel contained a mid to dark brownish grey clayey silty sand (211).

Trench 3: Recorded at the northen end of the trench, within a boxed section, was a dark reddish brown peaty clayey silt (309). An environmental sample (no. 7), from which 10th - 12th century pottery was retrieved, was taken from this deposit, see Appendix 9.

Trench 12: Recorded sealing the Roman dated features (1203) and (1206) was a 0.10m thick layer of mottled mid to dark brown silty sand and light brown/reddish brown sand with occasional small to medium stones (1201). This has tentatively been interpreted as a flood deposit from the nearby River Slea.

Trench 13: At the eastern end of the trench, cutting the Roman dated surface (1315) was a NE-SW ditch (1312) containing two sandy silt fills (1346) and (1311) from which 10th 12th century pottery was retrieved. Measuring at least 1.60m wide and 0.28m deep this linear may represent a boundary or drainage ditch.

Trench 14: Sealing all the features was a 0.53m dark brown silty sand 'dark earth' (1406) from which Stamford ware and 4th century pottery, prehistoric worked flint and horse, cattle and cattle sized bones were retrieved.

5.8 Phase 7: Post Saxo-Norman and Medieval deposits (Figs.8 and 18)

Trench 3: Overlying deposits (307) and (309) was a sequence of clayey silt alluvial deposits (304, 305 and 306). Horse bones were retrieved from deposit (304).

Trench 13: Cutting ditch (1338) and surface (1325) was a NNE-SSW linear measuring

1.60m wide and 0.50m deep (1337). This feature contained three deposits (1351), (1339), and (1324) from which several sherds of 13th-14th glazed ridge tiles were obtained. Overlying this feature, surface (1321) and ditch (1312) was a 0.27m thick dark brown silty sand 'dark earth' (1303/1313/1317/1352) containing medieval pottery, including; Bourne A, Nottingham ?splash glazed and Stamford ware and cattle, cattle sized and sheep/goat bones and tile and brick.

5.9 Phase 8: Post Medieval and Modern deposits (Figs.6 - 25)

Trench 1: A 0.24m thick mid brown sandy silt subsoil (101) was recorded overlying the natural (102) and in turn was sealed by a 0.20m thick dark brown sandy silt topsoil (100).

Trench 2: Sealing the alluvial deposits (204, 211, 214, 219, 220 and 221) was a 0.17m thick dark greyish brown sandy silt subsoil (203). Recorded above this deposit at the western end of the trench was a dark brown silty sand dumped deposit (213). A second dark brown sandy silt subsoil (202), measuring 0.16m thick, sealed deposit (203) at the eastern end. A 0.22m thick dark blackish brown silty sand (201) was recorded sealing the underlying deposits and represents the present day topsoil.

Trench 3: A 0.30m thick dark reddish brown clayey silt (303) sealed the underlying alluvial deposits. This topsoil was cut by a modern pit (302) containing a dark reddish brown clayey silt (301), at the southern end of the trench.

Trench 4: Cutting the natural in the centre of the trench was a N-S linear (413) measuring 2.20m wide and containing a backfilled mottled sand and gravel deposit (412). To the east of this ditch, located against the edge of the trench, was a sub-circular pit or post hole (411) containing a mottled sand and gravel fill (410) from which 18th - 19th century pottery was retrieved. Overlying this feature was a 0.17m thick dark brown sandy clayey silt subsoil (401), which in turn was sealed by a 0.26m thick dark grey sandy clayey silt topsoil (400).

Trench 5: Overlying all the features within the trench was a 0.39m thick mid to dark sandy silt 'dark earth' (515) which was sealed by a 0.18m thick dark brown sandy silt topsoil (514).

Trench 6: Sealing the natural deposits was a 0.30m thick dark reddish brown clayey silt (602). Containing pig bone, coke and coal this deposit has been interpreted as a subsoil. Overlying this deposit was a dark reddish brown clayey silt topsoil (601) with light reddish brown clayey silt lenses.

Trench 7: A dark brown silty sand subsoil (701), measuring 0.24m thick, was recorded sealing the underlying features and deposits. Overlying this deposit was a 0.27m thick topsoil (700) consisting of a dark blackish brown silty sand.

Trench 8: Overlying all the features was a 0.25m thick mid reddish brown silty sand subsoil/'dark earth' (802) from which human and cattle bones were retrieved. This layer was sealed by a dark reddish brown sandy silt topsoil (801).

Trench 9: Cutting feature (905) on its western side was a smaller N-S linear containing a single brown silt fill (904) from which 18th - 19th century pottery, a clay pipe stem and a cattle bone was retrieved. Overlying (905) and the rest of the trench was a 0.30m thick brown silt subsoil (902) which was sealed by a modern brownish grey silt topsoil (900/901).

Trench 10: Overlying all the features was a 0.50m thick dark brown sandy silt 'dark earth' (1012) which in turn was sealed by a dark greyish brown sandy silt topsoil (1011).

Trench 11: Sealing all the features were two silty sand 'dark earth' layers (1114) and (1115). Measuring 0.76m thick these deposits were cut by a large modern pit (1110) located at the northern end of the trench. A dark brown silty sand topsoil (1113) was recorded overlying the whole trench.

Trench 12: Cutting ditch (1210) at the western end of the trench was a modern service trench (1220). Overlying layer (1201) was a 0.20m thick buried plough soil (1222), in turn sealed by a dark brown sandy silt 'dark earth' (1221). A mid brown silty sand topsoil (1211) sealed all the features and deposits within the trench and in turn was cut by a modern pit (1228) at the eastern end of the trench.

Trench 13: Cutting the 'dark earth' in the centre of the trench was a N-S linear (1310) with steep sides and a concave base. Measuring at least 1.50m long by 1.30m wide this ditch contained two fills, a dark greyish brown silty sand (1302) and a dark brownish grey silty sand (1350). 16th – 17th century, 10th - 12th century and Roman pottery and a clay pipe stem was retrieved from the primary fill (1302).

Truncating several of the underlying features and deposits were four modern service trenches (1305), (1307), (1309), and (1327). Modern dumped deposits (1349) and (1355) and former topsoils (1316) and (1356) were also recorded within the trench.

Trench 14: A dark grey silty sand with occasional small gravel (1405) was recorded sealing the whole trench, and represents the modern topsoil.

Trench 15: Sealing all the features was a 0.70m dark brownish grey silt subsoil (1501/1509/1554) in to which a modern pit (1510) had been cut. Overlying the whole trench was a 0.30m thick dark brownish grey topsoil (1500/1508/1553).

Trench 16: Overlying all the features was a 0.35m thick dark yellowish brown silty sand subsoil/'dark earth' (1610). Sealing this deposit was a dark reddish brown silty sand topsoil (1609) containing a copper-alloy button.

Trench 17: Two modern features, a pit (1706) and a modern service trench (1714) containing a light greyish brown clay (1707) and (1715) respectively, were recorded cutting the 'dark earth' (1701). Sealing the whole trench was a dark greyish brown silty sand topsoil (1700) from which Nottingham salt-glazed stoneware pottery and a horse bone was retrieved.

Trench 18: Overlying all the features was a 0.60m thick mid brown silty sand topsoil (1821).

Trench19: Cutting the 'dark earth' (1901) at the western end of the trench was a modern service trench (1913). Overlying all the features was a 0.26m thick dark grey sandy clayey silt topsoil (1900).

Trench 20: Overlying all the features was a 0.17m thick dark brown sandy clay subsoil (2001) containing pottery and sheep bone. Sealing this deposit was a dark grey sand clay topsoil (2000) measuring 0.26m thick.

6. DISCUSSION

Archaeological evaluation on land at The Hoplands, Sleaford, Lincolnshire, has identified a range of archaeological deposits including undated wooden stakes and

features, a neolithic pit, a Roman cemetery, occupation debris, structures and features, Saxo-Norman ditches and deposits, a medieval boundary ditch, a post-medieval ditch and modern ditches, pits, post holes, sub-soils and topsoil.

6.1 Phase 1: Natural deposits

The natural deposits recorded across the site were generally divided into two zones, the area adjacent to the Old River Slea and the terraced area to the south. The natural silt and gravel deposits recorded in trenches 1, 2, 3, 6 and 7 generally derived from river deposits, either laid down in the shifting channels that represent the former courses of the river or during episodes of flooding.

The sands and gravels recorded within the other trenches are likely to have been deposited as part of a glaciofluvial process. Natural hollows formed by animal and root disturbance were recorded cutting these deposits in several of the trenches.

6.2 Phase 2: Undated deposits

The two undated graves recorded within Trench 17 both appeared to be aligned east-west. The similar nature of the grave fill and quality of preservation of the human bones suggest that they are of a similar date to the other burials recorded on the site and are therefore probably Roman in date.

Two pieces of worked wood from Trench 2 were radiocarbon dated to the Mesolithic period. The nature of the environmental sample, including horse and domestic cattle bones, puts into doubt this date and a possible error caused by hard water or some other factor may have effected the results (J. Rackham, Appendix 9). However, although the wood is not well enough preserved for detailed analysis it is believed that there is nothing about them to suggest that they are not prehistoric (M. Taylor, Appendix 5). Furthermore, the recovery of the worked wood below several layers of river gravels and alluvial deposits enhances the possibility of a prehistoric date.

The majority of the other undated features are ditches, gullies, pits and post holes. The linears probably functioned as either field boundaries, dividing the land in to several parcels, or drainage ditches. Whilst the pits and post holes probably represent the deposition of refuse and fence lines. The bulk of these are probably broadly contemporary in date with the Roman features that have been recorded across the site. However, due to the lack of finds within these features this is only tentative. Furthermore, the fact that several of the features were recorded inter-cutting each other suggest that the land was being utilised over a considerable period of time with the land being reorganised and reordered on several occasions Environmental samples taken from several undated features failed to produce any dateable evidence, although the samples did indicate a permanently waterlogged area on the flood plain with a drier open country grassland environment on the terrace.

6.3 Phase 3: Prehistoric and Post Prehistoric deposits

The only firmly dated prehistoric feature within the proposed development area was a ditch terminal within Trench 5. Furthermore, the recovery of a leaf shaped arrowhead within this feature suggests a neolithic date. The location of this feature within the trench and the lack of any other features assigned to this date makes any interpretation of its function difficult to interpret. However, the existence of a feature of that date suggests that the site was being utilised during that period and may suggest more than just a transient usage of

the area, especially if the undated features located within the vicinity are of a similar date. The environmental evidence from the ditch fill suggests a grassland environment with a damp ground or marshy component which is to be expected due to its location next to the river. Charcoal and a few unidentified waterlogged seeds were present within the sample although they do not give any indication to the features function or to any type of activity that may have occurred adjacent to the ditch.

6.4 Phase 4: Iron Age/Early Roman to 3rd century deposits (Fig.29)

Iron Age/Early Roman pottery was retrieved from three linear features within Trenches 4, 9 and 16. Interestingly these trenches are located to the southeast of the site and suggests a similar area of utilisation to that within the Prehistoric period. The nature of the features suggest either field boundaries or drainage ditches. The small amount of pottery and other finds suggest that although the area was being used during this period it may have been slightly away from any main settlement.

Activity appears to have shifted from the southeast to the southwest corner of the site during the 2nd to 3rd century with the metalling of Mareham Lane and the digging of the associated road side ditches and the construction of several linears and pits, that probably represent agricultural activity within the area during that time.

A beam slot (1822) recorded within Trench 18 and a large refuse pit (1419) recorded within Trench 14, suggests that possible limited occupation was also taking place at the time. The beam slot probably intimates the existence of a timber built structure. The date of construction of this building would correspond with the initial occupation of the new Police Station site to the south. This contemporary construction at The Hoplands site would suggest that this area along Mareham Lane was being developed at that time, although to a lesser extent.

Development also appears to have occurred adjacent to the Old River Slea with the construction of a cobbled surface possibly forming a hard standing adjacent to the area used for crossing of the river.

The human bone recovered from river gravel probably derived from a disturbed grave. A small quantity of cattle, sheep, goat and pig bones were retrieved from the 2nd to 3rd century features, and although not an extensive assemblage they do indicate that these animals were consumed and probably reared within the area. This view may be enhanced from the evidence obtained from the environmental samples which indicates an open country grassland, ideal for grazing. Horse bone was also recovered from several of the samples and are believed to have come from disturbed burials on site. This has been deduced from the fairly intact nature of the bones (J. Rackham Appendix 9).

Little further evidence of diet was forthcoming from the samples, with only small amounts of charred cereal grain, including spelt wheat and barley grain, being recorded.

6.5 Phase 5: Later 3rd to 4th century deposits (Fig.30)

Five burials have been positively dated to this period. Furthermore, several human bones were recovered from the environmental samples including several burnt bones. A radiocarbon date of between 130- 400 AD, with an interception date of 250 AD, was obtained from burial (1810) whilst pottery dated to the 3rd - 4th century was recovered from the grave fills. Nails

were also recovered and suggest coffin burials, whilst the burnt bones imply cremations. Interestingly, no hand bones were recovered from grave (1905) although this may be due to unfavourable soil conditions or animal disturbance, rather than any pre-burial ritual.

These burials and cremations appear to be located within a cemetery that extends throughout the southwest corner of the site beyond the sub-rectangular earthwork and south beyond the limits of the proposed development site.

The *Twelve Tables*, the earliest of Roman laws, forbade burial or cremation within cities or other nucleated settlement areas. This regulation was later translated into municipal law in the colonies of Rome. Accordingly, Romano-British cemeteries are generally located outside the towns, often alongside roads leading out of the settlement (Anderson 1984, 11). Interestingly, this may imply that the building recorded within the southwest corner of the site is either earlier, going out of use before the cemetery commenced or, less likely, constructed after the cemetery fell into disuse.

Ditch (1338) within Trench 13 appears to be part of the sub-rectangular earthwork formerly located in the western area of the site (Fig. 5), 3rd - 4th century pottery was retrieved from the ditch and confirms a Roman date. This earthwork was also recorded in several other trenches as undated ditches (1038), (1041), (1044), (1210), (1514), (1517) and (1519). This feature may initially have defined the cemetery.

At least one stone-built structure was recorded in the southwest corner of the site, probably being constructed after the cemetery went out of use. This building may be broadly contemporary with those recorded at the new Police Station site to the south. The quality of the remaining walls suggest that they probably acted as footings for a half timber structured building. The lack of tiles from the site suggests that either the building was thatched or that tiles were robbed when the building fell into disuse. Other walls recorded within this area appear to be property boundary walls. The semi-circular limestone feature (1911) recorded within Trench 19 has been interpreted as a well and would appear to be located to the rear of the building.

Also recorded within this area was an ashy layer (1912). An environmental sample taken from this deposit contained hammerscale and fuel ash. Hammerscale was also recovered from several other samples, to a lesser extent, and although the quantity is small it probably suggests that iron smithing was being carried out either on site or within the local vicinity.

Evidence of further land division and changing parcelling of land was recorded during this period with the cutting of further ditches and gullies. Several post holes recorded adjacent to the ditches suggest that some of these boundaries were enclosed by fencing, whilst environmental data suggests that at least one of the ditches (1615) was lined with an earthen bank and hedge. This continuation of ditch construction and the evidence of disturbed burials may imply that this activity was undertaken after the cemetery fell out of use. A similar sequence was revealed during excavations at Saltersford where an early 3rd century cemetery was built upon in the later 3rd century after the cemetery had fallen in to disuse (Taylor 1995).

Environmental evidence suggested a similar open country grassland to that in Phase 4.

Twenty two coins were recovered from the site and dated to the Roman period, and

although this assemblage is small it appears to suggest site activity from at least the 330's to the end of the 4th century or beyond (Appendix 4). These coins probably represent accidental loss on the site during the construction and subsequent occupation of the building and agriculture activities, rather than hoarding.

Several deposits were recorded as 'dark earth' and have been assigned a later 3rd- 4th century date. The appearance of these deposits suggest that they are a product of post-depositional transformation, primarily caused by re-working of archaeological layers through the process of natural decomposition and worm action. This would imply that this deposit formed after the site had been abandoned sometime within the later 4th century. A large quantity of pottery and animal bone was retrieved from this deposit. The pottery included imported Samian ware, wine and olive oil amphorae and infers a relatively high status site (B. Precious Appendix 3). The environmental samples from this phase produced insufficient material for any interpretation of diet.

The mould (Fig.26) from (1801) is part of an investment mould probably for the casting of a copper alloy object, though there are no obvious metallic traces on the fragments. There are two sets of round-sectioned linear grooves in groups of three and two. Both of the grooves in the set of two, and two of the set of three linear grooves, have fine longitudinal lines and may have been produced using reeds, rather than by the lost wax process. The group of 3 grooves are heavily reduced to a dark grey-black, caused by contact with molten metal. By contrast, the second set of two grooves is not reduced, and therefore was probably not used. Too little of the mould survives for the cast object to be definitively identified, though large pins, or a ribbed handle, are possible. Because such baked clay moulds are fragile and easily abraded or destroyed, the mould was probably deposited near the area of its use and is unlikely to have been disturbed much since (Appendix 7).

6.6 Phase 6: Post Roman and Saxo-Norman deposits

The only feature assigned a Saxo-Norman date was a ditch recorded within Trench 13. Interpreted as a boundary or drainage ditch the solitary nature of this feature suggests a limited utilisation of the proposed development area during this periods. This in part may be due to the apparent deterioration of ground conditions, especially within the area adjacent to the river were there is evidence of flooding during the post Roman period.

The recovery of Stamford ware within deposit (1460), interpreted as a 'dark earth' suggest that this layer was still forming and/or transforming during this period.

6.7 Phase 7: Post Saxo-Norman and Medieval deposits

A boundary or drainage ditch (1337) recorded within Trench 13 was the only medieval feature recorded within the proposed development area. Although this feature may define a boundary along Mareham Lane, it also appears to be part of the sub-rectangular earthwork previously recorded on the site, probably representing a re-cut of an earlier Roman dated feature (1338). Furthermore, the still extant remains of ridge and furrow earthworks within the southeast corner of the site, appears to respect this sub-rectangular earthwork and suggests that the earthwork was still extant during the medieval period. Furthermore, the redefining of a boundary along Mareham Lane suggests the routes' continued use during the medieval period

Medieval pottery was also recovered from several of the trenches situated on the terrace during machining. It may therefore be assumed that this area of the site was being utilised during the medieval period and that the activity was of an agricultural nature.

6.8 Phase 8: Post Medieval and Modern deposits

Trench 13 revealed the only positively dated Post-medieval feature (1310). This ditch probably represents a secondary re-cutting of ditch (1338) and suggest the continued use of Mareham Lane during that period. The lack of any other features dated to the Post-medieval period denotes a limited utilisation of the land at that time.

Several modern features were recorded across the site including service trenches, ditches, pits and post holes and confirms the continued use of the land during the period. Several of the service trenches were recorded along the route of Mareham Lane and appear to have truncated the underlying features.

Geophysical survey results defined several large areas of the site that had been disturbed (Fig.4). A number of these disturbances were revealed within the trenches truncating the underlying archaeology. These features contained modern building debris.

A subsoil and/or 'dark earth' sealed the underlying archaeological features and deposits and was covered by a modern topsoil.

6.9 Overview

The earliest utilisation of the site appears to have occurred during the Neolithic period, located in the eastern side of the proposed development area. Little information was gained from the environmental sample although a grassland environment with a marshy component was indicated

Utilisation beside the river may have occurred during this period, evidenced by the recovery of worked wooden stakes underlying river gravels. Furthermore, M. Taylor (Appendix 5) intimates that there is nothing about them to suggest that they are not prehistoric. However, as they are not dated the period of this development remains uncertain.

This Neolithic activity seems to be relatively minimal and it was not until the Iron Age/Early Roman period that greater utilisation occurred with the construction of field boundaries and drainage ditches, probably associated with agriculture. This area appears to be peripheral to an area of occupation, which may possibly be the Late Iron Age occupation attested by excavations within 250m of the site and further west (Elsdon 1997, 26, 30, Fig 2).

It was not until the 2nd - 3rd century that activity shifted to the west side of the proposed developed area with the development of Mareham Lane and the construction of a probable timber built structure, ditches, pits and post holes. Development adjacent to the River Slea also commenced with the construction of a hard standing possibly associated with a river crossing.

This relatively limited use of the area in the early Roman period may be bourne out by the coins, none of which pre-date the 4th century. However, it must be noted that only 22 coins were retrieved.

The area appears to have been under pasture during this period with the probable rearing of cattle and sheep. Limited evidence was

obtained of diet from the environmental samples although a few charred cereal grains were recovered. This may be due to the fact that the main occupation at the time was located to the south, at the new Police Station and west, on the opposite side of Mareham Lane where stone buildings and a corn-drier have been identified.

The cropmarks, recorded to the east of the railtrack, define a large complex of enclosures, these suggest that there was also occupation in that area at the time, although the exact period of the Roman occupation is not known.

A change in activity was noted in the 3rd - 4th century when the western area of the site was used as a cemetery. Previous archaeological investigations suggest that this cemetery also extended further south beyond the limits of the proposed development site. The construction of the sub-rectangular earthwork also appears to have occurred at this time, possibly initially defining the extent of the cemetery. This cemetery probably serviced the local community and, although no studies were available to indicate population size, distribution and pathological aspects, it is clear that the cemetery is extensive and includes both adult and juvenile burials and cremations. Graves are also known to the west and south of the site, some containing votive offerings (Oetgen 1997, 45-6) possibly suggesting an earlier date. It is possible therefore that the cemetery recorded within the proposed development site is an indication of a more organised burial practice during this later period.

After the cemetery fell in to disuse the land was again turned over to agriculture, evidenced by the construction of boundary and drainage ditches, pits and post holes. However, in the southwest corner of the site a stone building was recorded and suggest that development along Mareham Lane had advanced northwards possibly from the new Police Station site. The recovery of 'high status' pottery may suggest that this building was quite substantial and/or had an important function. Its location near to the crossing of the river may have some significance.

Evidence of industrial activity and diet from the environmental samples was small. Iron smithing may possibly be intimated from the recovery of hammerscale although the small quantity recovered probably suggest that this activity was occurring off site, although possibly within the vicinity.

The later 4th century post-depositional 'dark earth' recorded across the southwestern corner of the site implies a period of abandonment. This would correspond with the decline of occupation at the new Police Station site, although limited occupation did continue in to the 5th century on that site.

Post Roman activity on the site appears to have been limited to a purely agricultural nature, medieval ridge and furrow being recorded in the southeast corner of the site, interestingly avoiding the sub-rectangular earthwork that was still extant. The dearth of Post Roman features and deposits would imply that the former church of St. Giles and grounds and other medieval structures to the west of Mareham Lane did not impinge on the proposed development site.

7. ASSESSMENT OF SIGNIFICANCE

For assessment of significance the *Secretary of State's criteria for scheduling ancient monuments* has been used (DoE 1990, Annex 4; See Appendix 10)

Period
Archaeological deposits dating from the Neolithic, Iron Age/Early Roman to 3rd century, later 3rd - 4th century, Post Roman and Saxo-Norman, Post Saxo-Norman and medieval, and Post medieval and modern periods were recorded during the evaluation. Remains of this nature are typical of these periods.

Rarity
Neolithic, Iron Age/Early Roman to 3rd century, later 3rd - 4th century, Post Roman and Saxo-Norman, Post Saxo-Norman and medieval, and Post medieval and modern deposits of the type recorded during this evaluation are not particularly rare, although at a regional level it would be uncommon to record deposits of this range of dates at a single site. The post-medieval and modern deposits are commonplace. However, the depth of 'dark earth' deposits is rare on a non-urban site.

Documentation
The site has previously been the subject of a geophysical survey (Engineering Archaeological Services 1996) which identified potential archaeological anomalies. In addition, records of archaeological sites and finds made in the Sleaford area are held in the Lincolnshire Sites and Monuments Record and the files maintained by the North Kesteven Heritage Officer. Several archaeological investigations have been undertaken in the vicinity and are reported. A synopses of excavations of the area has previously been produced (Elsdon 1997).

Group Value
The archaeological evidence obtained from the investigation area suggests limited land use during the Prehistoric period, possible limited occupation and agricultural usage during the late Iron Age/Early Roman period, ritual, agricultural and occupation during the 3rd - 4th century and agricultural usage in the Post Roman period to present day. A moderate to high group value may be indicated by this repeated association.

Survival/Condition
The features recorded appeared to have survived well although evidence for recent disturbance, in the form of services and machine dug trenches, was apparent. Preserved organic remains were recorded within the northern area of the site on the flood plain. However any other environmental remains taken from features on the terrace would be limited to charred or other non organic remains.

Fragility/Vulnerability
Due to the proposed development of the site all of the features are vulnerable.

Diversity
Prehistoric ditches, late Iron Age/Early Roman to 3rd century beam slots, ditches, pits and post holes, later 3rd - 4th century cemetery, stone footings, ditches, pits and post holes, Saxo-Norman ditch and medieval ditches were revealed. The majority of these features related to agricultural uses, although some of the features in the southwest corner of the site are related to ritual and occupation. A limited range of ecofactual and economic indicators were recovered during processing of environmental samples. As a group these have high functional and period diversity.

Potential
There is a high potential that similar prehistoric, Late Iron Age, Roman, Saxo-Norman, medieval and later features and deposits, as found during the archaeological evaluation, occur on, and in the immediate vicinity of the site. The evidence has the potential to provide an insight into the changing land use through the various periods and burial practices during the 3rd -

4th century. Also, there is potential for further evidence of buildings along Mareham Land and the developments associated with the crossing of the Old River Slea. The highest potential for well preserved archaeology is in the southwest of the site (Fig.31).

8. EFFECTIVENESS OF TECHNIQUES

The technique of using trial trenches to evaluate archaeological deposits was successful. Removal of overburden deposits by mechanical excavator allowed a rapid appraisal indicating archaeological deposits were present across the development area, although the larger density of features was confined to the central and southwest corner of the site. Moreover, the evaluation recognised many of the geophysical signals previously recorded at the site and revealed other remains not previously identified.

Manual excavation of the remains established that the archaeological deposits were well-preserved with different phases of activity, from the Prehistoric period to the present day. Additionally, the investigations also indicated the majority of the functions of the remains.

9. CONCLUSIONS

Archaeological evaluation on land at the Hoplands, Sleaford, Lincolnshire was undertaken because the site was considered to be within the core area of Late Iron Age and Romano-British settlement of Sleaford and a previous geophysical survey identified possible ditches and pits at the site. It was therefore probable that archaeological remains were located on the site and, in consequence, an evaluation was undertaken to categorise the evidence to provide information to assist the determination of a proposed planning application for the development of the area.

Evidence of prehistoric activity at the site was identified in the form of a ditch terminal and worked flint. The lack of further prehistoric features suggests that this activity was limited, although other features of a similar date may still survive within the area.

Late Iron Age/Early Roman features were recorded within the eastern half of the site and indicated an agricultural based activity, possibly peripheral to an area of occupation. Previously excavated occupation sites of this period have been recorded to the west.

The evaluation also revealed that activity shifted during the 2nd - 3rd century to the western side of the development site with the metalling of Mareham Lane and extensive agricultural land use.

The sub-rectangular earthwork previously recorded in the southwest corner of the site was revealed during the evaluation and has been dated to the later 3rd - 4th century appearing to initially encompass a cemetery. Human burials and remains dated to this period were recorded suggesting an extensive cemetery.

It is clear that this is a much disturbed cemetery, certainly a number of discrete human burials have been disturbed by later activity, and possibly also cremations. The distribution of the human bones from the excavated sample suggests that this is likely to occupy the same area of ground where the bulk of the other archaeological evidence was found, the southwest part of the site on the gravel terrace.

A 'high status' stone building was revealed within the southwest corner of the site,

probably constructed after the cemetery fell in to disuse.

The occupation of the site appears to have declined in the post Roman period with the continuation of a 'dark earth' and usage of the land being generally limited to an agricultural activity. The bulk of the animal bone is also to be found in the southwest of the site

Modern ploughing of the site and the filling of earthworks has caused some limited damage of the underlying deposits. However, archaeological remains were generally well-preserved and environmental evidence survived in good condition both through waterlogging on the flood plain and charring on the terrace.

Furthermore, the organic sediments beneath the floodplain have good potential for elucidating aspects of the palaeoenvironmental history of the site and Sleaford. However without dating the sediments the results of further analysis would not be relateable to the archaeology of the site.

The archaeologically rich area of the site appears to be limited to the southwest part of the site although features have been uncovered elsewhere on the site. This area appears to be the focus of activity.

10. ACKNOWLEDGEMENTS

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11. PERSONNEL

Project Coordinator: Gary Taylor
Project Officer: Tobin Rayner
Site Assistants: Denise Buckley, Rachael Hall, Andy Hardwick, Steve Malone, Barry Martin, Chris Moulis, Kristian Pederson, Jim Snee, Steve Thomson and Dale Trimble
Finds Processing: Denise Buckley
Photographic Reproduction: Sue Unsworth
Artefact Illustration: David Hopkins
Illustration: Mark Dymond, Rachel Hall and Tobin Rayner
Post-excavation Analyst: Tobin Rayner

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13. ABBREVIATIONS

APS	Archaeological Project Services
CLAU	City of Lincoln Archaeological Unit
DoE	Department of the Environment
EAS	Engineering Archaeological Services
IFA	Institute of Field Archaeologists
NKDC	North Kesteven District Council
PCA	Pre-Construct Archaeology
TLA	Trust for Lincolnshire Archaeology

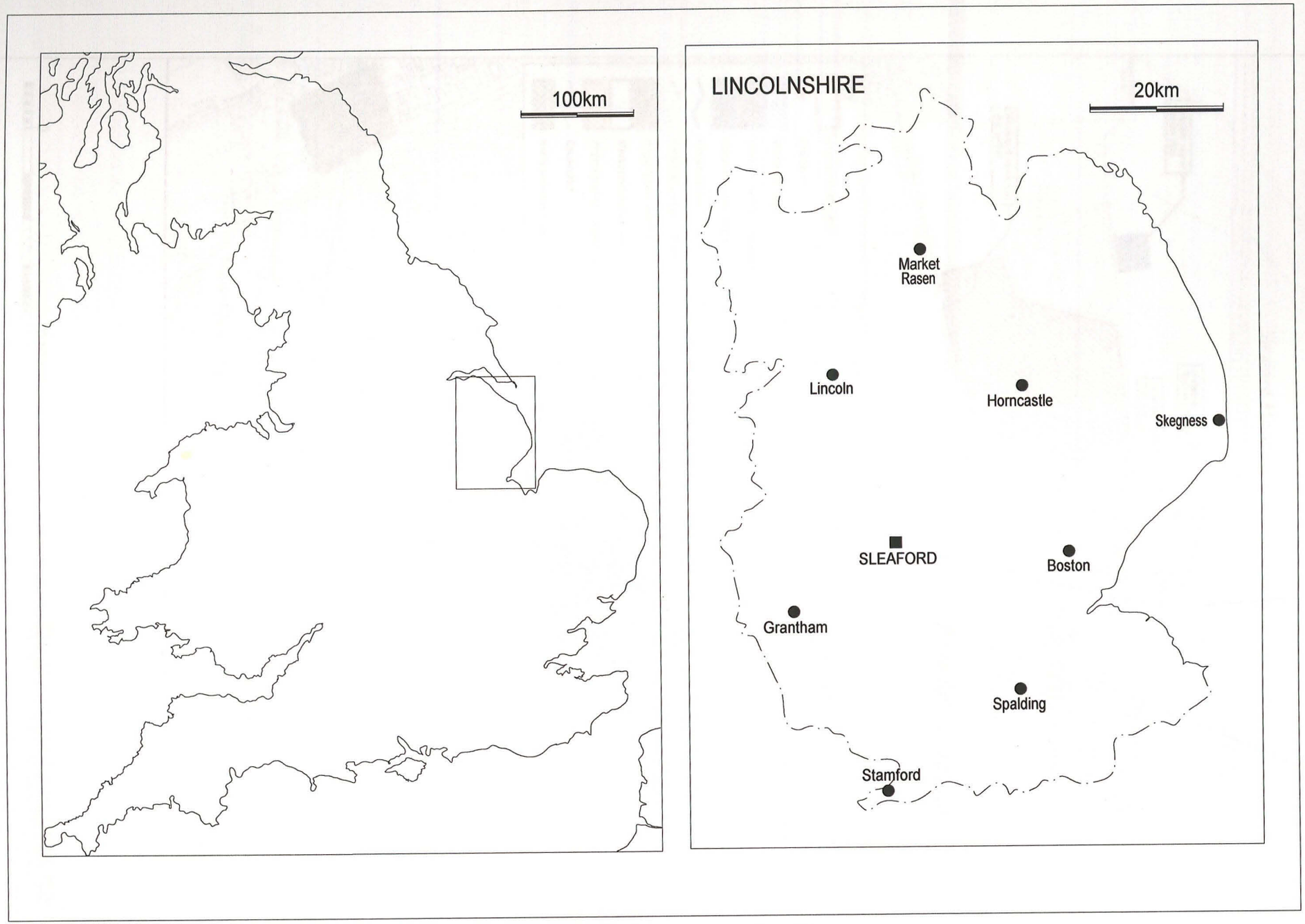


Figure 1: General Location Plan

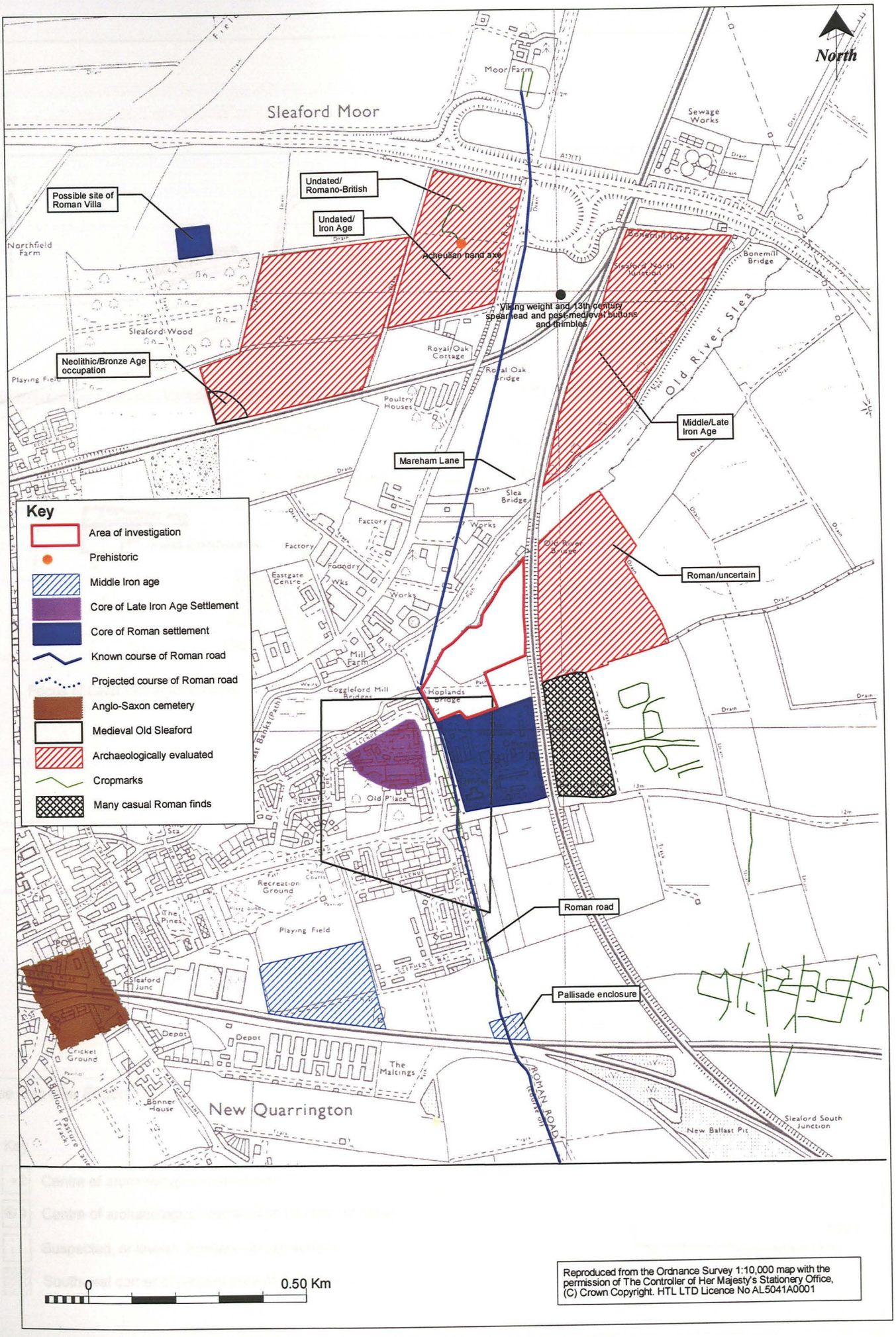


Figure 2 Site location plan showing archaeological setting

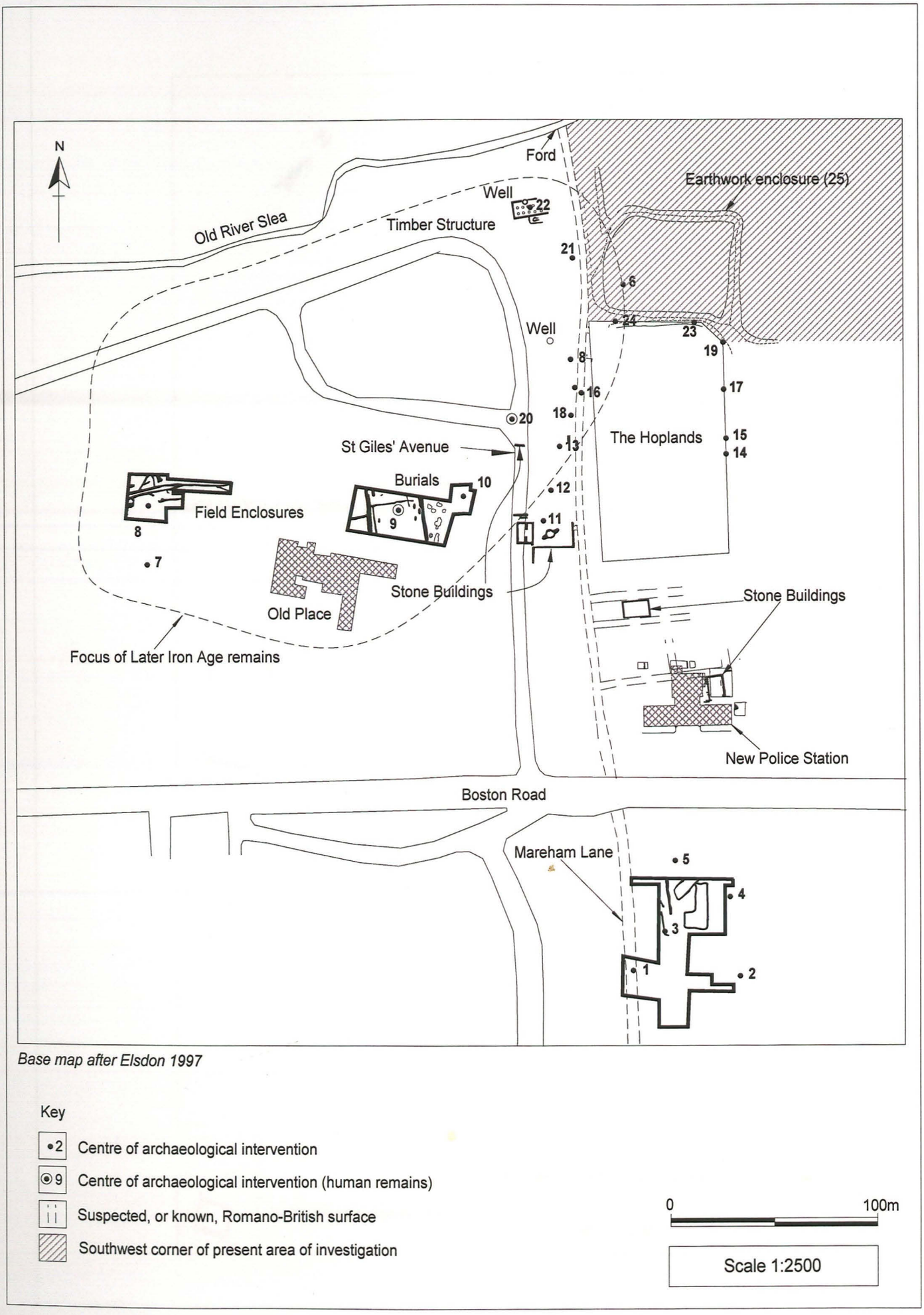


Figure 3: Old Sleaford, showing location of previous investigations

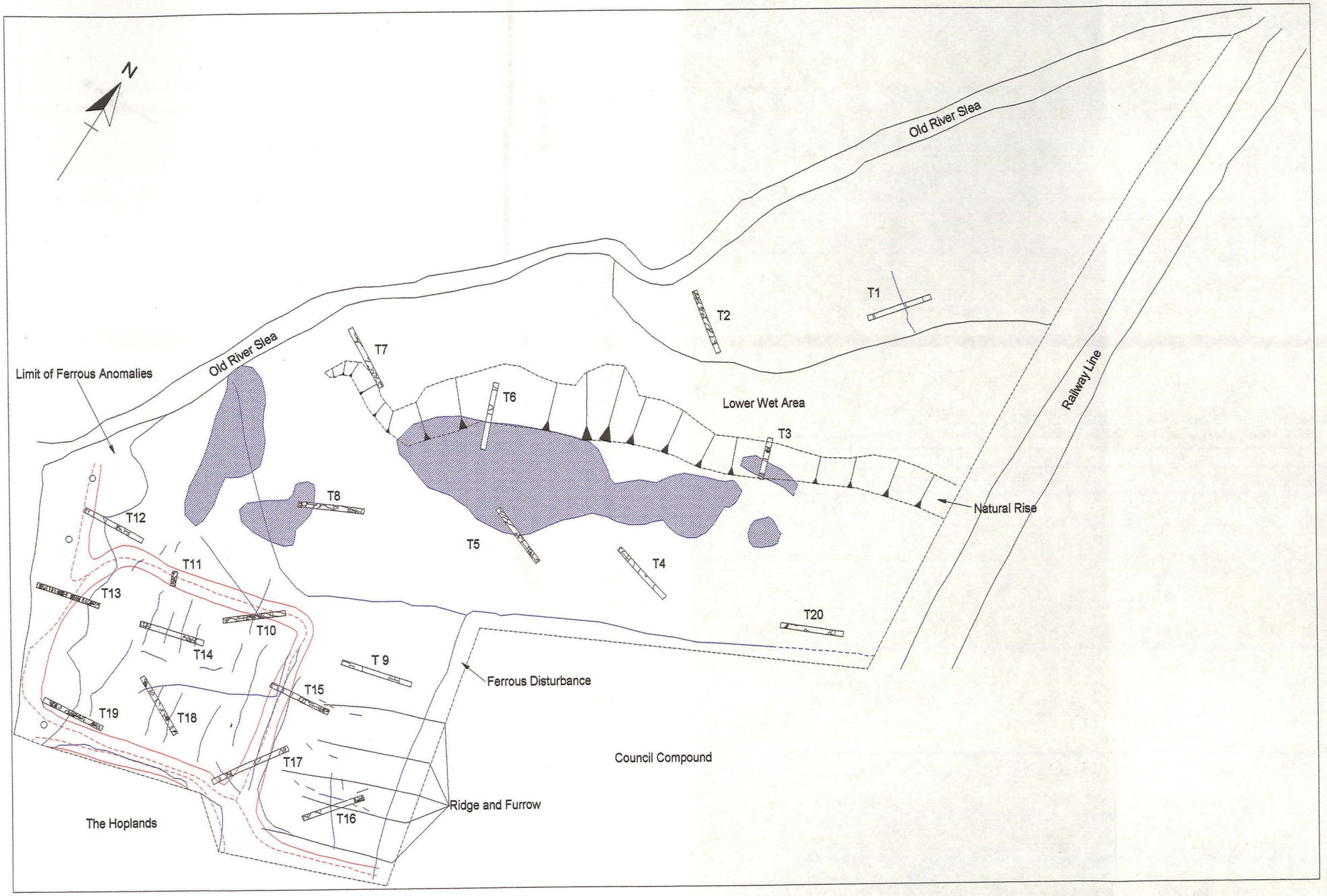


Figure 4: Trench, Geophysical Survey and Earthwork Location

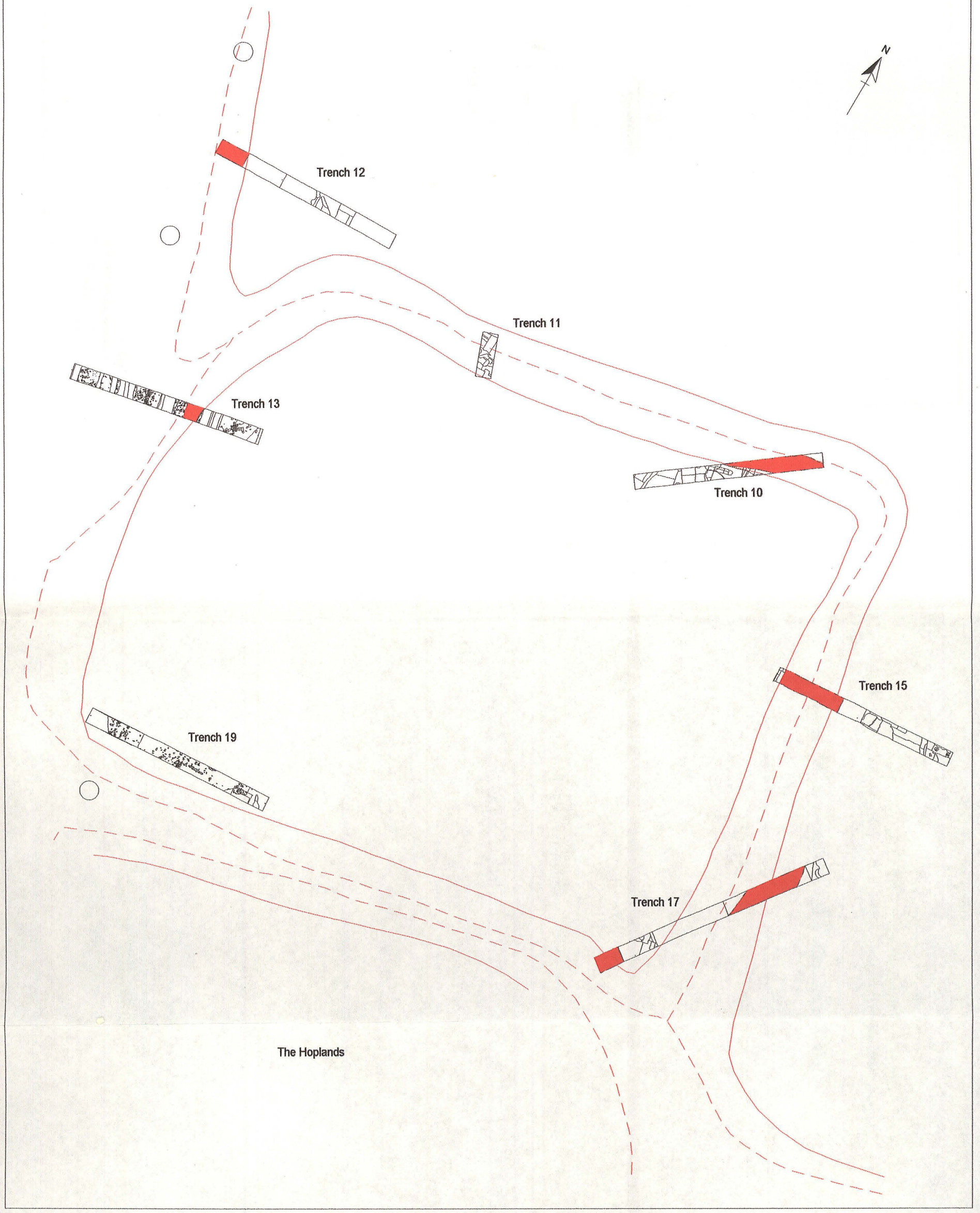


Figure 5: Detailed plan of Earthwork and associated trenches

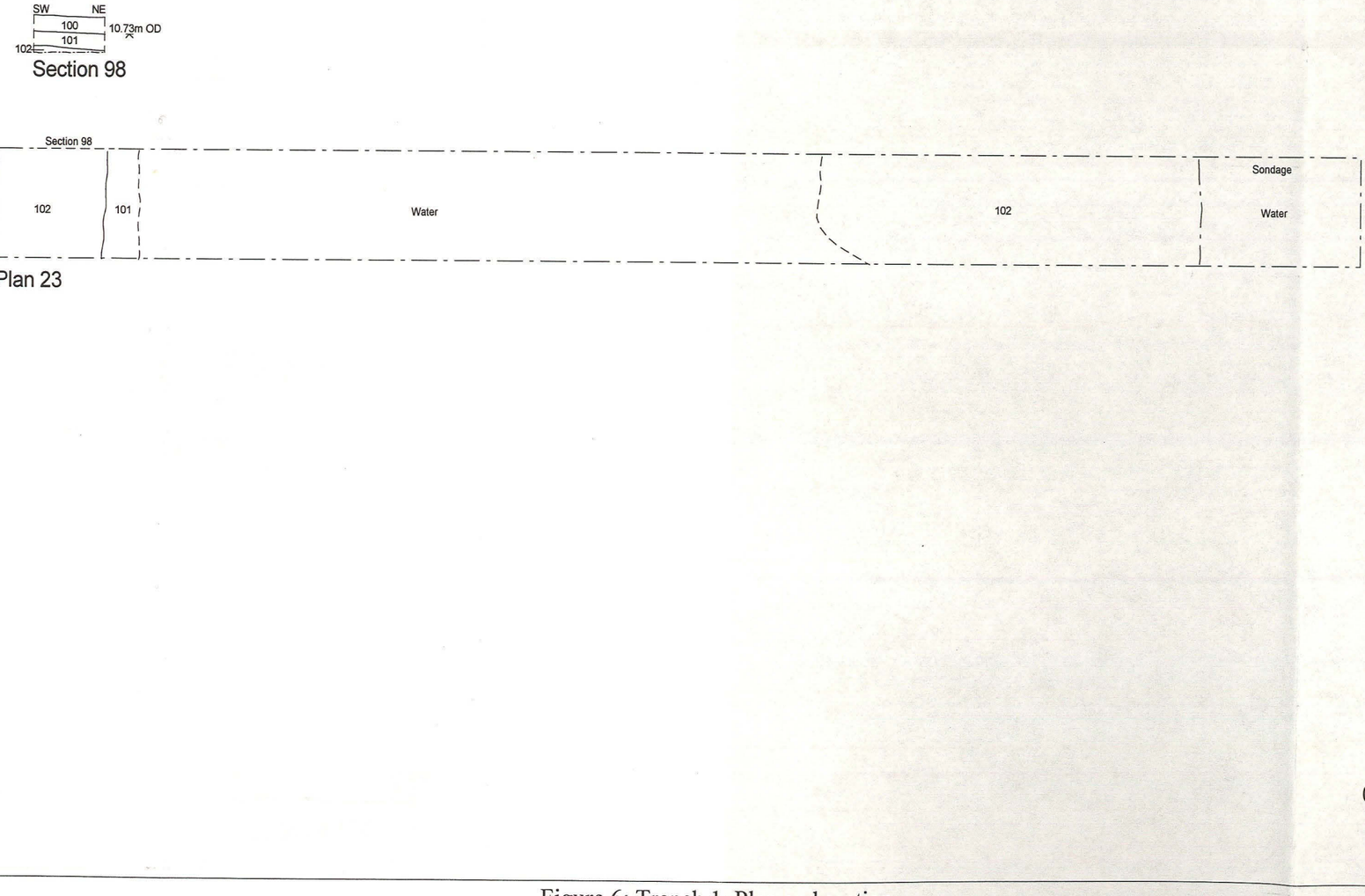
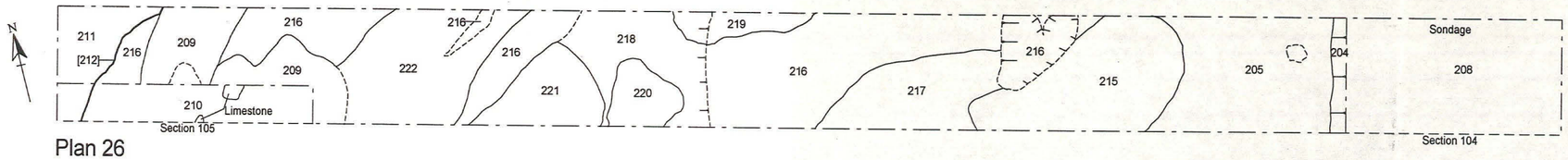
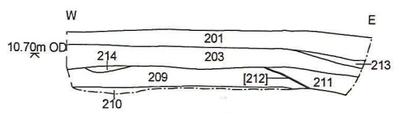


Figure 6: Trench 1: Plan and section



Plan 26



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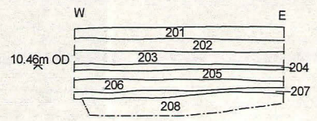

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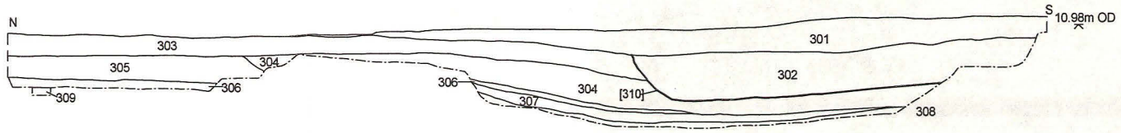
Figure 7: Trench 2: Plan and sections



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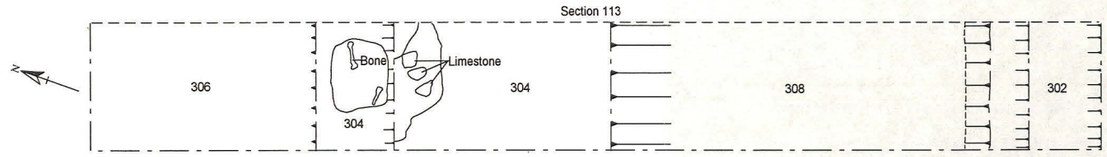

Plan 29

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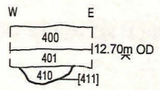
Figure 8: Trench 3: Plan and section



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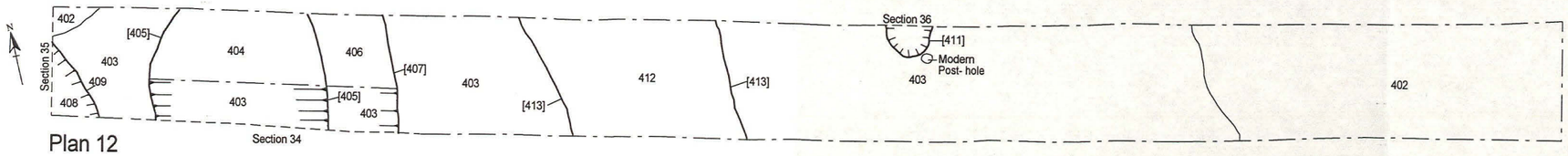

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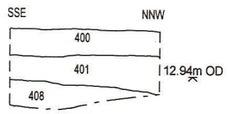

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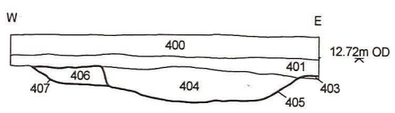

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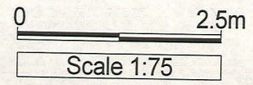
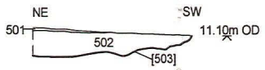


Figure 9: Trench 4: Plan and sections



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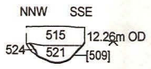
Section 103



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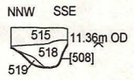

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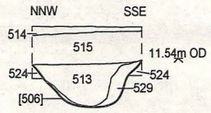

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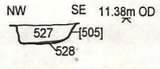

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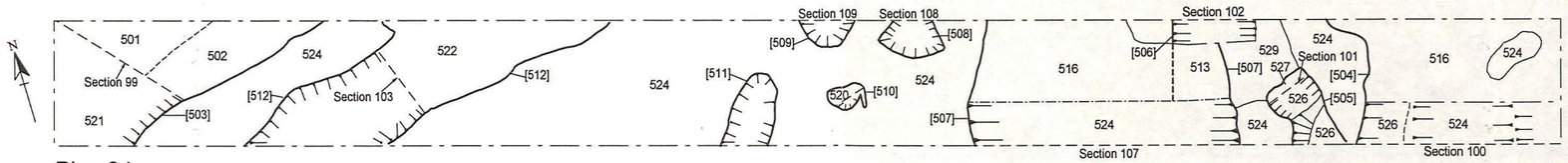
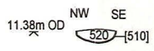


Plan 24



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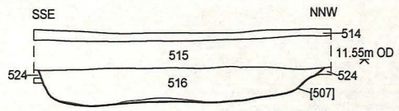

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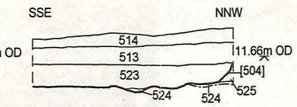

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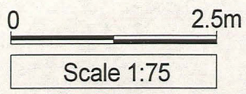
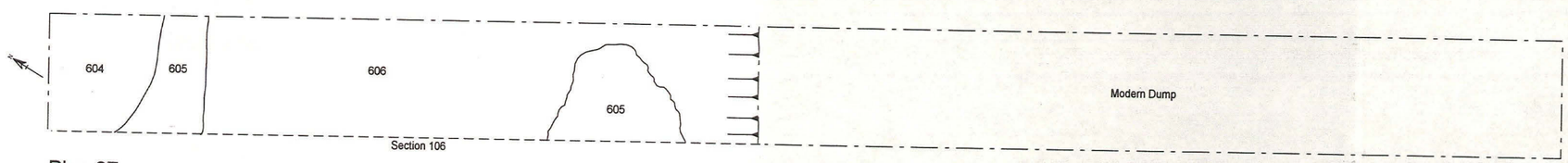
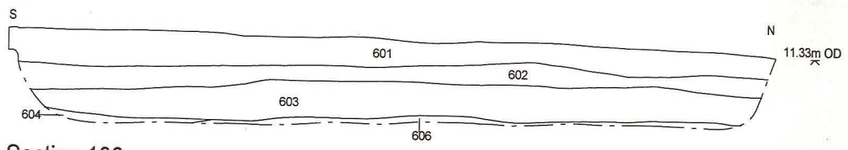


Figure 10: Trench 5: Plan and sections



Plan 27

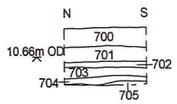


Section 106

0 2.5m

Scale 1:75

Figure 11: Trench 6: Plan and section



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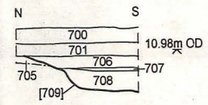

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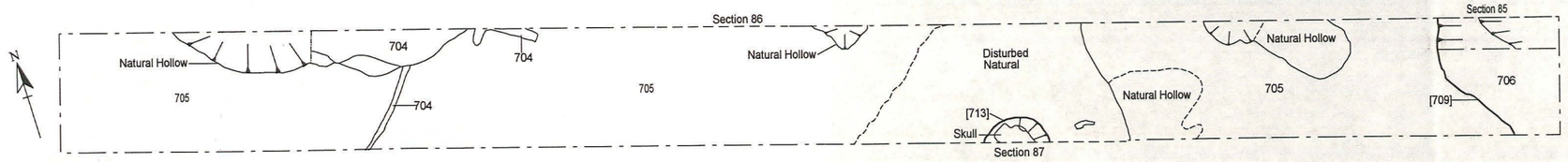
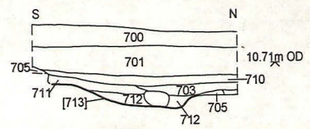


Plan 17

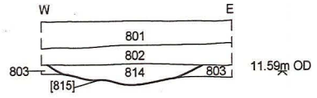


Section 87

0 2.5m

Scale 1:75

Figure 12: Trench 7: Plan and sections



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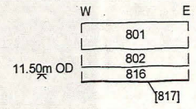

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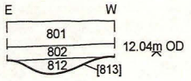

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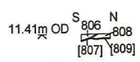

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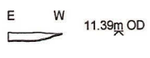

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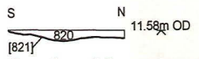

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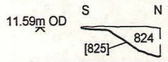

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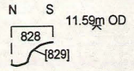

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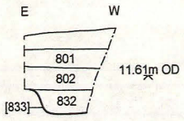

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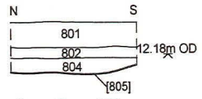

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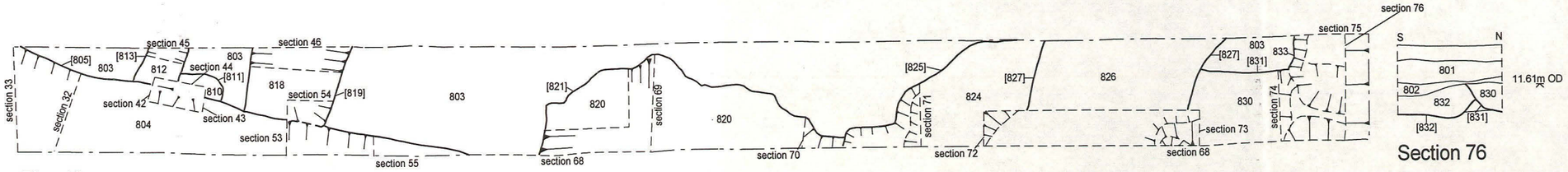
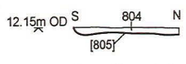


Plan 18

Section 76



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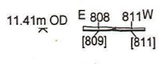

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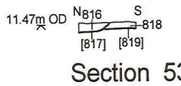

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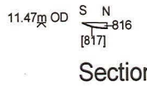

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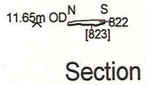

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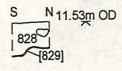

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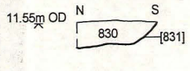

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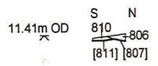

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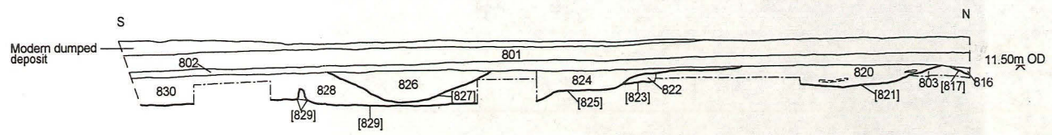

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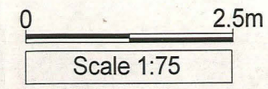
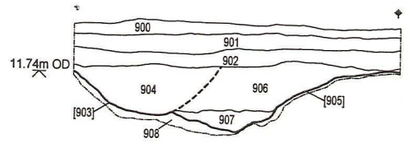


Figure 13: Trench 8: Plan and sections



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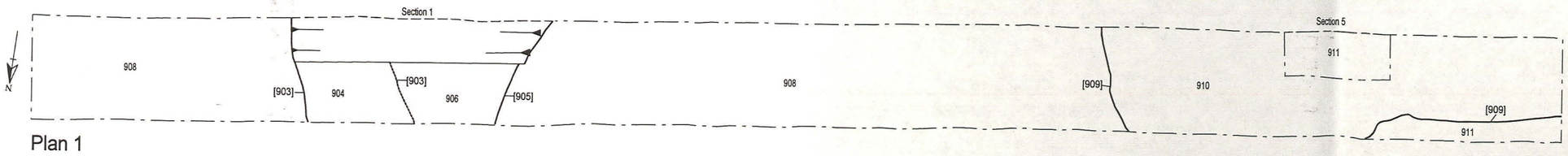
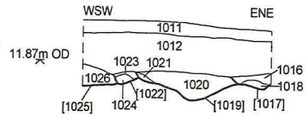


Plan 1

0 2.5m

Scale 1:75

Figure 14: Trench 9: Plan and section



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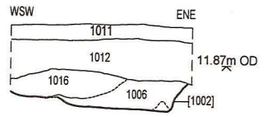

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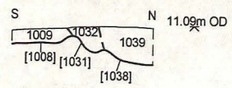

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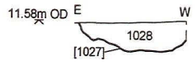
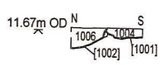


Section 59

Section 58



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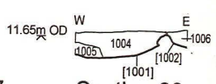

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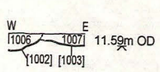

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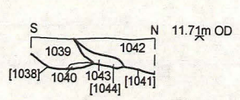

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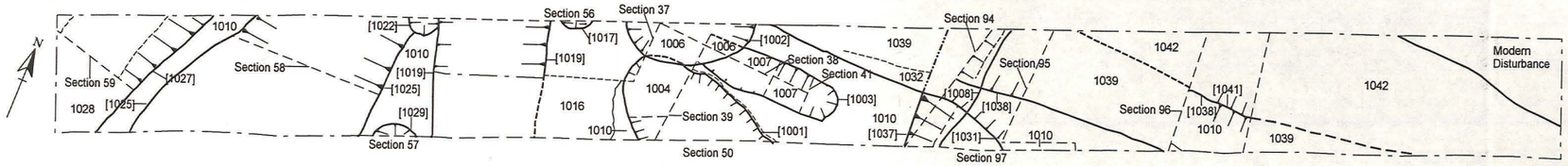

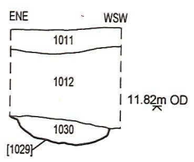

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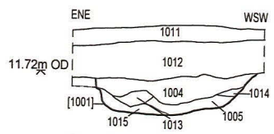

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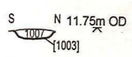

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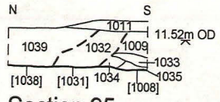

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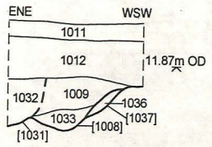

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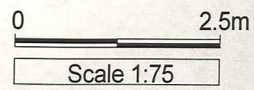
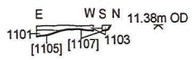
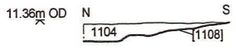


Figure 15: Trench 10: Plan and sections

Section 30



Section 31



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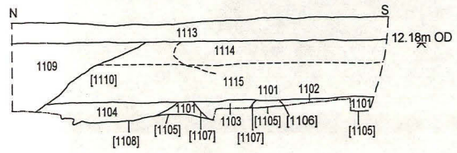

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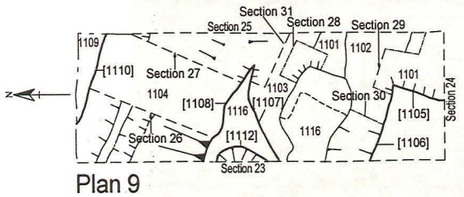
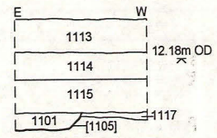
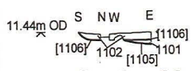


Plan 9



Section 24



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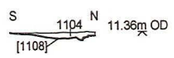

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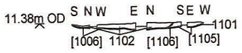

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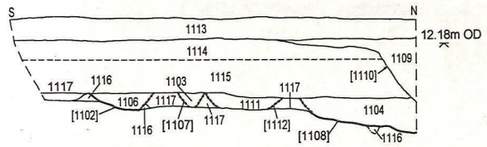

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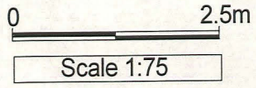
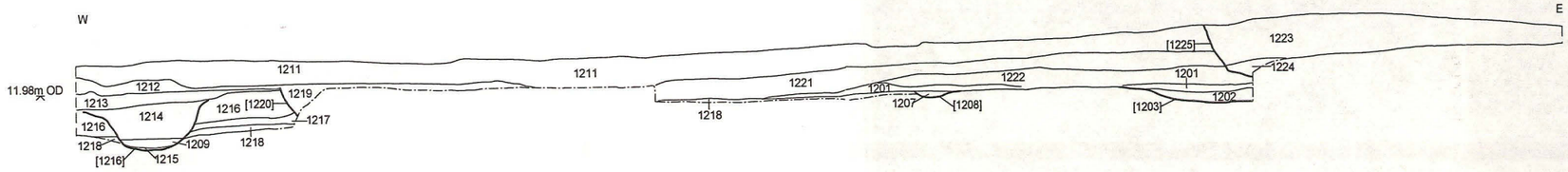
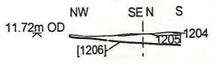


Figure 16: Trench 11: Plan and sections



Section 47

Plan 13



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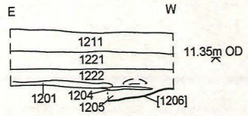

Section 49

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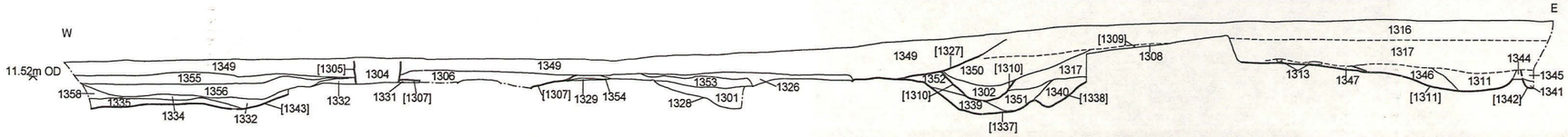
Scale 1:75

Figure 17: Trench 12: Plan and sections



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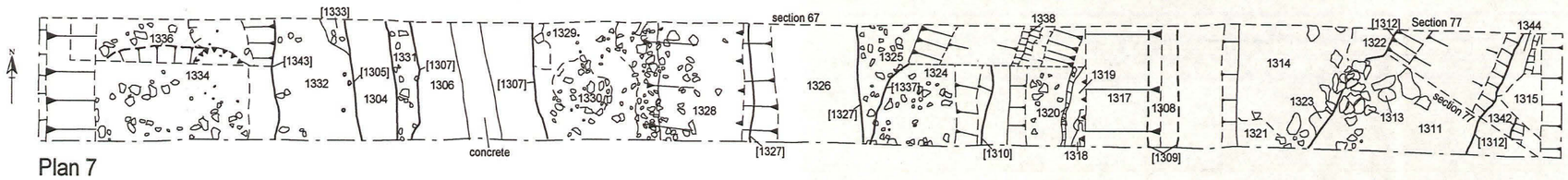

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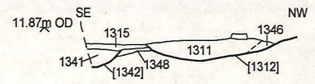
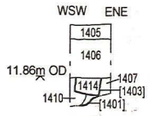


Section 77

0 2.5m

Scale 1:75

Figure 18: Trench 13: Plan and sections



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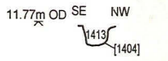

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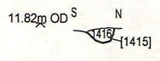

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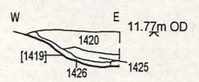

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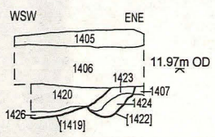

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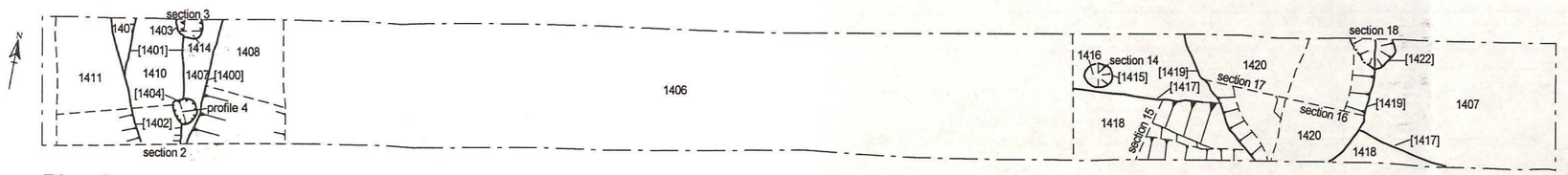

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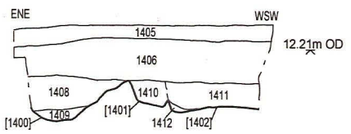

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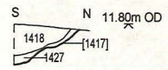

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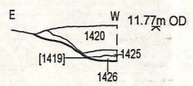
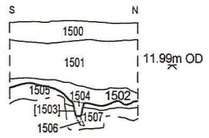


Section 16

0 2.5m

Scale 1:75

Figure 19: Trench 14: Plan and sections



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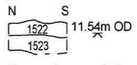

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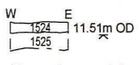

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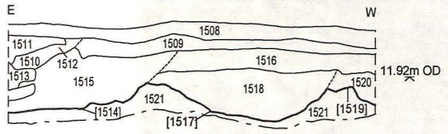
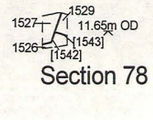


Section 21 and 22



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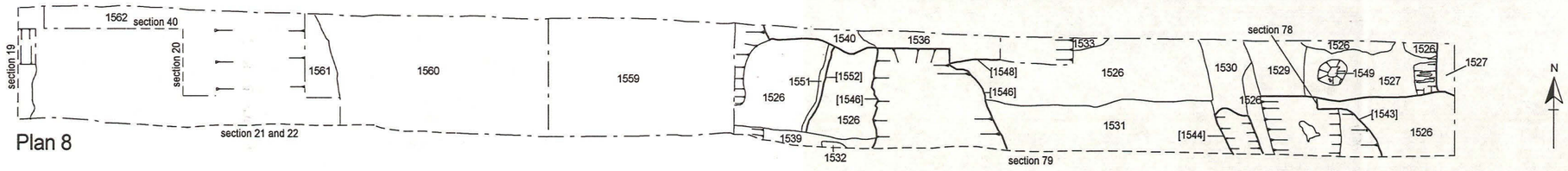
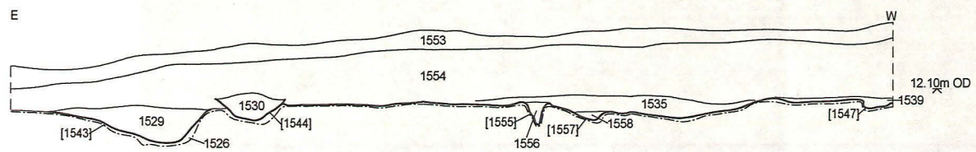


Plan 8

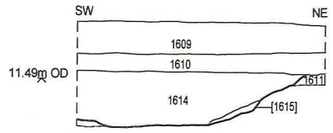


Section 79

0 2.5m

Scale 1:75

Figure 20: Trench 15: Plan and sections



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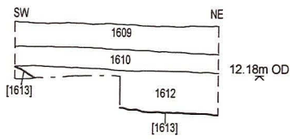

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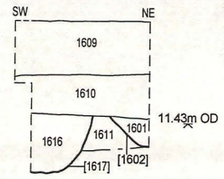

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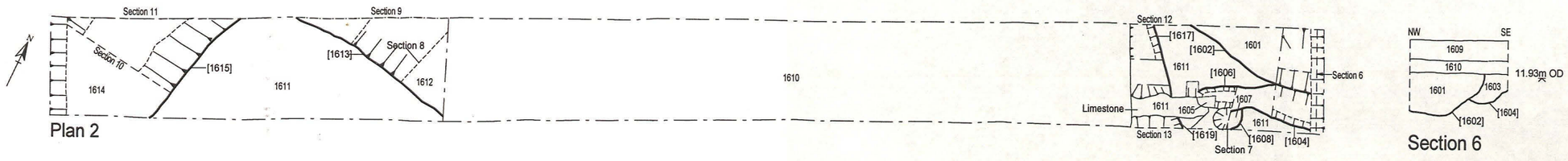
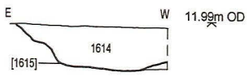


Plan 2



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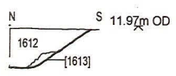

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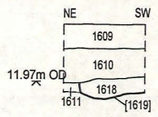

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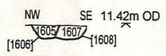
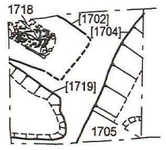


Section 7

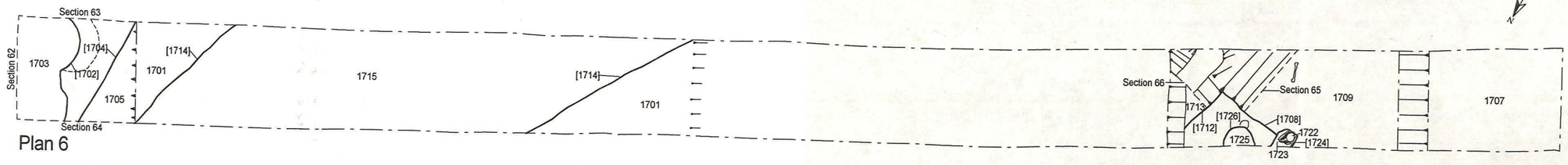
0 2.5m

Scale 1:75

Figure 21: Trench 16: Plan and sections



Plan 14



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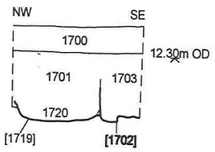

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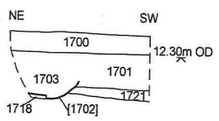

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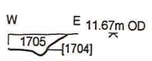

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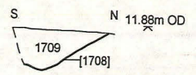

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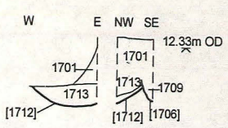
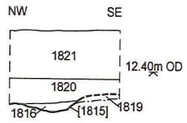


Section 66

0 2.5m

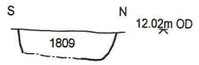
Scale 1:75

Figure 22: Trench 17: Plan and sections



Section 90

Section 89



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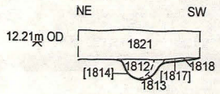

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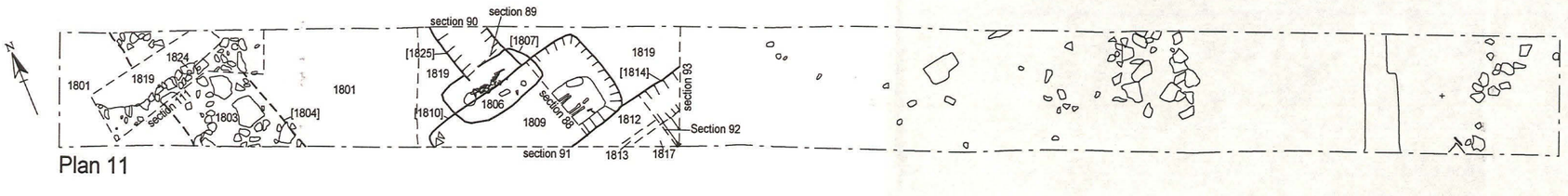
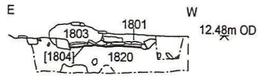


Plan 11



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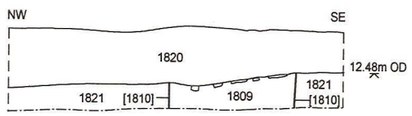

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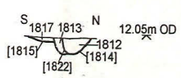
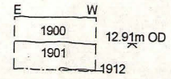


Section 92

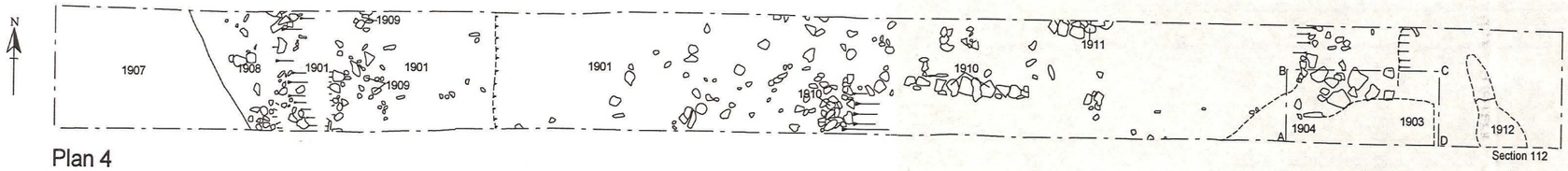
0 2.5m

Scale 1:75

Figure 23: Trench 18: Plan and sections



Section 112



Plan 4

Plan 5

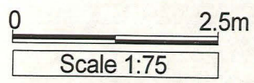
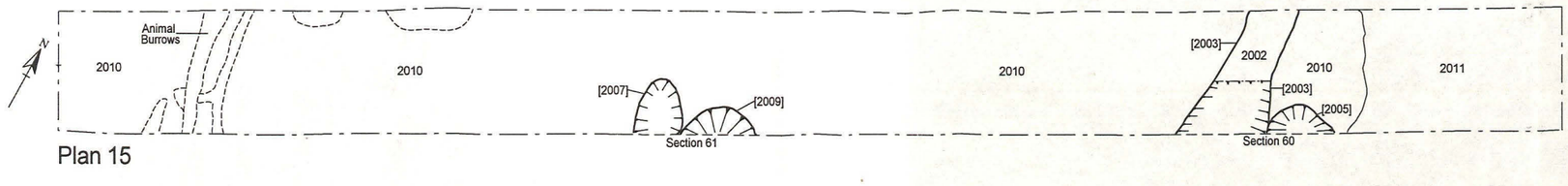
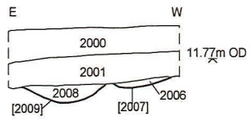


Figure 24: Trench 19: Plans and section



Plan 15



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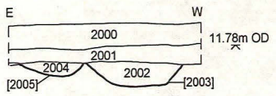


Section 60

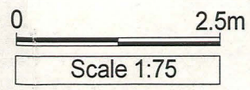
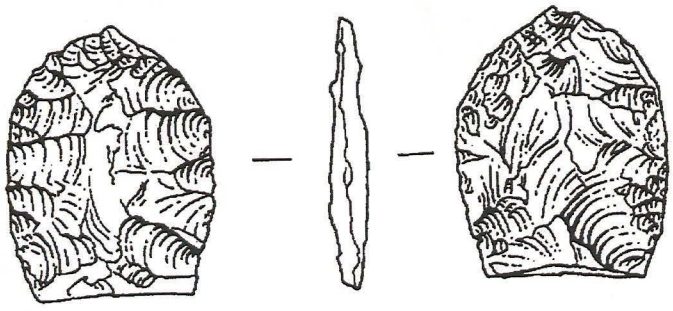
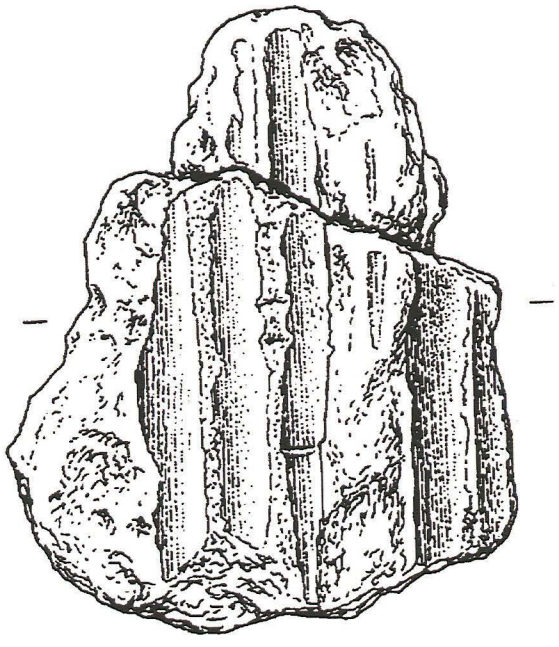


Figure 25: Trench 20: Plan and sections



Broken Leaf shaped Arrowhead



Mould fragment

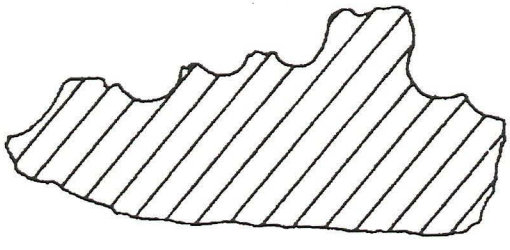


Figure 26: Leaf shaped arrowhead (513) and mould fragment (1801)

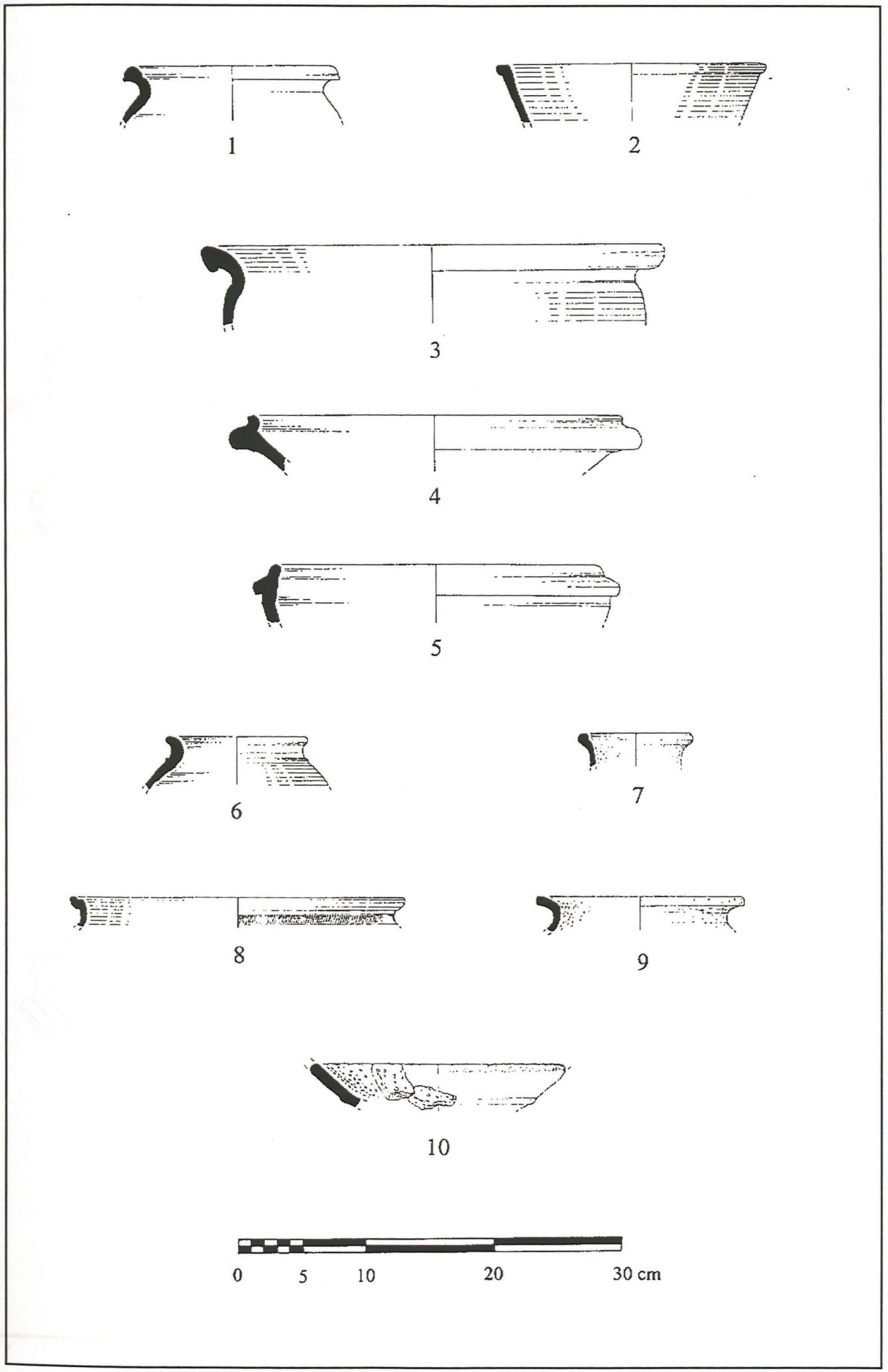


Figure 27: Pottery forms (see Appendix 3 for details)

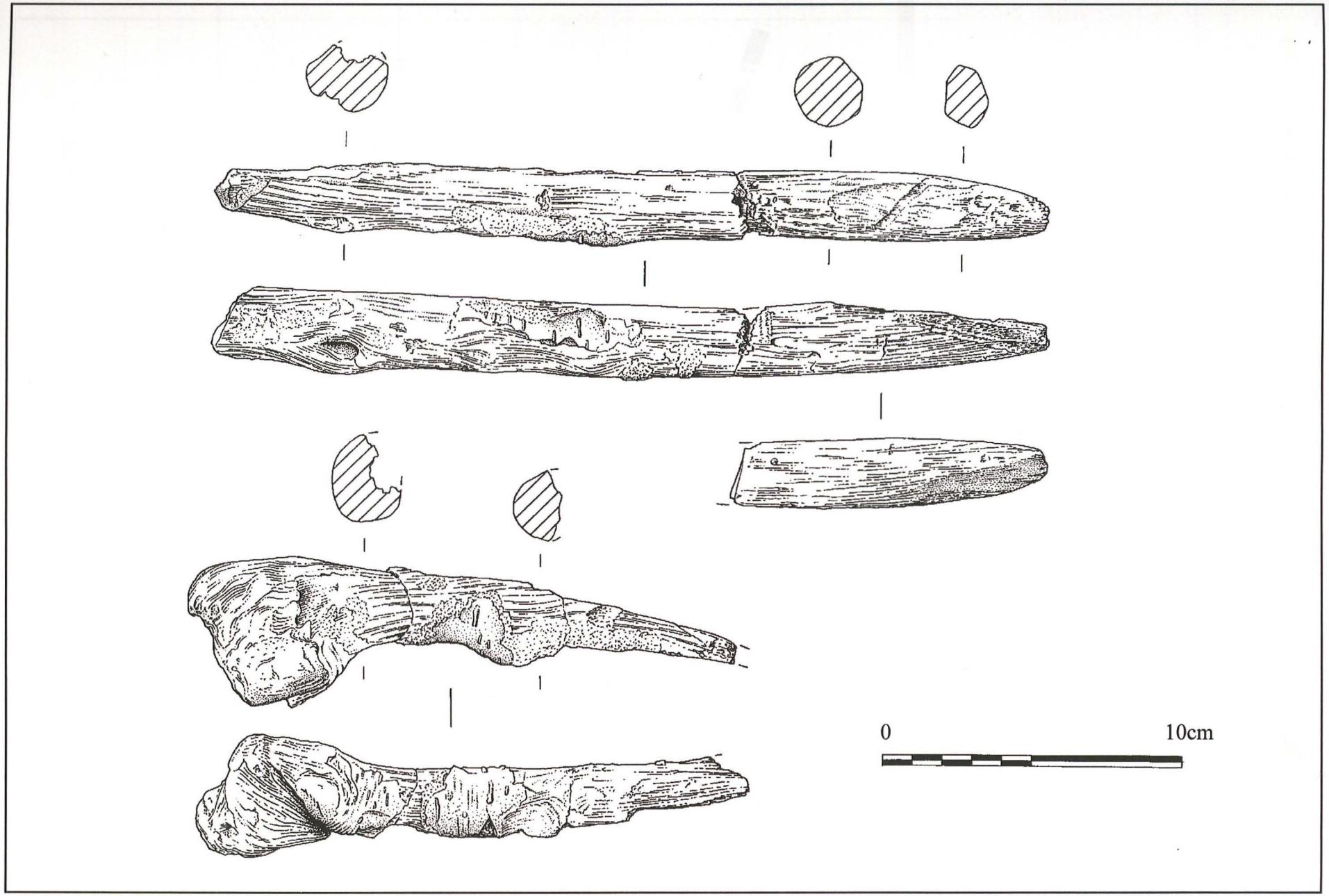


Figure 28: Worked wood (200) and (208)

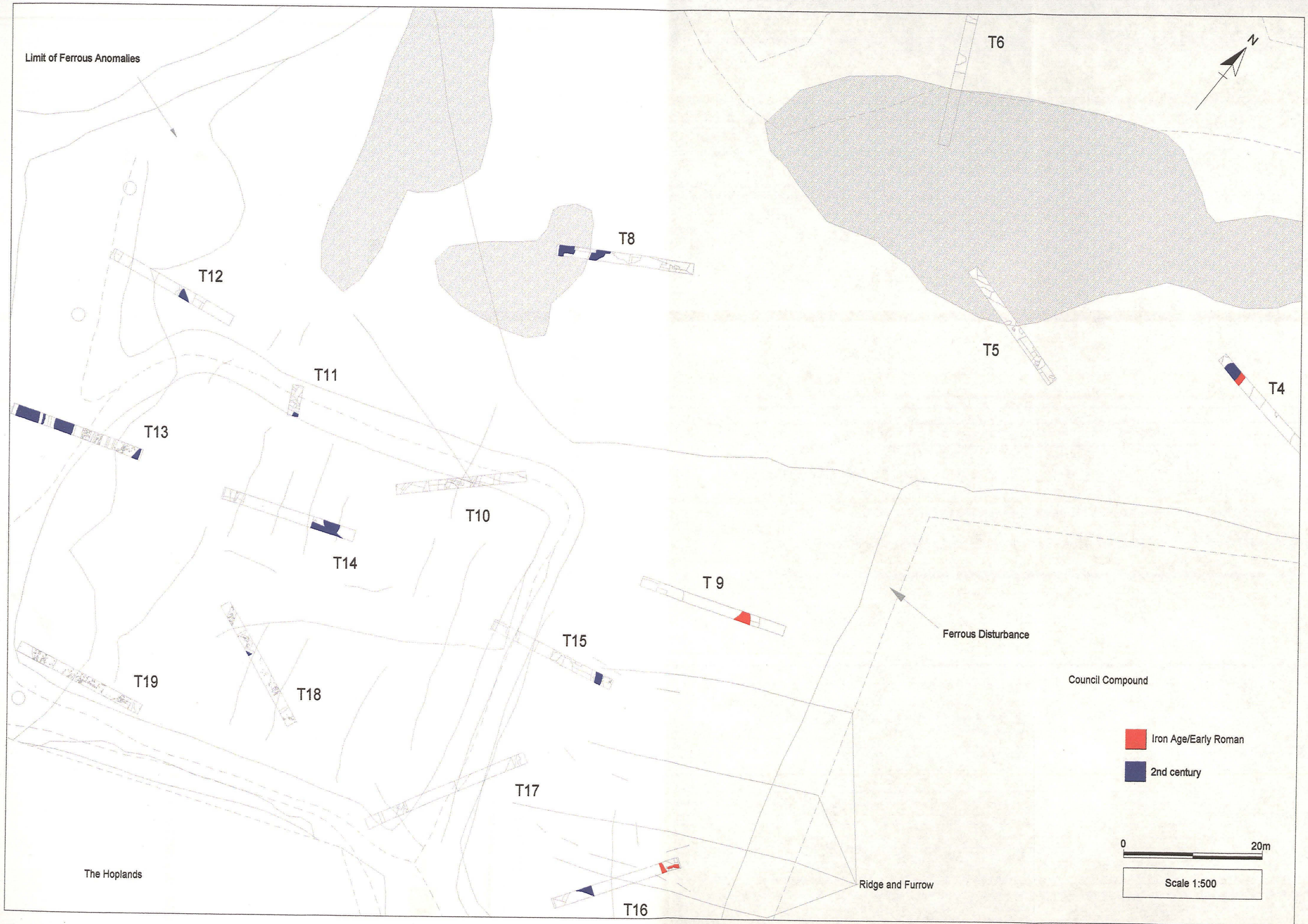


Figure 29: Iron Age/Early Roman to 3rd century features (see figure 4 for legend)

Figure 30: Later 3rd to 4th century features (see figure 4 for legend)

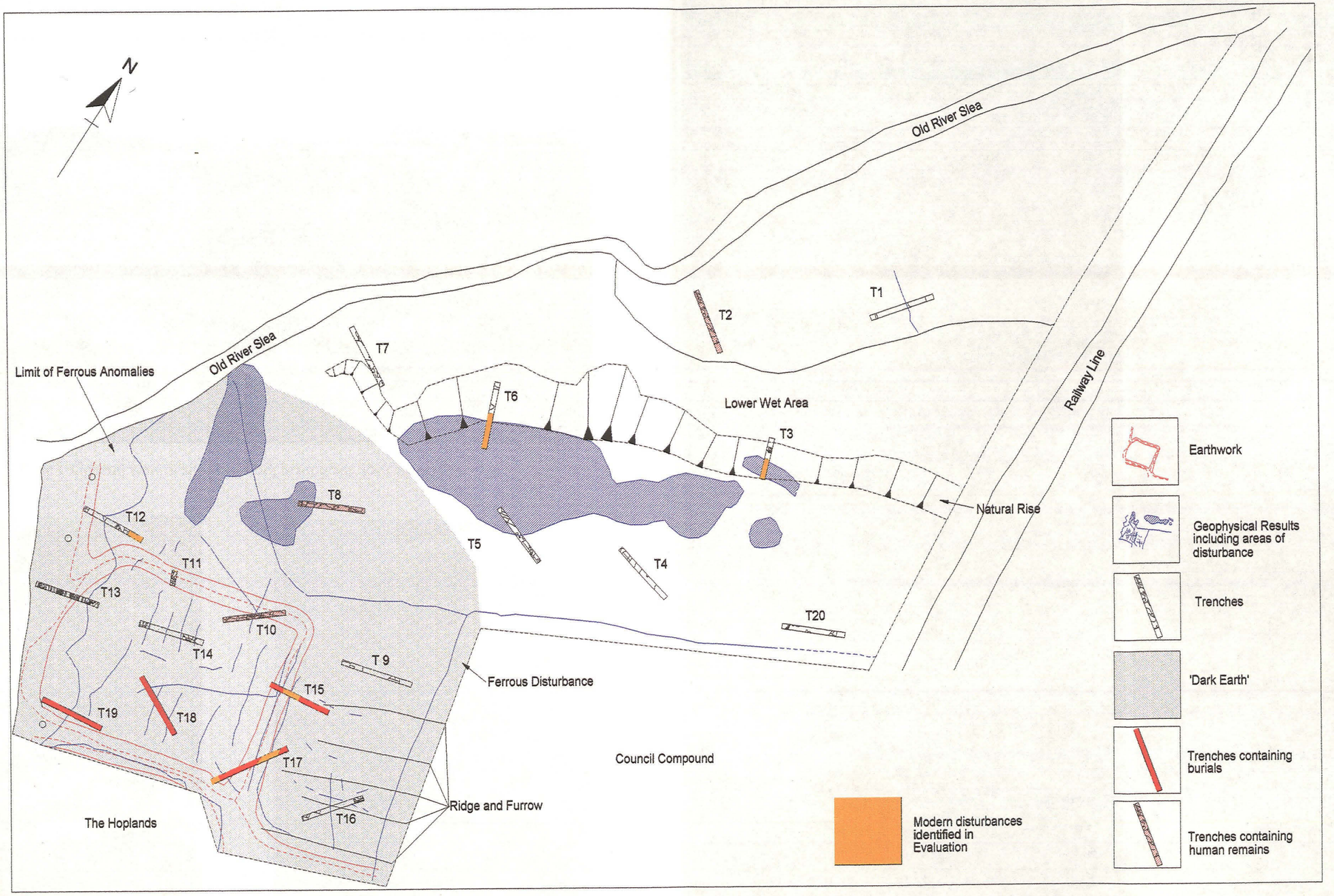


Figure 31: Extent of human remains and 'dark earth'

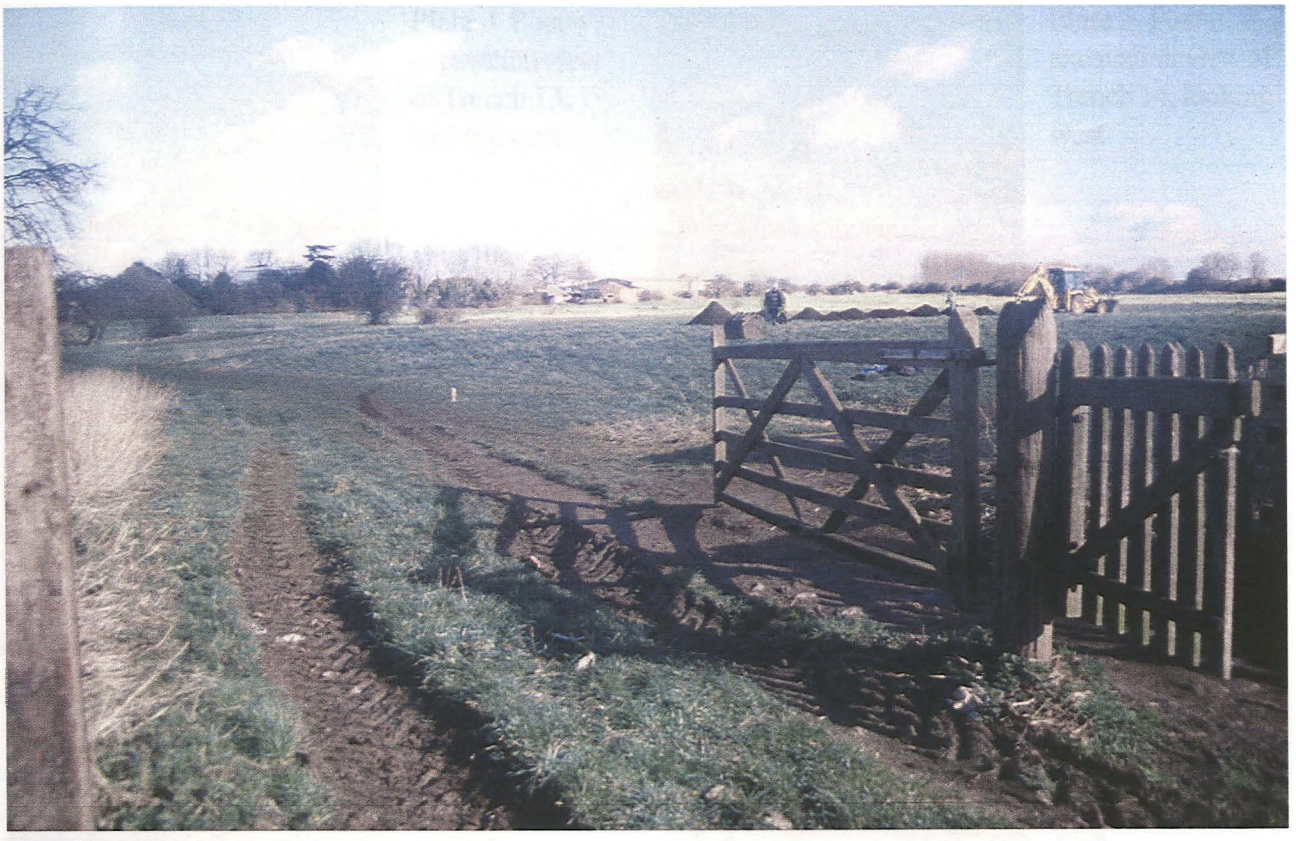


Plate 1 General view of site with work in progress, looking north

Plate 2 Post-excavation view of Trench 5, looking northwest

Plate 3 Post-excavation view of Trench 10, looking southwest

Plate 4 Post-excavation view of Trench 13, looking west

Plate 5 Post-excavation view of Trench 14, looking west

Plate 6 Post-excavation view of Trench 18, looking northwest

Plate 7 Post-excavation view of Trench 19, looking west

Plate 8 View of Mareham Lane within Trench 13, west end, looking west

Plate 9 Grave cut (1807) with skeleton (1806) within Trench 18, grave cut (1810) is visible on the left, looking northwest

Plate 10 Probable well (1911) recorded within south facing section of Trench 19, looking north

Plate 11 Northeast facing section within Trench 2 clearly showing organic material (208) at base, looking northwest

Plate 12 An alignment of limestone recorded within Trench 3, looking east

Plate 13 View of ditch (1337) located within Trench 13, possibly being part of the earthwork recorded by Fennell (?), looking north

Plate 14 Cow skull recorded with natural hollow (713) within Trench 7, looking southwest

Plate 15 Wall (1803) located at the northwest end of Trench 18, showing the footings and dark earth (1801, 1820), looking south

Appendix 1

Specification for the archaeological evaluation of land at The Hoplands, Sleaford, Lincolnshire

1 SUMMARY

1.1 This document comprises a specification for the archaeological field evaluation of land to the rear of the Hoplands, Boston Road, Sleaford.

1.2 The site lies alongside a Roman road and in an area of Romano-British and Iron Age settlement. Additionally, a medieval church was located immediately adjacent and it is probable that the cemetery associated with this church in part falls within the site.

1.3 Geophysical survey of the site has identified buried remains thought to relate to Romano-British occupation. This evidence is mostly concentrated toward the west side of the site, near the Roman road, but geological conditions and ground disturbance elsewhere on site may have obscured geophysical signals of archaeological remains.

1.4 A planning application has been made for development of the area. The archaeological works are being undertaking to provide information to assist the determination of the application.

1.5 The archaeological work will consist of a programme of trial trenching of the site. On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by line drawings and photographs.

2 INTRODUCTION

2.1 This document comprises a specification for the archaeological field evaluation of land to the rear of the Hoplands, Boston Road, Sleaford, Lincolnshire, national grid reference TF 0787 4624. Refer to Figures 1 and 2 for site location.

2.2 The document contains the following parts:

- 2.2.1 Overview
- 2.2.2 The archaeological and natural setting
- 2.2.3 Stages of work and methodologies to be used
- 2.2.4 List of specialists
- 2.2.5 Programme of works and staffing structure of the project

3 SITE DESCRIPTION

3.1 Sleaford is located 27km south of Lincoln in the administrative district of North Kesteven. The site is located to the east of Sleaford town centre and north of Boston Road on land to the north and northeast of the NKDC Hoplands Depots, bordering the Old River Slea. The site covers an area of *c.* 4ha and is centred on national grid reference TF 0787 4624. Currently the site is open ground.

4 PLANNING BACKGROUND

4.1 A planning application (N/28/0838/91) has been submitted to develop the land for housing.

5 SOILS AND TOPOGRAPHY

5.1 Located at a height of *c.* 12m OD, the investigation area is bordered at its northern limit by the Old River Slea. Although as an urban fringe the investigation area has not been fully mapped by the Soil Survey, it is probable that three soil regimes occur on the proposed development site. At the extreme north of the area, alongside the Old River Slea, is a strip of Clayhythe Series calcareous humic gley soils over calcareous sandy gravelly glaciofluvial drift. (George and Robson 1978, 101-2) To the south, but still in the northern half of the site, are St. Lawrence Series stagnogleyic brown calcareous earths over calcareous loamy drift (*ibid.*, 84) The southern part of the site, presently occupied by buildings, probably consisted of Newsleaford Series gleyic brown calcareous sand on calcareous Fen sand and gravel (*ibid.*, 86-7).

6 ARCHAEOLOGICAL OVERVIEW

6.1 Artefacts of Bronze Age date (2000 - 700 BC) have been found near to the site, though these perhaps represent casual losses rather than actual occupation in the immediate proximity.

6.2 A major settlement was established in the proximity of the proposed development site during the later part of the Iron Age (700 BC - AD 50). This settlement, located where a track crossed the River Slea, was one of the principal centres of the Corieltauvi, the Iron Age tribe that occupied part of the East Midlands. The settlement had a major involvement in coin production and possessed the largest known mint of the period in Europe. Subsequently, the Iron Age settlement was succeeded by a Romano-British (AD 50-400) occupation site and the prehistoric track became a Roman road. Previous investigations, just to the west on St. Giles' Avenue, identified ditches of Late Iron Age enclosures and later Roman stone buildings (Archaeological Project Services 1997). Additionally, investigations immediately to the south of the site revealed well-preserved, extensive Roman remains, including stone buildings, though Iron Age evidence was absent from the area. Romano-British burials, mostly of infants and located within a large building, were also identified (Archaeological Project Services 1999). The later Roman remains both west and south of the present site were covered by dark homogenous soil deposits up to 0.5m thick and interpreted as 'dark earth' often found in late and post-Roman urban contexts.

6.3 A church was built in the vicinity during the medieval period (AD 1066-1500). It is probable that the cemetery associated with the church partially falls within the investigation area (Archaeological Project Services 1996).

6.4 Previous geophysical survey of the site has revealed a number of geophysical anomalies thought to represent buried archaeological remains. These features are predominantly linear and are mostly concentrated toward the south and west sides of the site, close to the Roman road. As such, these anomalies are thought to represent probable Romano-British settlement remains (Engineering Archaeological Services 1996).

6.5 The main potential for the site is the location of Iron Age and Roman settlement evidence and burials and other remains associated with a medieval cemetery.

7 AIMS AND OBJECTIVES

7.1 The aim of the work will be to gather sufficient information to enable the North Kesteven Heritage Officer to formulate an appropriate policy for the management of the archaeological resource of the site.

7.2 The objectives of the work will be to:

7.2.1 Establish the type of archaeological activity that may be present within the site.

7.2.2 Determine the likely extent of archaeological activity present within the site.

7.2.3 Determine the spatial arrangement of the archaeological features present within the site.

7.2.4 Identify the extent to which the surrounding archaeological features extend into the application area.

7.2.5 Determine the way in which the archaeological features identified fits into the pattern of occupation and land-use in the surrounding landscape.

7.2.6 Determine the date and function of the archaeological features present on the site

8 TRIAL TRENCHING

8.1 Reasoning for this technique

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

8.1.2 The trial trenching will consist of the excavation of a 2% sample of the 3.24ha proposed development area, as stipulated in the brief for evaluation set by the North Kesteven Heritage Officer. This will be by way of the excavation of 20 trenches, each 20m x 1.6m in extent. The locations of 19 of the 20 trial trenches have been specified in supplement to the brief for works prepared by the North Kesteven Heritage Officer. Positioning of the 20th trench will probably occur during machine excavation and the trench will be placed to further investigate an area of interest, or a topographical feature.

8.1.3 Should any of the specified trench locations in the northeastern part of the site be in impractically wet areas then thee trenches may be re-positioned.

8.1.4 Should archaeological deposits extend below 1.2m depth then the trench sides will be stepped in, or shored, as appropriate. Trenches will be at least 1m wide at the lowest levels of excavation. Augering may be used to determine the depth of the sequence of deposits present. As specified in the brief for works, 25% of the designated trenches (6) in the southern part of the site will be fully excavated to natural. Selective examination to natural may also be necessary in the event of significant vertical stratigraphy being encountered in the northern part of the site.

8.2 General Considerations

8.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the evaluation. A risk assessment will prepared prior to the commencement of site works.

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

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

8.2.4 A metal detector will be used during mechanical and subsequent manual excavation. Mechanically excavated spoil will be scanned by detector and all excavated surfaces, of all trenches, will be scanned daily by detector.

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

8.2.6 Open trenches will be enclosed with HERAS fencing because of public access to the site in general. Subject to the consent of the North Kesteven Heritage Officer, and following the appropriate recording, the trenches, particularly those of excessive depth, will be backfilled as soon as possible to ensure good health and safety procedures.

8.3 Methodology

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

8.3.2 Should 'dark earth' deposits be encountered they may be tested by machine excavation. If this indicates the deposit is extensive then excavation of the deposit may be undertaken by machine, in thin spits. Should artefact clusters occur in the otherwise homogeneous deposit they will be recorded separately.

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

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

8.3.5 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at more appropriate scales.

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

8.3.6.1 the site before the commencement of field operations.

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

8.3.6.3 individual features and, where appropriate, their sections.

8.3.6.4 groups of features where their relationship is important.

8.3.6.5 the site on completion of field work

8.3.7 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. The appropriate Home Office licences will be obtained and the local environmental health department and the police informed.

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

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

8.3.10 The precise location of the trenches within the site and the location of site recording grid will be established, relative to the National Grid, by an EDM survey.

9 ENVIRONMENTAL ASSESSMENT

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

10 POST-EXCAVATION AND REPORT

10.1 Stage 1

10.1.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

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

10.2 Stage 2

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

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

10.3 Stage 3

10.3.1 On completion of stage 2, a report detailing the findings of the evaluation will be prepared. This will consist of:

10.3.1.1 A non-technical summary of the findings of the evaluation.

10.3.1.2 A description of the archaeological setting of the site with reference to the desk-top assessment.

10.3.1.3 Description of the topography and geology of the evaluation area

10.3.1.4 Description of the methodologies used during the evaluation and a critical review of their effectiveness in the light of the findings of the investigation.

10.3.1.5 A text describing the findings of the evaluation.

10.3.1.6 Plans of the trenches showing the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each

phase will be produced.

10.3.1.7 Sections of the archaeological features.

10.3.1.8 Interpretation of the archaeological features exposed and their context within the surrounding landscape.

10.3.1.9 Specialist reports on the finds from the site.

10.3.1.10 Appropriate photographs of the site and specific archaeological features.

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

11 ARCHIVE

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

12 REPORT DEPOSITION

12.1 Copies of the evaluation report will be sent to: the client/agent, Pygott and Crone; the North Kesteven Heritage Officer; and the Lincolnshire County Sites and Monuments Record.

13 PUBLICATION

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

14 CURATORIAL MONITORING

14.1 Curatorial responsibility for the project lies with the North Kesteven Heritage Officer. They will be given seven days notice in writing prior to the commencement of the project to enable them to make appropriate monitoring arrangements.

15 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

15.1 Variations to the scheme of works will only be made following written confirmation from North Kesteven Heritage Officer.

15.2 Should the North Kesteven Heritage Officer require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

16 SPECIALISTS TO BE USED DURING THE PROJECT

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

Task	Body to be undertaking the work
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust
	Roman: B Precious, independent specialist
	Anglo-Saxon: J Young, independent specialist
	Medieval and later: H Healey, independent specialist
Other Artefacts	J Cowgill, independent specialist
Human Remains Analysis	R Gowland, independent specialist
Animal Remains Analysis	Environmental Archaeology Consultancy
Environmental Analysis	Environmental Archaeology Consultancy
Radiocarbon dating	Beta Analytic Inc., Florida, USA
Dendrochronology dating	University of Sheffield Dendrochronology Laboratory

17 PROGRAMME OF WORKS AND STAFFING LEVELS

17.1 Fieldwork is expected to be undertaken by up to 7 staff, a supervisor and up to 6 assistants, and to take fifteen (15) days.

17.2 Post-excavation analysis and report production is expected to take 26 person-days within a notional programme of 15 days. A project officer or supervisor will undertake most of the analysis, with assistance from the finds supervisor and CAD illustrator. Three days of specialist time are allotted in the project budget.

17.3 Contingency

17.3.1 Contingencies have been specified in the budget. These include: environmental sampling/analysis of waterlogged remains (expected to be some level of sampling and assessment, but cannot be estimated in advance); pump (possible, as site close to river); Roman pottery (very large amounts); Anglo-Saxon pottery- moderate quantities (small amount expected and allowed for); Medieval and later pottery- moderate-large quantities (small amount expected and allowed for); faunal remains -large quantities (moderate amounts expected and allowed for); Human remains (possible, but cannot be determined in advance); artefact illustration (possible, but cannot be determined in advance); Conservation and/or Other unexpected remains or artefacts.

17.3.2 Other than the pump, the activation of any contingency requirement will be by the archaeological curator, not Archaeological Project Services.

18 INSURANCES

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

19 COPYRIGHT

19.1 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.

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

19.3 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.

19.4 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.

20 BIBLIOGRAPHY

Archaeological Project Services, 1996 *Desk-top Assessment of the Archaeological Implications of Proposed Development of land at Hoplands Bridge, Sleaford, Lincolnshire (SHB96)*

Archaeological Project Services, 1997 *Archaeological Investigation of a Pipeline along St. Giles' Avenue, Sleaford, Lincolnshire (SSG96)*, unpublished APS Report No: **16/97**

Archaeological Project Services, 1999 *Archaeological Investigations at the New Police Station, Boston Road, Sleaford, Lincolnshire*, unpublished APS Report No: **30/98**

Engineering Archaeological Services, 1996 *The Hoplands Geophysical Survey*

George, H, and Robson, J D, 1978 *Soils in Lincolnshire II Sheet TF04 (Sleaford)*, Soil Survey Record No. **51** (Harpenden)

Appendix 2

Context Summary

Cxt	Type	Description	Tk (m)	Interpretation
001	Finds	Unstratified finds from machining		

Trench 1

Cxt	Type	Description	Tk (m)	Interpretation
100	Deposit	Friable, dark brown sandy silt	0.20	Topsoil
101	Deposit	Friable, mid brown sandy silt	0.24	Subsoil
102	Deposit	Compact, mottled mid reddish brown/brown/pale greyish brown silty sand, freq. sml.gravel		Natural

Trench 2

Cxt	Type	Description	Tk (m)	Interpretation
201	Deposit	Loose, dark blackish brown silty sand, occasional root	0.22	Topsoil
202	Deposit	Soft, dark brown sandy silt	0.16	Subsoil
203	Deposit	Soft, dark greyish sandy silt	0.17	Subsoil
204	Deposit	Soft, dark reddish yellowish brown sandy silt with iron staining	0.1	Alluvial/ colluvial deposit
205	Deposit	Soft, mid blackish grey clayey sandy silt	0.15	Colluvial
206	Deposit	Soft, dark greyish brown silty sand with iron staining	0.17	Alluvial deposit
207	Deposit	Soft, light yellowish brown sand, freq. rounded gravel	0.1	River gravel
208	Deposit	Soft, dark grey silty sand, freq. sml. rounded gravel	0.3	Waterlogged deposit
209	Deposit	Soft, mottled mid grey-light greyish white silty sand	0.25	Alluvial deposit
210	Deposit	Soft, mottled mid white/ yellowish brown sand	0.07+	River bed gravel, EM2C
211	Deposit	Loose, mid-dark brownish grey clayey silty sand	0.33	Fill/ Naturally deposited
212	Cut	E-W linear, shallow, unknown base 1.6m long x 1.4m wide	0.33	Ditch/ Former channel of river
213	Deposit	Loose, dark brown silty sand	0.1	Dumped lense
214	Deposit	Loose, mid yellow reddish brown silty sand	0.07	Alluvial deposit
215	Deposit	Loose mid yellowish brown clayey silty sand with iron staining		Alluvial deposit
216	Deposit	Loose, mottled mid grey brownish white/reddish yellowish brown silty sand, bioturbation		Alluvial deposit
217	Deposit	Loose, mid grey silty sand		Alluvial deposit

Cxt	Type	Description	Tk (m)	Interpretation
218	Deposit	Loose, mid-dark grey silty sand		Alluvial deposit
219	Deposit	Loose, mid-dark brown silty sand		Alluvial deposit
220	Deposit	Loose, mid grey silty sand		Alluvial deposit
221	Deposit	Loose, mid grey silty sand		Alluvial deposit
222	Deposit	Loose, mid brownish silty sand		Alluvial deposit

Trench 3

Cxt	Type	Description	Tk (m)	Interpretation
301	Deposit	Compact, dark reddish brown clayey silt, freq. root	0.4	Layer
302	Deposit	Firm, dark greyish brown limestone rubble in clayey silt matrix, frags of modern sewer pipe	0.5	Fill
303	Deposit	Firm, dark reddish brown clayey silt, occ. charcoal	0.3	Topsoil
304	Deposit	Firm, light greyish brown sand with red mottles	0.4	Natural layer
305	Deposit	Firm, light reddish brown clayey silt	0.4	Alluvial layer
306	Deposit	Firm, light yellowish brown clayey silt	0.1	Alluvial layer
307	Deposit	Firm, dark reddish brown peaty clayey silt	0.1	Layer
308	Deposit	Firm, mottled dark brownish grey clayey silt, freq. limestone and chalk frags		Natural layer
309	Deposit	Firm, dark reddish brown peaty clayey silt		Layer
310	Cut	Irregular sided and irregular based feature, 5m long x 1.6m+ wide	0.4	Modern pit

Trench 4

Cxt	Type	Description	Tk (m)	Interpretation
400	Deposit	Loose, dark grey sandy clayey silt, freq. root	0.26	Topsoil
401	Deposit	Loose, dark brown sandy clayey silt, freq. pea gravel and occ. roots	0.17	Subsoil
402	Deposit	Soft, mottled mid brown and light brownish yellow sand, occ. gravel		Natural
403	Deposit	Loose, red gravel and sand with mid brown mottles		Natural
404	Deposit	Loose-soft, mid brown clayey sand, freq. redeposited natural, occ. charcoal frags, gravel and rounded pebbles	0.42	Fill, ML2
405	Cut	Sub-circular, steep sided, slightly concave based feature, 1.68m long x 2.37m wide	0.42	Pit
406	Deposit	Loose mid brown clayey sand with redeposited natural lenses, occ. gravel and charcoal	0.24	Fill, IA or RO
407	Cut	N-S linear, gradual sided, flat based feature, 1.68m long x 0.86m wide	0.24	Ditch/Field boundary

Cxt	Type	Description	Tk (m)	Interpretation
408	Deposit	Loose mid brown clayey sand, freq. gravel and occ. charcoal frags	0.22	Fill
409	Cut	N-S linear, gradual sided feature, 1.18m+ long x 0.64m+ wide	0.22	Ditch
410	Deposit	Firm, mottled brown and light red clayey sand, freq. gravel and charcoal and occ. coal	0.21	Backfill, 18th - 19th century
411	Cut	Semi-circular, steep sided, concave based feature, 0.68m wide	0.22	Pit/Large post hole
412	Deposit	Firm-loose mottled brown, dark grey and red clayey sand, freq. gravel		Backfill
413	Cut	N-S linear, 1.7m long x 2.2m wide		Ditch/Modern
414	Deposit	Loose, mottled mid brown and reddish sand and gravel	0.11	Primary Fill

Trench 5

Cxt	Type	Description	Tk (m)	Interpretation
500	Finds	Unstratified from machining		
501	Deposit	Soft, blackish brown silt	0.03	Fill
502	Deposit	Very soft, very dark blackish grey silt, occ. broken cockle	0.31	Fill
503	Cut	NW-SE linear, irregular sided and based feature, 1.6m+ long x 1.96m wide	0.35	Ditch
504	Cut	E-W linear, smooth sided, flat based feature, 1.6m+ long x 2.5m wide	0.3	Ditch
505	Cut	Sub-circular, irregular sided, flat based feature, 0.7m x 0.43m long	0.22	Shallow pit
506	Cut	NE-SW linear (?), irregular sided, almost flat based feature, (?)1.6m+ long x 1.35m wide	0.55	Ditch
507	Cut	E-W linear (?), irregular sided, flat based feature, (?) 1.6m+ long x 3.5m wide	0.45	Ditch/pit
508	Cut	Sub rectangular, smooth sided, slightly concaved based cut, 0.7m wide	0.31	Pit
509	Cut	Sub-circular, smooth sided, concaved based feature, 0.68m wide	0.24	Pit
510	Cut	Irregular , smooth sided, concaved based feature, 0.49m x 0.3m wide	0.17	Animal burrow
511	Cut	Oblong, irregular sided and based feature, 0.45m wide	0.2	Animal burrow
512	Cut	NW-SE linear, irregular sided, almost flat based feature, 1.6m+ long x 0.93m wide	0.17	Ditch
513	Deposit	Soft, very dark blackish grey sandy silt, occ. gravel	0.52	Fill, prehistoric
514	Deposit	Loose, dark brown fine sandy silt	0.18	Topsoil

Cxt	Type	Description	Tk (m)	Interpretation
515	Deposit	Loose, mid-dark brown sandy silt, occ. gravel	0.39	Dark earth layer
516	Deposit	Soft, dark brownish grey sandy silt, occ. bright yellow sand patches	0.45	Fill
517	Deposit	Soft, dark greyish brown silt	0.04	Fill
518	Deposit	Soft, mid greyish brown sandy silt	0.32	Tertiary fill
519	Deposit	Loose, mid brownish yellow sand, freq. gravel		Fill
520	Deposit	Soft, dark brown sandy silt	0.17	Fill
521	Deposit	Soft, very dark grey silt	0.22	Fill
522	Deposit	Soft, very dark grey fine silt, occ. gravel	0.17	Fill
523	Deposit	Loose, dark greyish brown silt, mod. gravel	0.31	Fill
524	Deposit	Loose, bright yellow sand freq. gravel		Natural
525	Deposit	Loose, dark brown silt with sand lenses, mod. gravel	0.21	Layer
526	Deposit	Soft, pale yellowish grey fine sand with silt mottles	0.03	Natural layer
527	Deposit	Loose, dark brown fine sandy silt	0.22	Fill
528	Deposit	Loose mottled brownish yellow silty sand, mod. gravel	0.02	Fill
529	Deposit	Soft, mid yellowish grey medium grained sand	0.46	Primary fill

Trench 6

Cxt	Type	Description	Tk (m)	Interpretation
600	Finds	Unstratified from machining		
601	Deposit	Firm, dark reddish brown clayey silt, occ. lenses of reddish brown clayey silt, occ. sml.-med. pebbles	0.42	Topsoil
602	Deposit	Firm, dark reddish brown clayey silt, occ. charcoal	0.3	Layer
603	Deposit	Firm, light yellowish brown -greyish brown clayey silt, occ. shell	0.4	Alluvium
604	Deposit	Firm-soft, light yellowish brown fine sand, freq. light brownish yellow sand	0.1	Natural layer
605	Deposit	Spongy, dark reddish brown peaty clayey silt	0.2	Layer
606	Deposit	Firm, dark reddish brown grey with yellowish white mottles clayey silt		Layer

Trench 7

Cxt	Type	Description	Tk (m)	Interpretation
700	Deposit	Loose, dark blackish brown silty sand	0.27	Topsoil
701	Deposit	Loose, dark brown silty sand	0.24	Subsoil
702	Deposit	Loose-soft, dark brownish grey silty sand	0.08	Alluvial

Cxt	Type	Description	Tk (m)	Interpretation
703	Deposit	Loose-soft dark brown silty sand	0.15	Alluvial
704	Deposit	Loose-soft dark reddish brown silty sand	0.12	Alluvial
705	Deposit	Loose, light yellow and reddish brown sand, freq. gravel patches	0.05	Natural
706	Deposit	Loose, dark blackish brown silty sand, occ. gravel	0.15	Fill
707	Deposit	Moderate, dark grey silty sand, freq. gravel	0.05	Fill
708	Deposit	Loose, dark blackish brown silty sand	0.29	Fill
709	Cut	N-S linear, vertical becoming concave sides, flat based feature, 1.6m+ long x 1.42m+ wide	0.44	Ditch
710	Deposit	Loose-soft, dark brownish grey silty sand with iron staining	0.08	Alluvial
711	Deposit	Loose, mid greyish brown silty sand with iron staining	0.24	Alluvial
712	Deposit	Loose, dark blackish brown silty sand	0.23	Alluvial
713	Cut	Circular, concave sided, flat Based feature, 1.22m long x 0.34m+ wide	0.32	Naturally formed Pit

Trench 8

Cxt	Type	Description	Tk (m)	Interpretation
800	Finds	Unstratified from machining		
801	Deposit	Firm, dark reddish brown slightly sandy silt, occ. coal and pebbles	0.35	Topsoil
802	Deposit	Firm, mid reddish brown silty sand, occ. charcoal, mod. gravel	0.25	Subsoil/ Dark earth
803	Deposit	Very compact, light brownish yellow sandy gravel, occ. large pebbles	0.15	Natural
804	Deposit	Firm, mid greyish brown sandy silt, occ. sml-med pebbles	0.2	Fill, 3-4C
805	Cut	E-W linear, shallow sided, flat based feature, 0.95m+ long x 1.55m wide	0.2	Ditch
806	Deposit	Firm, mid greyish brown sandy silt, occ. sml- med pebbles	0.07	Fill
807	Cut	E-W linear, concave sided feature, 0.85m+ long x 0.2m+ wide	0.07	Ditch
808	Deposit	Firm, dark yellowish brown sandy silt, mod. gravel	0.05	Fill
809	Cut	N-S linear, shallow sided, flat based feature, 1.6 m+ long x 0.45m + wide	0.05	Gully
810	Deposit	Firm, mid yellowish brown sandy silt, freq. gravel	0.05	Fill
811	Cut	E-W irregular shaped and sided, flat based feature, 1.6m+ long x 0.43m+ wide	0.05	Root disturbance
812	Deposit	Firm, dark yellowish brown sandy silt, mod. gravel	0.2	Fill

Cxt	Type	Description	Tk (m)	Interpretation
813	Cut	N-S linear, steep sided, rounded based feature, 1.6m+ long x 1m+ wide	0.2	Gully
814	Deposit	Firm, mid brown silty sand, mod. sml.-med. pebbles	0.25	Fill
815	Cut	N-S linear, steep sided, round based feature, 1.6m+ long x 1.8m wide	0.25	Ditch
816	Deposit	Firm, mid greyish brown sandy silt, occ. sml.-med pebbles	0.2	Fill
817	Cut	E-W linear, shallow sided, flat based feature, 0.95m+ long x 1.55m wide	0.2	Ditch
818	Deposit	Firm, mid brown silty sand, mod. sml.-med. pebbles	0.25	Fill
819	Cut	N-S linear, steep sided, round based feature, 1.6m+ long x 1.8m wide	0.25	Ditch
820	Deposit	Firm-slightly spongy, dark greyish brown slightly sandy silt, occ. shell	0.15	Fill
821	Cut	E-W irregular, shallow sided, flat based feature, 5m long x 1.46m wide	0.15	Natural hollow
822	Deposit	Firm-slightly spongy, dark greyish brown slightly sandy silt, occ. shell	0.15	Fill
823	Cut	E-W irregular, shallow sided, flat based feature, 5m long x 1.46m wide	0.15	Natural hollow
824	Deposit	Firm, dark reddish brown sandy silt, freq. gravel, occ. limestone	0.35	Fill
825	Cut	E-W linear, steep sided, flat based feature, 1.6m+ long x 1m+ wide	0.35	Ditch
826	Deposit	Firm, mid brownish grey sandy silt, occ. charcoal, limestone, bone frags.	0.5	Fill, L3-4C
827	Cut	N-S linear, steep sided, round based feature, 1.6m+ long x 2.1m wide	0.5	Ditch
828	Deposit	Firm, dark reddish brown sandy silt, freq. gravel and occ. limestone	0.35	Fill, ML2
829	Cut	E-W linear, steep sided, flat based feature, 1.6m+ long x 1m+ wide	0.35	Ditch
830	Deposit	Firm, dark reddish brown sandy silt, freq. gravel and occ. limestone	0.35	Fill
831	Cut	E-W linear, steep sided, flat based feature, 1.6m+ long x 1m+ wide	0.35	Ditch
832	Deposit	Firm, dark reddish brown sandy silt, freq. gravel	0.5	Fill, EM2
833	Cut	N-S linear, steep sided, flat based feature, 1.15m long x 0.8m wide	0.5	Ditch

Trench 9

Cxt	Type	Description	Tk (m)	Interpretation
900	Deposit	Moderately compact, greyish brown silt	0.2	Topsoil
901	Deposit	Moderately compact, brownish grey silt	0.25	Layer
902	Deposit	Moderately compact, brown silt	0.3	Subsoil
903	Cut	N-S linear, concave sided and based feature	0.6	Ditch
904	Deposit	Moderately compact, brown silt	0.6	Fill, 18th - 19th century
905	Cut	SSW-NNE linear, concave sided and based feature, truncated by 903	0.8	Ditch
906	Deposit	Moderately compact, dark brown silt	0.6	Fill
907	Deposit	Moderately compact, very dark brown silt	0.3	Fill, IA-EROM
908	Deposit	Loose, yellowish brown sand, freq. gravel, cobbles and limestone		Natural
909	Cut	Shallow tree throw		Tree throw
910	Deposit	Moderately compact, brownish grey silt		Fill
911	Deposit	Moderate-loose yellowish brown sand with red staining, freq. limestone frags.		Natural
912	Finds	Metal detecting finds/unstratified		

Trench 10

Cxt	Type	Description	Tk (m)	Interpretation
1000	Finds	Unstratified finds from machining		
1001	Cut	Ovate, near vertical sided concaved based feature, 1.44m+ long x 1.3m wide	0.47	Pit/ditch terminus
1002	Cut	Semi-circular, steep sided, flat based feature, 1.68m x 0.53m+ wide	0.37	Pit
1003	Cut	E-W linear, steep sided, concave based feature, 1.8m+ long x 0.52m wide	0.12	Shallow linear/Structural
1004	Deposit	Friable, dark greyish brown sandy silt, occ. calcareous deposits and occ. burnt clay/daub	0.38	Fill
1005	Deposit	Friable, mid yellowish brown, occ. gravel	0.26	Fill
1006	Deposit	Friable, dark brown silty sand, occ. snail shell	0.37	Fill
1007	Deposit	Friable, very dark greyish brown sandy silt, occ. sml. gravel	0.12	Fill
1008	Cut	N-S linear, steep sided, concaved based feature, 1.2+ wide	0.67	Ditch
1009	Deposit	Friable, dark greyish brown sandy silt, occ. gravel and burnt clay	0.4	Fill
1010	Deposit	Compact, light yellowish brown sand and gravel		Natural

Cxt	Type	Description	Tk (m)	Interpretation
1011	Deposit	Friable, very dark greyish brown sandy silt, occ. sml. gravel	0.2	Topsoil
1012	Deposit	Friable, very dark brown sandy silt, mod. sml. gravel	0.5	Dark Earth
1013	Deposit	Friable, dark brown sandy silt, occ. degraded sandstone	0.21	Fill
1014	Deposit	Friable-compact, light yellowish brown silty sand, occ. gravel and calcareous deposits	0.1	Fill
1015	Deposit	Friable, dark brown silty sand, occ. decayed sandstone	0.3	Fill
1016	Deposit	Friable, very dark greenish brown sandy silt, occ. sml. gravel	0.34	Layer
1017	Cut	Indeterminate shaped, concaved based feature, 0.44m wide	0.11	Continuation of 1003?
1018	Deposit	Friable, dark brown sandy silt, occ. sml. gravel and calcareous flecks	0.11	Fill
1019	Cut	NW-SE linear, gradual sided, concaved based feature, 1.5m wide	0.42	Ditch
1020	Deposit	Friable, very dark greyish brown silty sand, occ. decayed sandstone and organic residue	0.42	Fill
1021	Deposit	Friable, mid-light brown silty sand, occ. gravel	0.16	Fill
1022	Cut	Circular, steep sided, concaved based feature, truncated by 1019, 0.38m wide	0.19	Posthole
1023	Deposit	Friable, mid brown silty sand, occ. sml. gravel	0.11	Fill
1024	Deposit	Friable, dark brown silty sand, occ. gravel	0.16	Fill
1025	Cut	N-S linear, gradual sided, concaved based feature, 2.12m wide	0.23	Possible field boundary
1026	Deposit	Friable, very dark brown silty clayey sand, occ. sml. gravel and charcoal, flecks	0.33	Fill
1027	Cut	N-S linear, steep sided, irregular-concave based feature, 1.32m wide	0.35	Ditch
1028	Deposit	Friable, very dark greyish brown silty clayey sand, occ. sml. gravel and charcoal flecks	0.35	Fill
1029	Cut	Semi-circular steep sided concave based feature, 0.28m wide	0.22	Posthole
1030	Deposit	Friable, mid brown sandy silt, occ. gravel	0.22	Fill
1031	Cut	E-W curvilinear, steep sided, concave based feature truncated by 1038, 2.6m+ long x 0.5m wide	0.55	Ditch/Gully
1032	Deposit	Friable, dark greyish brown silty sand, occ. gravel	0.55	Fill
1033	Deposit	Friable, mottled grey/yellow silty sand, occ. gravel	0.3	Backfill
1034	Deposit	Friable, dark greyish brown silty sand, occ. gravel	0.13	Backfill
1035	Deposit	Friable, very dark greyish brown silty sand, occ. gravel	0.09	Primary fill

Cxt	Type	Description	Tk (m)	Interpretation
1036	Deposit	Friable, dark greyish brown silty sand, occ. angular pebbles and sml. gravel	0.35	Fill
1037	Cut	N-S linear, steep sided concaved based feature truncated by 1008, 0.44m wide	0.35	Ditch
1038	Cut	E-W linear, steep sided concaved -nearly flat based feature, 4.6m+ long x 1.08m wide	0.5	Ditch
1039	Deposit	Friable, dark brown silty sand, occ. gravel and decayed ironstone	0.5	Fill
1040	Deposit	Friable, mid brown silty sand, occ. sml. gravel	0.08	Slumped fill
1041	Cut	E-W linear, gradual sided concaved based feature truncated by modern disturbance, 6m+ long x 1.07m wide	0.47	Boundary ditch
1042	Deposit	Friable, dark brown silty sand, occ. gravel	0.47	Fill
1043	Deposit	Friable slightly sticky, dark greyish brown silty sand, occ. gravel	0.38	Fill
1044	Cut	E-W linear steep sided concaved based feature, recut by 1041, 0.66m wide	0.38	Recut of ditch 1038

Trench 11

Cxt	Type	Description	Tk (m)	Interpretation
1100	Finds	Unstratified finds from machining		
1101	Deposit	Loose, mid-dark grey/green mottled silty sand, occ. sml.-med. gravel	0.19	Fill, M2-3C
1102	Deposit	Loose, mid-dark silty sand, occ. sml.-med. gravel	0.09	Fill, 3C+
1103	Deposit	Loose, mid-dark grey silty sand, occ. sml.- med. gravel	0.23	Fill, 3C+
1104	Deposit	Loose, dark greyish brown clayey silty sand, occ. sml.-med. gravel	0.29	Fill, 3-4C
1105	Cut	N-S linear, concave sided flat based feature, truncated by 1106, 1107 and 1108, 2.4m+ long x 0.83m+ wide	0.19	Ditch
1106	Cut	E-W linear, concave sided rounded based feature, 1.6m+ long x 0.6m+ wide	0.09	Gully
1107	Cut	E-W curvilinear, concave sided flat based feature, 1.6m+ long x 0.5m wide	0.23	Gully
1108	Cut	E-W linear, concave sided undulating base feature, 1.6m+ long x 1.8m+ wide	0.29	Boundary/ drainage ditch
1109	Deposit	Firm, light yellowish brown/ mid brown, clay/sand, containing drainage pipe and tarmac	0.84	Fill
1110	Cut	E-W linear? steep sided unknown based feature, 1.6m+ long x 0.34m+ wide	0.84	Modern Pit
1111	Deposit	Loose, mid grey silty sand, occ. sml. gravel	0.19	Fill

Cxt	Type	Description	Tk (m)	Interpretation
1112	Cut	Circular, concave sided flat based feature, 0.6m+ long x 0.18m+ wide	0.19	Hollow/pit
1113	Deposit	Loose, dark blackish brown silty sand, occ. gravel	0.25	Topsoil
1114	Deposit	Loose, dark greyish brown silty sand, occ. sml. gravel	0.28	Dark Earth
1115	Deposit	Loose, dark brown silty sand, occ. gravel	0.48	Dark Earth
1116	Deposit	Loose, mid brownish yellow, sandy gravel		Natural
1117	Deposit	Loose, mottled dark brown/mid brownish yellow silty sand	0.17	Transforming layer

Trench 12

Cxt	Type	Description	Tk (m)	Interpretation
1200	Finds	Unstratified finds from machining		
1201	Deposit	Friable, mottled mid-dark brown silty sand, pale brown/red brown sand, occ. sml.-med. stones	0.1	Layer
1202	Deposit	Friable, greyish-brown silty sand, mod. stone	0.17	Fill, ML4C
1203	Cut	N-S linear, shallow sided flat based feature, truncated by 1225, 1.4m+ wide	0.24	Ditch
1204	Deposit	Compact, sml.-med pebbles/limestone	0.03	Surface
1205	Deposit	Friable, greyish brown silty sand, occ. sml. stone	0.12	Fill, 2-3C+
1206	Cut	SE-NW half oval, shallow sided flattish based feature 1.2m long x 0.55m wide	0.12	Butt end
1207	Deposit	Friable, greyish mid brown silty sand, occ. sml. stone	0.08	Fill
1208	Cut	N-S linear, shallow sided irregular-flattish based feature, 0.58m wide	0.08	Animal burrow
1209	Deposit	Moderately compact, dark brown/black silty clay, freq. frags. of wood, occ. shell	0.15	Waterlogged fill
1210	Cut	N-S linear, moderately steep sided flattish based feature, 1.5m wide	0.6	Ditch
1211	Deposit	Friable, mid brown silty sand, occ. sml.-med. stone	0.35	Topsoil
1212	Deposit	Friable, mid reddish brown slightly silty sand, occ. sml. pebbles and patches of lime mortar	0.16	Fill
1213	Deposit	Friable, mid-dark brown sandy silt, occ. sml. stones	0.2	Fill
1214	Deposit	Friable, greyish brown silty sand, mod. sml.-med. stones	0.45	Fill
1215	Deposit	Loose, greyish red sand	0.02	Fill
1216	Deposit	Firm, mid-light greyish brown silty clay, occ. sml. stones	0.35	Natural
1217	Deposit	Firm, grey silty clay, freq. red mottles	0.12	Natural
1218	Deposit	Compact, red sand and gravel		Natural

Cxt	Type	Description	Tk (m)	Interpretation
1219	Deposit	Friable, mid reddish brown slightly silty sand, mod. sml.-med. stones	0.35	Fill
1220	Cut	N-S linear, steep sided feature, 4.8m+ wide	0.35	Modern service trench
1221	Deposit	Friable, dark brown fine sandy silt, occ. sml. stones	0.25	Dark Earth
1222	Deposit	Friable, mid brown silty sand, occ. sml. stones	0.2	Ploughsoil
1223	Deposit	Friable, dark brown sandy silt, mod. patches of sand and gravel	0.5	Backfill
1224	Deposit	Compact, pale red sandy clay	0.3	Modern dumped fill
1225	Cut	Indeterminate shaped, steep sided feature, 4.6m wide	0.6	Modern pit

Trench 13

Cxt	Type	Description	Tk (m)	Interpretation
1301	Deposit	Soft, dark greyish brown silty sand, freq. sml. limestone frags and occ. pebbles	0.23	Fill
1302	Deposit	Soft, dark greyish brown humic silty sand, occ. limestone frags and mod. snail shell	0.3	Fill, 17th century
1303	Deposit	Soft dark olive brown silty sand, mod. sml. limestone frags and occ. pebbles	0.3	Dark Earth, 13th - 14th century
1304	Deposit	Loose, light brownish yellow sandy gravel	0.28	Fill
1305	Cut	N-S linear, 1.5m+ long x 0.55m wide	0.28	Modern service trench
1306	Deposit	Loose, light brownish yellow sand and gravel	0.2	Fill
1307	Cut	Linear vertical sided feature, 1.5m+ long x 1.5m wide	0.2	Modern service trench
1308	Deposit	Soft, dark olive brown with light reddish brown and brownish yellow mottles silty sand, mod. limestone frags	0.03	Fill
1309	Cut	N-S linear vertical sided feature, 1.5m+ long x 0.5m wide	0.03	Modern service trench
1310	Cut	N-S linear, steep sided concave based feature, 1.5m+ long x 1.3m wide	0.6	Ditch
1311	Deposit	Soft, dark greyish brown sandy silt, freq. sml. limestone frags and mod. pebbles	0.28	Fill, 10th - 12th century
1312	Cut	SW-NE linear, gradual sided concave based feature, 1.8m+ long x 1.6m wide	0.28	Ditch
1313	Deposit	Loose-soft dark olive greyish brown silty sand matrix, freq. limestone	0.18	Dump
1314	Deposit	Soft, light brownish grey with dark olive greyish brown sand and silty sand, freq. sml. limestone frags		Layer/Possible surface

Cxt	Type	Description	Tk (m)	Interpretation
1315	Deposit	Firm-compact dark greyish brown silty sand, freq. sml. limestone	0.06	Possible surface, RO
1316	Deposit	Soft, dark brownish grey silty sand, occ. sml. limestone frags.	0.25	Topsoil
1317	Deposit	Soft, dark brown silty sand, mod. limestone frags, occ. pebbles	0.27	Dark Earth
1318	Deposit	Soft, dark olive greyish brown silty sand matrix, freq. limestone	0.1	Dumped deposit
1319	Deposit	Compact, reddish brown with dark greyish brown mottles sand/silty sand	0.07	Surface
1320	Deposit	Compact, dark greyish olive brown silty sand matrix, freq. limestone frags	0.1	Surface
1321	Deposit	Compact, mid reddish brown with dark olive greyish brown mottles silty sand matrix, freq, limestone frags		Layer/surface
1322	Deposit	Soft, light yellowish brown sand, freq. sml. limestone		Natural
1323	Deposit	Soft, light yellowish brown sand, freq. sml. limestone		Natural
1324	Deposit	Soft, dark grey with dark reddish brown mottles sandy silt, freq. sml. limestone frags	0.25	Fill, 13th - 14th century
1325	Deposit	Compact, light grey/light yellowish brown with dark greyish brown mottles sand/silt matrix, freq. limestone frags		Surface metalling
1326	Deposit	Loose, mid brownish yellow sand and gravel	0.15	Fill
1327	Cut	N-S linear, vertical sided feature, 1.5m+ long x 1.2m wide	0.15	Modern service trench
1328	Deposit	Soft, dark grey with dark reddish brown mottles silty sand matrix, freq. limestone frags.		Road surface
1329	Deposit	Compact, light reddish brown with light brownish grey mottles sand, freq. sml. limestone		Road surface
1330	Deposit	Compact, dark grey silty sand matrix, freq. limestone frags		Road surface
1331	Deposit	Compact, light reddish brown with light brownish grey mottles sand		Truncated remains of road surface
1332	Deposit	Firm, mid-dark brown with dark greyish brown mottles, freq. sml. limestone and mod. sml. pebbles	0.06	Road metalling
1333	Deposit	Compact, mid-dark greyish brown silty sand matrix, freq. limestone frags and mod. pebbles		Road metalling
1334	Deposit	Compact, light greyish brown with mid reddish brown mottles silty sand matrix, freq. limestone and mod. pebbles		Metalling?, 19th - 20th century
1335	Deposit	Soft, light grey with mid reddish brown mottles slightly silty sand, mod. sml. limestone frags.	0.1	Layer/Buried topsoil
1336	Cut	E-W linear, gentle sided concave based feature, 1.8m+ long x 0.22m+ wide	0.12	Natural undulation?

Cxt	Type	Description	Tk (m)	Interpretation
1337	Cut	NNE-SSW linear, steep sided flat-concaved based feature, 1.5m+ long x 1.6m wide	0.5	Ditch
1338	Cut	NNE-SSW linear, steep sided concaved based feature, 1.5m+ long x 0.65+ wide	0.45	Ditch
1339	Deposit	Soft, mid grey with mid reddish brown mottles silty sand, freq. sml. limestone frags.	0.19	Fill, RO
1340	Deposit	Soft, mid. olive grey with mid reddish brown silty sand, freq. sml. limestone frags	0.45	Fill, M3-4C
1341	Deposit	Moderately firm, mid grey with mid reddish brown mottles sandy silt, freq. sml. limestone	0.22	Fill
1342	Cut	N-S linear, steep sided flattish based feature, 1.5m+ long x 0.5m+ wide	0.22	Ditch
1343	Cut	N-S linear, steep sided irregular based feature, 2.8m+ long x 1m wide	0.3	Ditch?
1344	Deposit	Soft, mid-dark olive greyish brown with mid yellowish brown mottles sandy silt, mod. sml. limestone frags.	0.11	Layer/ Former topsoil ?
1345	Deposit	Moderately firm dark brownish grey sandy silt, freq. limestone frags	0.15	Fill
1346	Deposit	Soft, dark olive grey with mid yellowish brown mottles sandy silt, mod. sml. limestone frags.	0.24	Fill
1347	Deposit	Soft, dark olive brown/light brown silty sand, mod. sml. limestone frags	0.06	Layer
1348	Deposit	Soft, mid-dark olive greyish brown with mid yellowish brown mottles sandy silt, mod. sml. limestone frags.	0.11	Layer/ Former topsoil ?
1349	Deposit	Soft, greyish dark brown sandy silt, mod. limestone frags	0.46	Dumped layer
1350	Deposit	Soft, very dark brownish grey silty sand, occ. sml. limestone frags	0.35	Fill
1351	Deposit	Moderately firm, dark grey sandy silt freq. limestone frags	0.2	Fill
1352	Deposit	Moderately firm, mid olive brown sandy silt, mod. limestone frags	0.22	Poss continuation of 1317
1353	Deposit	Firm, dark greyish brown silty sand, mod. sml. limestone frags, occ. charcoal flecks	0.15	Layer
1354	Deposit	Firm, mid brown sandy silt mod. sml. limestone frags	0.04	Metalling
1355	Deposit	Loose, light yellowish brown sand and gravel	0.16	Dump
1356	Deposit	Soft, dark brownish grey silty sand, mod. sml. limestone frags	0.23	Former topsoil
1357	Deposit	Loose, light reddish-pale whitish brown sand and limestone		Natural
1358	Deposit	Firm, dark grey sandy silt freq. limestone frags, occ. coal	0.18	Layer

Trench 14

Cxt	Type	Description	Tk (m)	Interpretation
1400	Cut	N-S linear, steep sided concave based feature, 1.,7m+ long x 1.3m+ wide	0.6	Ditch
1401	Cut	NW-SE linear, steep sided flat based feature, 1.6m+ long x 0.76m wide	0.33	Ditch
1402	Cut	NW-SE linear, near vertical sided flattish base, 1.7m+ long x 0.65m wide	0.38	Ditch
1403	Cut	Circular, vertical sided concave based feature, 0.31m diameter	0.22	Posthole
1404	Cut	Circular, near vertical sided concaved based feature, 0.35m diameter	0.21	Posthole
1405	Deposit	Friable, very dark grey silty sand, occ. sml. gravel	0.22	Topsoil
1406	Deposit	Friable, very dark brown silty sand, occ. sml. gravel	0.53	Dark Earth, 10th - 12th century
1407	Deposit	Loose, light brownish yellow sand and gravel		Natural
1408	Deposit	Friable, very dark greyish brown sandy silt, occ. gravel	0.43	Fill, 3-4C/POSTRO
1409	Deposit	Friable, dark brown silty sand, occ. gravel	0.14	Primary fill
1410	Deposit	Loose, dark brown silty sand, occ. gravel	0.33	Fill
1411	Deposit	Friable, very dark brown sandy silt, occ. gravel	0.32	Fill
1412	Deposit	Loose, dark brown silty sand, occ. gravel	0.15	Primary fill
1413	Deposit	Loose, dark brown silty sand, occ. gravel	0.21	Fill
1414	Deposit	Loose-friable, dark brown silty sand, occ. gravel and pebbles	0.22	Fill, 3-4C
1415	Cut	Circular, steep sided concave based feature, 0.35m diameter	0.2	Posthole
1416	Deposit	Friable, very dark brown silty sand, occ. pebbles and burnt clay	0.2	Fill, 3-4C
1417	Cut	E-W linear, steep sided concaved based feature, 4.2m+ long x 0.8m+ wide	0.5	Ditch
1418	Deposit	Friable, very dark brown sandy silt, occ. gravel	0.39	Fill, M2-3C
1419	Cut	Sub-circular, steep sided concave based feature, 2.2m diameter	0.42	Pit
1420	Deposit	Friable, very dark greyish brown sandy silt, occ. pebbles	0.38	Fill, M2-3C/POSTRO
1421	Finds	Unstratified metal detecting finds		
1422	Cut	Circular, steep sided concave based feature, 0.6m diameter	0.36	Posthole
1423	Deposit	Friable, very dark brown with yellowish brown mottles sandy silt, occ. gravel	0.1	Fill

Cxt	Type	Description	Tk (m)	Interpretation
1424	Deposit	Friable, light brown silty sand, occ. gravel/sand	0.28	Primary fill
1425	Deposit	Friable, dark brown silty sand, occ. charcoal, lenses of yellowish grey sand	0.12	Dumped fill, M2-3C
1426	Deposit	Friable, mid brown silty sand, occ. gravel	0.07	Primary fill
1427	Deposit	Friable, dark brown silty sand	0.14	Primary fill

Trench 15

Cxt	Type	Description	Tk (m)	Interpretation
1500	Deposit	Loose dark brownish grey silt	0.8m	Topsoil
1501	Deposit	Moderately compact, dark brownish grey silt	0.8	Subsoil
1502	Deposit	Moderately compact very dark brown silt	0.3	Fill
1503	Cut	Steep sided, flat based feature, 0.1m diameter	0.2	Posthole?
1504	Deposit	Moderately compact, very dark brown silt	0.2	Fill
1505	Deposit	Loose, reddish yellow coarse sand, freq. gravel and limestone	0.3	Natural
1506	Deposit	Loose, whitish brown sand	0.05	
1507	Deposit	Loose, whitish grey fine sand		Natural
1508	Deposit	Moderately compact dark brownish grey silt	0.2	Topsoil
1509	Deposit	Moderately compact greyish brown silt	0.3	Subsoil
1510	Cut	N-S linear, concave sided feature, 3m wide	0.75	Ditch
1511	Deposit	Firm, blue clay, mod. stones and brick	0.3	Fill
1512	Deposit	Moderately compact, dark brown silt	0.2	Fill
1513	Deposit	Firm, tan clay, mod. lrg. stones and brick	0.3	Fill
1514	Cut	N-S linear, concave sided flat based feature, truncated by 1510, 1.6m+ long	0.7	Ditch
1515	Deposit	Moderately compact, dark brown silt	0.8	Fill
1516	Deposit	Moderately compact dark brown silt	0.3	Fill
1517	Cut	N-S linear, concave sided flat based feature, truncated by 1514, 1.6m+ long	0.7	Ditch
1518	Deposit	Moderately compact, very dark brown silt	0.7	Fill
1519	Cut	N-S linear, steep sided feature, 1.6m+ long	0.35	Ditch
1520	Deposit	Moderately compact, dark brown silt	0.45	Fill
1521	Deposit	Loose, reddish yellow coarse sand, freq. gravel and cobbles		Natural
1522	Deposit	Moderately compact, very dark brown silt	0.7	
1523	Deposit	Loose, reddish yellow coarse sand, freq. gravel and cobbles		Natural

Cxt	Type	Description	Tk (m)	Interpretation
1524	Deposit	Moderately compact, very dark brown silt	0.7	
1525	Deposit	Loose, reddish yellow coarse sand, freq. gravel and cobbles		Natural
1526	Deposit	Loose, yellowish brown coarse sand, freq. gravel and limestone frags.		Natural
1527	Deposit	Moderately compact, dark brownish grey silt		Fill, 3-4C
1528	Deposit	Moderately compact, dark brown silt	0.5	Fill
1529	Deposit	Moderately compact, dark brown silt	0.5	Fill, M2-3C
1530	Deposit	Moderately compact, dark brown silt	0.35	Fill
1531	Deposit	Loose, yellowish brown coarse sand, freq. gravel and limestone frags.		Natural
1532	Deposit	Loose, yellowish brown coarse sand, freq. gravel and limestone frags.		Natural
1533	Deposit	Loose, yellowish brown coarse sand, freq. gravel and limestone frags.		Natural
1534	Deposit	Moderately compact, dark brown silt, freq. snail shell	0.35	Fill
1535	Deposit	Moderately compact, dark brown silt, freq. snail shell	0.35	Fill
1536	Deposit	Moderately compact, dark brown silt, freq. snail shell	0.35	Fill
1537	Deposit	Moderately compact brownish grey silt		Fill
1538	Deposit	Moderately compact brownish grey silt		Fill
1539	Deposit	Moderately compact dark brown silt	0.1	Fill
1540	Deposit	Moderately compact dark brownish grey silt		Fill
1541	Deposit	Moderately compact, dark brown silt	0.35	Fill
1542	Cut	E-W rectangular cut, steep sided flat based feature, 2m+ long x 0.6m+ wide		Grave cut
1543	Cut	NW-SE linear, concave sided flat based feature, truncated by 1542, 1.6m+ long x 1.8m wide	0.5	Ditch
1544	Cut	NW-SE linear, concave sided round based feature, 1.6m+ long x 0.8m wide	0.35	Ditch
1545	Cut	Same as 1548		
1546	Cut	N-S linear, smooth sided with undulating based feature, 1.6m+ long x 2.7m wide	0.35	Tree throw
1547	Cut	E-W linear, concaved sided with undulating base, part of 1546	0.25	Tree throw
1548	Cut	E-W linear, part of 1546		Tree throw
1549	Skeleton	E-W aligned skeleton, only skull and lower legs exposed		
1550	Finds	Unstratified finds from machining and metal detecting		

Cxt	Type	Description	Tk (m)	Interpretation
1551	Deposit	Moderately compact, dark brownish grey silt		Fill
1552	Cut	N-S linear, part of tree throw 1546		Tree throw
1553	Deposit	Moderately compact brownish grey silt	0.3	Topsoil
1554	Deposit	Moderately compact, brown silt	0.7	Subsoil
1555	Cut	Part of tree throw 1546		Tree throw
1556	Deposit	Moderately compact greyish brown silt		Fill
1557	Cut	Part of tree throw 1546		Tree throw
1558	Deposit	Moderately compact, dark brown silt	0.4	Fill
1559	Deposit	Moderately compact, dark brown silt	0.2	Fill
1560	Deposit	Firm, tan clay, mod. lrg. stones and brick	0.3	Fill
1561	Deposit	Moderately compact, very dark brown silt	0.3	Layer
1562	Deposit	Moderately compact, very dark brown silt	0.7	

Trench 16

Cxt	Type	Description	Tk (m)	Interpretation
1600	Finds	Unstratified finds from machining		
1601	Deposit	Firm, dark yellowish brown slightly silty sand, mod. sml. gravel, bone and charcoal flecks	0.65	Fill, 2C+, 337-41AD
1602	Cut	E-W linear, steep sided uneven based feature, 2m+ long x 1.15m wide	0.65	Ditch
1603	Deposit	Firm, dark reddish brown slightly silty sand	0.47	Fill
1604	Cut	NE-SW linear, steep sided round based feature, 1.6m+ long x 0.6m wide	0.47	Gully
1605	Deposit	Firm, mid reddish brown slightly silty sand, occ. med pebbles and redeposited natural	0.16	Fill, IA-EROM
1606	Cut	E-W curvilinear, steep sided flat based feature, 0.3m+ long x 0.34m wide	0.16	Gully
1607	Deposit	Firm, mid yellowish brown sand, freq. redeposited light yellowish brown natural sand	0.16	Fill
1608	Cut	Circular, steep sided flat based feature, 0.4m diameter	0.16	Post hole
1609	Deposit	Firm, dark reddish brown slightly silty sand, occ. sml.-med. pebbles	0.35	Topsoil
1610	Deposit	Firm, dark yellowish brown slightly silty sand, mod. sml.-med. pebbles and gravel	0.35	Subsoil
1611	Deposit	Firm, light yellowish brown sandy gravel, occ. limestone and sandstone		Natural

Cxt	Type	Description	Tk (m)	Interpretation
1612	Deposit	Firm, dark reddish brown slightly silty sand, freq. sml.-med. pebbles and occ. gravel	0.5	Fill, 2C+
1613	Cut	Linear, steep sided flat based feature, 2.6m+ long x 1.3m wide	0.5	Ditch
1614	Deposit	Firm, dark reddish brown slightly silty sand, freq. sml.-med. pebbles, occ. limestone frags., snail shells and redeposited natural	0.7	Fill, 4C
1615	Cut	N-S linear, steep sided flat based feature, 2m+ long x 2m+ wide	0.7	Ditch
1616	Deposit	Firm, mid yellowish brown slightly silty sand, occ. gravel	0.4	Fill, IA-EROM
1617	Cut	E-W linear, steep sided uneven based feature 0.98m+ long x 0.56m wide	0.4	Ditch
1618	Deposit	Firm, mid yellowish brown slightly silty sand, occ. gravel	0.26	Fill
1619	Cut	Un-excavated feature		Ditch/same as 1617

Trench 17

Cxt	Type	Description	Tk (m)	Interpretation
1700	Deposit	Friable, dark greyish brown silty sand, occ. sml. limestone frags.	0.3	Topsoil
1701	Deposit	Friable, dark greyish brown silty sand, occ. limestone	0.75	Dark Earth, 3-4C
1702	Cut	E-W sub-rectangular, near vertical sided flat based feature, 0.95m+ long x 0.42m wide, truncated by 1701	0.42	Grave cut
1703	Deposit	Firm, very dark greyish brown silty sand, occ. limestone frags	0.42	Fill, 3-4C
1704	Cut	N-S linear, steep sided flat based feature, 1.6m+ long x 0.7m wide	0.25	Ditch
1705	Deposit	Friable, dark greyish brown silty sand, occ. sml. stones	0.25	Fill
1706	Cut	N-S linear, steep sided flat based feature, 1.6m+ long x 2m+ wide		Pit/modern
1707	Deposit	Soft, pale greyish brown clay		Fill
1708	Cut	E-W linear, steep sided round based feature, 1.6m+ long x 1.18m+ wide	0.5	Ditch
1709	Deposit	Friable, dark greyish brown silty sand, occ. sml. stones	0.5	Fill, 3-4C
1710	Not used			
1711	Not used			
1712	Cut	N-S linear, steep sided flat based feature, 1.6m+ long x 0.8m+ wide	0.27	Ditch

Cxt	Type	Description	Tk (m)	Interpretation
1713	Deposit	Friable, dark greyish brown silty sand, occ. sml. limestone frags	0.27	Fill
1714	Cut	N-S linear, not excavated		Modern trench
1715	Deposit	Soft, pale greyish brown clay		Fill
1716	Not used			
1717	Not used			
1718	Skeleton	East- west aligned disturbed remains		Skeleton
1719	Cut	NE-SW linear, steep sided flat based feature, 0.7m+ long x 0.9m wide	0.2	Ditch butt end
1720	Deposit	Friable, dark greyish brown silty sand, occ. stones	0.2	Fill
1721	Deposit	Friable, pale yellowish brown and pale red brown sand and limestone gravel		Natural
1722	Skeleton	N-S aligned, fragmentary remains, truncated by ditch		Skeleton
1723	Deposit	Loose, mid brown silty sand, freq. pea gravel and occ. charcoal flecks		Fill
1724	Cut	N-S linear feature		Grave cut
1725	Deposit	Loose, light-mid brown silty sand		Fill
1726	Cut	N-S linear, 0.5m+ long x 0.09m+ wide		Grave cut?

Trench 18

Cxt	Type	Description	Tk (m)	Interpretation
1800	Finds	Unstratified finds from machining		
1801	Deposit	Loose, mid-dark greyish brown silty sand, occ. sml. limestone frags. occ. charcoal flecks		Dark Earth, 17th - 18th century
1802	Finds	Grave nails from grave cut 1807		
1803	Deposit	Loose, dark brownish grey clayey sand, freq. lenses of greyish brown clay and occ. limestone frags.	0.25	Fill, L3-4C
1804	Cut	N-S linear, sharp sided flat based feature, 1.4m+ long x 1m wide	0.25	Wall foundation
1805	Deposit	Moderate-firm, mid brown limestone, occ. charcoal flecks	0.15	Fill, M3-4C
1806	Skeleton	E-W aligned, disturbed remains, right lower leg missing		Skeleton
1807	Cut	E-W sub-rectangular- sub-oval, gently sloping sides slightly concave base, 2.6m long x 1.64m wide	0.15	Grave cut
1808	Finds	Retrieved round area around 1807		3C+/POSTRO
1809	Deposit	Friable, mid greyish brown silty sand, freq. sml. limestone frags., occ. sml. pebbles and charcoal flecks	0.31	Fill, ML3C
1810	Cut	W-E rectangular? steep sided flat based feature, wide 1.4m	0.31	Grave cut

Cxt	Type	Description	Tk (m)	Interpretation
1811	Skeleton	E-W aligned, lower legs exposed		Skeleton
1812	Deposit	Soft- friable, mid brownish grey silty sand, occ. charcoal flecks	0.19	Fill, 2-3C
1813	Deposit	Friable, mid greyish brown silty sand, occ. sml. limestone frags.	0.21	Fill
1814	Cut	W-E linear, steep sided concave based feature, truncated by 1810, 0.57m wide	0.2	Gully
1815	Cut	N-S linear, concave based feature, truncated by 1807	0.1	Gully/ditch
1816	Deposit	Loose, mid brown silty sand, occ. limestone flecks, occ. sml. limestone frags	0.1	Fill
1817	Deposit	Soft-friable mid yellowish brown silty sand, occ. limestone flecks	0.05	Fill
1818	Cut	W-E linear, not fully excavated, 0.5m + wide	0.05	Gully
1819	Deposit	Moderate- friable, light yellowish brown and mid-dark brown silty sand, sand and gravel		Natural
1820	Deposit	Loose, mid-dark greyish brown silty sand, occ. sml. limestone frags and charcoal flecks	0.32	Layer, 3C
1821	Deposit	Soft-friable mid brown silty sand, occ. sml. limestone frags.	0.6	Layer
1822	Cut	W-E linear, steep sided concave based feature, 0.36m wide	0.21	Floor beam
1823	Finds	Unstratified, retrieved during excavation of sondage		
1824	Masonry	E-W roughly hewn single coursed limestone frags (300 x 220 x 30mm - 40 x 40 x 20mm)		Wall foundation?
1825	Finds	Finds mixed up during finds processing		

Trench 19

Cxt	Type	Description	Tk (m)	Interpretation
1900	Deposit	Loose, dark grey sandy clayey silt	0.26	Topsoil
1901	Deposit	Soft, dark greyish brown sandy silt, freq. stones		Dark Earth, 13th - 14th century
1902	Skeleton	E-W aligned, not fully exposed, hands absent, nails in surrounding deposit		Skeleton, M3-4C
1903	Deposit	Friable, dark brown sandy silt, freq. pale grey ashy sand lenses		Fill, L3-4C
1904	Deposit	Friable, dark brown sandy silt, freq. limestone frags.		Fill, 16th 17th century
1905	Cut	E-W, not fully excavated, 1.1m+ long x 0.3m+ wide		Grave cut
1906	Cut	Indeterminate , not fully excavated, 0.8m long x 0.4m wide		Pit
1907	Deposit	Loose, mid yellowish brown slightly silty sand, mod. stones/rubble, tarmac		Backfill

Cxt	Type	Description	Tk (m)	Interpretation
1908	Masonry	N-S rough finished dry bonded limestone frags. (140 x 90 x 30mm), 1.6m+ long x 0.8m wide		Wall
1909	Masonry	N-S rough finished dry bonded limestone frags. (160 x 90 x 35mm), 1.6m+ long x 0.8m wide		Wall
1910	Masonry	E-W rough finished dry bonded limestone frags. (240 x 190 x 60mm)		Wall
1911	Masonry	Rough finished dry bonded limestone frags. (170 x 130 x 45mm)		Well
1912	Deposit	Soft, light grey/beige silt, occ. sand		Ashy deposit
1913	Cut	Modern service trench		
1914	Finds	Unstratified finds, retrieved near 1909		13th - 14th century
1915	Finds	Unstratified finds, retrieved near 1910		
1916	Finds	Unstratified finds, retrieved near 1909		13th - 14th century
1917	Finds	Unstratified finds, retrieved near 1909		M2-3C+

Trench 20

Cxt	Type	Description	Tk (m)	Interpretation
2000	Deposit	Loose, dark grey sandy clayey silt	0.26	Topsoil
2001	Deposit	Loose, dark brown sandy clayey silt	0.17	Subsoil
2002	Deposit	Soft, dark- mid brown clayey sand, occ. gravel and charcoal flecks	0.3	Fill
2003	Cut	N-S linear, steep sided flat based feature, 1.6m+ long x 1.19m wide	0.3	Ditch
2004	Deposit	Soft, mid brown clayey sand, occ. gravel and charcoal frags.	0.2	Fill
2005	Cut	Semi-circular concave sided and based feature, 0.78m wide	0.2	Pit
2006	Deposit	Firm, mottled brown and black clayey sand	0.23	Fill
2007	Cut	N-S ovoid, gradual sloping sides concaved based feature, 0.68m long x 0.6m wide	0.23	Pit
2008	Deposit	Firm, mottled brown and black clayey sand	0.23	Fill
2009	Cut	Semi-circular, gradual sided concave based feature, 0.82m long x 0.33m wide	0.17	Refuse pit
2010	Deposit	Loose, red with mid brown mottling gravel and sand		Natural
2011	Deposit	Soft, mid brown and light brownish yellow sand, occ. gravel		Natural

Cxt	-	Context number	Tk (m)	-	Thickness	E	- Early
M	-	Mid	L	-	Late	C	- Century
POSTRO-		Post Roman	IA	-	Iron Age	RO	- Roman

Appendix 3

The Roman Pottery

By B J Precious

The pottery has been recorded according to the Study Group for Roman Pottery (SGRP) guidelines, using codes currently in use by the City of Lincoln Archaeology Unit (CLAU), with sherd count and weight as a measure. See also the site archive 'The Roman pottery from The Hoplands, Sleaford - THSA01 (thsa01.xls).

The site produced a moderate sized assemblage of Roman pottery consisting of 575 sherds weighing 7301.5 gms, ranging in date from the late Iron Age to the late 4th century AD (see Table 1, below).

Table 1- The date-range of the Roman pottery by sherd count

Date	Sherds	%
IA -EROM	7	1.22%
IA OR RO	3	0.52%
LIA-EROM/POSTRO	6	1.04%
L1-2C/POSTRO	2	0.35%
EM2C	8	1.39%
ML2C	6	1.04%
2C+	14	2.43%
2-3C	3	0.52%
2-3C+	3	0.52%
2-3C/POSTRO	2	0.35%
M2-3C	20	3.48%
M2-3C+	3	0.52%
M2-3C/POSTRO	8	1.39%
ML3C	21	3.65%
ML3C/POSTRO	14	2.43%
3C	9	1.57%
3C+	6	1.04%
3C+/POSTRO	14	2.43%
3-4C	19	3.30%
3-4C/POSTRO	3	0.52%
M3-4C	40	6.96%
M3-4C/POSTRO	6	1.04%
L3-4C	8	1.39%
4C	8	1.39%
4C/POSTRO	259	45.04%
M4/POSTRO	17	2.96%
ML4C	33	5.74%
ML4C/POSTRO	31	5.39%
RO	2	0.35%
TOTAL	575	100.00%

Pottery assigned from the Iron Age to the early Roman period consists of a few very friable fragments of shell-tempered ware. The fragments are unlike the other shell-tempered Roman pottery from the site, but as they are undiagnostic the dating is uncertain. Definite 1st century pottery is represented by 2 sherds of South Gaulish samian, but these abraded sherds are residual within contests with later Roman wares. Two fresh sherds of early 2nd century samian from Les Martres de Veyre are also residual. Other 2nd century samian from the Lezoux kilns in Central Gaul occurs either as the only representative or with one or two undiagnostic sherds within a context (404; 828; 1101 and Appendix 1: Context dates - *thsadate.xls*).

There is a gradual increase in the amount of Roman pottery present from the mid 2nd to 3rd century - 39 sherds; then in the 3rd century - 64 sherds; increasing to 76 sherds in the 3rd, probably mid 3rd, to the 4th century. However the bulk of the material is 4th century in date - 267 sherds, mainly the product of Context 1901 which produced 215 sherds. There is also a good sized group of mid to late 4th century wares - 81 sherds.

Condition

It is clear that a high proportion of the Roman pottery from the site occurs with post-Roman wares. Nevertheless, although this pottery may be residual the individual contexts concerned consist of largely homogeneous assemblages with few earlier Roman wares. This is borne out by the presence of several large individual sherds together with a relatively low incidence of abrasion, some of which is due to soil conditions rather than much redeposition. However, the average sherd/weight ratio amounts to almost 13 gms which is on the low side.

As mentioned above some of the possible Iron Age shell is very friable, and there are several incidences of finer wares with signs of burning after fracture. However, the bulk of the sooted or burnt sherds are the result of cooking, and some of the cooking pots have scale deposits on the interior. Despite the large size of the assemblage there are no definite few sherd links, but similar pottery occurs in Contexts 404 & 406; and 1805 & 1808.

Statement of Potential and further work

The assemblage provides particularly good dating evidence for late Roman occupation, especially for the mid to late 4th century and, to a lesser extent, during the mid to late 2nd to the 3rd centuries. It is clear from Table 2, below, that this site is of relatively high status, based on the presence of imported samian wares, and wine and olive oil amphorae, together with a good proportion of colour-coated, fine wares from the Nene Valley kilns.

This site clearly shows the interface between traded wares manufactured at the Swanpool kilns, near Lincoln, and those from South Lincolnshire, mainly Nene Valley products. The Swanpool products account for a high proportion of the late 3rd to 4th century grey wares as well as a mortarium and oxidised ware. This is also reflected within the shell-tempered wares with a very small proportion of Dales ware from the North of the county and a similarly small amount from the South Midlands, but the bulk consists of South Lincolnshire wares. The latter contains small amounts of punctate brachiopods and occasional echinoid spines, amongst the more usual oyster shell.

Wares imported from other Romano-British manufacturing areas include Oxfordshire, Much Hadham, Mancetter Hartshill products and a probable Black-burnished sherd from either Doncaster or Dorset.

Table 2 - The Roman fabrics by sherd count and weight in gms.

Fabric	Code	Shs	%	Wt	%
Black-burnished 1	BB1?	1	0.17%	1	0.01%
Black-burnished 2	BB2	1	0.17%	11	0.15%
Misc. Colour-coat	CC	1	0.17%	2	0.03%
Dressel 20 amphora	DR20	2	0.35%	114	1.56%
Dales type ware	DWSH	14	2.43%	227	3.11%
Gauloise 4 amphora	GAU4	1	0.17%	24	0.33%
Fine grey ware	GFIN	4	0.70%	8	0.11%
Micaceous grey ware	GMIC	1	0.17%	1	0.01%
Grey Ware	GREY	286	49.74%	4492	61.52%
Fairly fine grey ware	GRFF	1	0.17%	4	0.05%
Sandy grey ware	GRSA	2	0.35%	21	0.29%
Grey with sandwich core	GRSAN	1	0.17%	54	0.74%
Grey minimum shell	GYMS	4	0.70%	36	0.49%
Local coarse ware	LCOA	1	0.17%	32	0.44%
Much Hadham ware	MHAD	1	0.17%	1	0.01%

Mancetter Hartshill mortaria	MOMH	1	0.17%	6	0.08%
Nene Valley mortaria	MONV	1	0.17%	11	0.15%
Swanpool mortaria	MOSP	1	0.17%	64	0.88%
Nene Valley colour-coat	NVCC	60	10.43%	617	8.45%
Nene Valley cream	NVCR	4	0.69%	63	0.86%
Nene Valley cream w. grey slip	NVCRG	2	0.35%	15	0.21%
Nene Valley coarse grey ware	NVGW	7	1.21%	66	0.90%
Nene Valley grey ware	NVGWC	20	3.48%	155	2.12%
Nene Valley sand-tempered grey	NVGY	3	0.52%	31	0.43%
Misc. Oxidised	OX	24	4.17%	251	3.44%
Fine misc. oxidised	OXF	1	0.17%	2	0.03%
Oxford red colour-coat	OXRC	1	0.17%	10	0.14%
Parchment ware	PARC?	2	0.35%	22	0.30%
Parisian type ware	PART?	1	0.17%	15	0.21%
Pink ware	PINK?	2	0.35%	11	0.15%
Central Gaulish samian	SAMCG	15	2.60%	60.5	0.83%
East Gaulish samian	SAMEG	1	0.17%	4	0.05%
Les Martres de Veyre samian	SAMLM	2	0.35%	13	0.18%
South Gaulish samian	SAMSG	2	0.35%	5	0.07%
Misc. shell-tempered	SHEL	63	10.96%	268	3.67%
Fine misc. shell-tempered	SHELF	5	0.87%	29	0.40%
South Lincs. shell	SLSH	17	2.95%	372	5.09%
Fine South Lincs. shell	SLSHF	11	1.91%	88	1.21%
South Midlands shell	SMSH	5	0.87%	77	1.05%
Late Roman rilled ware	SPIR	1	0.17%	5	0.07%
Swanpool oxidised	SPOX?	2	0.35%	13	0.18%
	TOTAL	575	100.00%	7301.5	100.00%

In common with most late Roman sites the bulk of the forms are jars, largely used for cooking, or similar closed vessels, with almost three times as many jar forms as bowls and dishes. Amphorae are rare, but the presence in this area suggests a higher status site. Other storage vessels are represented by a small proportion of larger jars or bowls. Flagons are rare, which would be expected during the later Roman period, but beakers appear to be well-represented, although they tend to break into small fragments. Other vessels of note include mortaria from three different sources, Mancetter Hartshill, Swanpool and the Nene Valley, a strainer base pierced before firing and a 'castor' box and lid, and a samian cup form (see Table 3, below).

Appendix 2, which gives a detailed listing of the individual form types (*thsafm.xls*), shows that late Roman forms are well-represented, including a Swanpool beaker type C13, single and double lid-seated jars, wide-mouthed bowls with elongated necks, and an inturned bead and flange bowl. Other late forms include pentice-moulded and folded beakers with scale-decoration as well as bead and flange bowls, and collared jars.

Table 3 - The Roman forms by sherd count and weight in gms

Form	Shs	%	Wt	%
Misc. body sherds	135	23.48%	800.5	10.96%
Amphora	3	0.52%	138	1.89%
Flagon	4	0.69%	32	0.44%
Beakers	66	11.47%	265	3.62%
Cup Dr. 33	3	0.52%	24	0.33%
Closed form mainly jars	123	21.39%	1164	15.94%
Jars	124	21.55%	1385	18.99%
Storage & large jars	18	3.14%	1190	16.29%
Bowl	50	8.69%	1598	21.93%
Bowl or dish	24	4.17%	414	5.67%

Dish	19	3.29%	160	2.20%
Strainer	1	0.17%	32	0.44%
Lids	2	0.34%	14	0.19%
Mortaria	3	0.52%	81	1.11%
Total	575	100.00%	7301.5	100.00%

The assemblage as a whole should be viewed within its archaeological context and phasing. The moderate, but varied shell-tempered wares would benefit from futher analysis to isolate the precise sources as part of a larger study of shell-tempered wares in the county of Lincolnshire. Within the Nene Valley assemblage there is a distinctive group of Nene Valley grey wares with much coarser quartz inclusions (NVGWC), possibly products of the Upper Nene Valley, which require further analysis. Ten vessels have been selected for drawing for both dating and intrinsic value (see Table 4, below, Fig.27).

Table 4 - Vessels for illustration

Context	Fabric	Form	Dec	Dwg	Comments	She	WT
1100	GRSAN	JLS		D1	RIM NECK; 17D;SPOOLISH	1	54
1406	NVGWC?	BTR		D2	RIM GIRTH	2	20
1202	GREY	BWM		D3	RIMS J;CF SPOOL	2	255
1202	MOSP	MBF		D4	RIM UPPER WALL TRITS NR LOST	1	64
1202	GREY	BIBF		D5	RIM GIRTH	1	68
1202	GREY	JNN		D6	RIM SHLDR	1	30
1418	SLSHF	JLS	WM	D7	RIM RED BN PB; FS	1	9
1801	OXRC	BNK	ROUL	D8	RIM LS;CF YOUNG TYPE 75.2 325-400+	1	10
1904	SMSH	JCUR		D9	RIM	1	15
1901	MONV	M		D10	BS; REUSED	1	11

Storage and Curation

The pottery should be retained for further study, and the friable, probable Iron Age sherds should be stored in acid free tissue.

The date range of the Roman pottery by context - thsadate.xls

Context	Sherds	Date
1	2	3-4C/POSTRO
210	5	EM2C
401	3	M2-3C
404	5	ML2
406	3	IA OR RO
600	1	3C+/POSTRO
804	1	3-4C
826	2	L3-4C
828	1	ML2
832	3	EM2
907	4	IA-EROM
1000	6	M3-4C/POSTRO
1100	12	ML4C
1101	8	M2-3C
1102	3	3C+
1103	2	3C+
1104	7	3-4C
1202	21	ML4C
1205	3	2-3C+
1302	4	M3-4C
1303	15	4C/POSTRO
1311	2	L1-2C/POSTRO
1315	1	RO
1339	1	RO
1340	4	M3-4C
1406	29	4C/POSTRO
1408	1	3-4C/POSTRO
1414	1	3-4C
1416	1	3-4C
1418	4	M2-3C
1420	8	M2-3C/POSTRO
1425	3	M2-3C
1527	3	3-4C
1529	2	M2-3C
1600	6	LIA-EROM/POSTRO
1601	1	2C+
1605	1	IA-EROM
1610	1	2C+
1612	12	2C+
1614	4	4C
1616	2	IA -EROM
1701	2	3-4C
1703	2	3-4C
1709	2	3-4C
1800	10	M3-4C
1801	17	M4/POSTRO
1803	1	L3-4C
1805	10	M3-4C
1807	4	M3-4C
1808	11	3C+/POSTRO
1809	21	ML3C
1812	3	2-3C
1820	9	3C
1823	4	4C
1825	14	ML3C/POSTRO

The date range of the Roman pottery by context - thsadate.xls

1901	215	4C/POSTRO
1902	8	M3-4C
1903	5	L3-4C
1904	31	ML4C/POSTRO
1914	2	2-3C/POSTRO
1916	2	3C+/POSTRO
1917	3	M2-3C+
2001	1	3C+

Form	Code	Shs	%	Wt	%
		135	23.48%	800.5	10.96%
Amphora	A	3	0.52%	138	1.89%
Flagon	F	4	0.69%	32	0.44%
Beaker	BK	32	5.57%	132	1.81%
Swanpool type C13 beaker	BKC13	1	0.17%	12	0.16%
Funnel-necked beaker	BKFN	3	0.52%	10	0.13%
Folded beaker	BKFO	6	1.04%	11	0.15%
Scale decorated folded beaker	BKFOSC	2	0.35%	3	0.04%
Pentice moulded beaker	BKPM?	1	0.17%	3	0.04%
Jar or beaker	JBK	21	3.65%	94	1.29%
Cup Dr.33	33	3	0.52%	24	0.33%
Closed form	CLSD	123	21.39%	1164	15.94%
Cooking pot	CP	15	2.60%	141	1.93%
Jar	J	72	12.52%	640	8.77%
Jar or bowl	JB	12	2.09%	132	1.81%
Curve rim jar or bowl	JBCUR	1	0.17%	15	0.21%
Collared rim jar	JCR	2	0.35%	49	0.67%
Curve rim jar	JCUR	11	1.91%	148	2.03%
Double lid seated jar	JDLS	1	0.17%	32	0.44%
Dales type jar	JDW	2	0.35%	11	0.15%
Everted rim jar	JEV	1	0.17%	10	0.14%
Lid-seated jar	JLS	3	0.52%	70	0.96%
Narrow-necked jar	JNN	4	0.70%	137	1.88%
Large jar	JL	2	0.35%	372	5.09%
Large jar or bowl	JBL	9	1.57%	265	3.63%
Storage jar	JS	7	1.22%	553	7.57%
Bowl	B	1	0.17%	17	0.23%
Bowl or dish	BD	21	3.65%	353	4.83%
Bowl as Dr.31	B31	1	0.17%	13	0.18%
Bowl Lincoln type 334	B334?	1	0.17%	15	0.21%
Bowl as Dr.36	B36	2	0.35%	20	0.27%
Expanded rim bowl	BEXR	2	0.35%	47	0.64%
Bead & flange bowl	BFB	5	0.87%	261	3.57%
High bead & flange bowl	BFBH	1	0.17%	21	0.29%
Flanged bowl	BFL	2	0.35%	11	0.15%
Groove-rimmed bowl	BGR	2	0.35%	21	0.29%
Hemispherical bowl	BHEM	3	0.52%	27	0.37%
Inturned bead & flange bowl	BIBF	1	0.17%	68	0.93%
Necked bowl	BNK	2	0.35%	42	0.58%
Triangular rim bowl	BTR	3	0.52%	25	0.34%
Wide-mouth bowl	BWM	21	3.65%	1004	13.75%
Castor box	BX	1	0.17%	3	0.04%
Groove rim dish	DGR	3	0.52%	51	0.70%
Plain rim dish	DPR	3	0.52%	60	0.82%
Dish Dr.18	18	1	0.17%	2	0.03%
Dish Dr.18/31	18/31	1	0.17%	10	0.14%
Dish Dr.18/31-31	18/31-31	5	0.87%	24	0.33%
Dish Dr.31 etc	31 etc	6	1.04%	13	0.18%
Bowl Dr.37	37	1	0.17%	3	0.04%
Bowl Dr.81	81?	1	0.17%	4	0.05%
Open form	OPEN	3	0.52%	61	0.84%
Strainer	STR	1	0.17%	32	0.44%
Lid	L	1	0.17%	10	0.14%
Castor box lid	LBX	1	0.17%	4	0.05%
Mortaria	M	2	0.35%	17	0.23%

Bead & flange mortaria	MBF	1	0.17%	64	0.88%
	TOTAL	575	100.00%	7301.5	100.00%

Appendix 3

Addendum - Extra pottery

A further 27 sherds, weighing 206 gms came from two Contexts 708, 1535 1801and 1805, which were located after the completion of this report and are included at the end of the Roman pottery archive (thsa01.xls). Contexts 1535 and 1801 also produced post-Roman sherds suggesting that the Roman material may have been redeposited. This is borne out to some extent by the low, average sherd weight of 8 gms. .A single grey ware body sherd dated to the Roman period was retrieved from context 708. Context 1535 contained pottery of broadly 3rd century date based on the presence of a Nene Valley colour-coated closed form in the generally earlier cream fabric, and a fragment from a probable wide mouthed bowl in greyware. Context 1801 is securely dated to the 4th century by the presence of two greyware, bead and flanged bowls. A beaker rim sherd of Nene Valley colour coated ware, dated to the late 2nd to mid 3rd century, was retrieved from context 1805.

Addendum - Extra pottery

CONTEXT	FABRIC	FORM	DEC	VESSNO	COND	COMMENTS	SHS	WT
708	GREY					BS	1	5
1535	NVCC	CLSD				BS JAR OR FLAGON;CR FAB; BLK CC	1	15
1535	NVGWC?	J				BS	1	3
1535	BB1	CP				BS	1	3
1535	GREY	BWM?			ABR	BS	1	12
1535	GYMS	CLSD			ABR	BS	1	1
1535	ZZZ					SMALL GROUP; MIXED?		
1535	ZDATE					3C/POSTRO?		
1801	GREY	BFB			ABR	RIM GIRTH	1	24
1801	GREY	BFB				RIM UPPER WALL	1	13
1801	NVCC	BKPM?				RIM NECK;LFAB; BN CC	1	6
1801	GREY	CLSD				BSS MISC	4	18
1801	GREY				VABR	BSS	3	13
1801	GREY	OPEN				BS	1	7
1801	GREY	J				BS SHLDR GROOVE	1	15
1801	GREY	JBK				BS THIN	1	1
1801	GREY	CP	LA			BS	1	4
1801	GREY	JL				BS THICKER	1	8
1801	GREY	OPEN			VABR	BASE	1	8
1801	SLSH	JL				BS MIN PB;GRY CORE BN SURFS	1	39
1801	GYMS	J		1?	ABR	BSS	2	6
1801	SHEL	JLS				RIM; BLK NO PB; UNUSUAL	1	4
1801	ZDATE					4C/POSTRO		
1805	NVCC	BK				RIM	1	1
							26	206

Appendix 4

The Coins

By P.J.Casey

References. Coins are catalogued to the appropriate volume of Mattingly, H. & Sydenham, E.A. The Roman imperial coinage. London, 1923-81 (RIC) using the following system:

Volume number/ Mint/ Assigned catalogue reference. Thus 8TR 37 means RIC Vol. 8. Mint of Trier. Coin number 37.

Issues which are not adequately dealt with in RIC are catalogued by reference to Part 2 of Carson. R.A.G, Hill. P.V. and Kent, J. P.C. The late Roman bronze coinage . London, 1968. (LRBC2.)

The issuers name in parentheses indicates that the coin is a contemporary copy, where possible the original is identified and noted as 'copy of …'; 'copy as…' indicates a general prototype. Dates are given for the prototype coin, offering a TPQ for the copy.

Condition at time of loss is given with reference to obverse and reverse:
UW- Unworn; SW – Slightly worn; W – Worn; VW – Very worn; C - Corroded

No./Sf.	Ctx.No.	Issuer	Type	Ref.	Date	Cnd
1/18	001	Constantine 1	Obv. [VRBS ROMA] Rev. Wolf and twins	as. 7TR.522	330-5	c/c
2/9	1100		Obv. CONSTANTINOPOLIS Rev. Victory on prow	as 7TR 523	330-5	uw/c
3/19	1902	Constantine, posth.	Obv. [DIVO CONSTANTINOP] Rev. [AETERNA PIETAS]	as 8TR 37	337-41	sw/w
4/12	1000	Constantine, house	Obv - Rev. [GLORIA EXERCITUS]	copy as 8TR 117	337+	c/c
5/14	800		Obv. - Rev. [GLORIA EXERCITUS]	RIC 8 -	335-41	c/c
6/3	1600	Constantine II, caes.	Obv. CONSTANTINVS IVNNC Rev. BEATA TRAN –QVILLITAS	7TR ?	325-8	uw/uw
7/11	1421	Constans	Obv. CONSTAN-SPFAVG Rev. VICTORIAEDDAVGGQNN	8TR 181	346-8U	w/uw
8/4	912		Obv. CONSTAN-SPFAVG Rev. VICTORIAEDDAVGGQNN	8TR 196	346-8	sw/uw

9/26	1000		Obv. [CONSTAN-SPFAVG] Rev. [VICTORIAEDDAVGGQNN]	as 8TR 196	346-8	Frag.
10/2	1800	'Constans'	Obv. CONSTAN [S] PFAVG Rev. GLORI-AEXER-CITVS	copy as 8TR 117	337+	uw/uw
11/1	1601	Constantius II	Obv. [FLIVLCONST] ANTIVS AVG Rev. GLOR-IAEXERC-ITVS	8TR 40	337-41	sw/sw
12/6	1500	'Constans/ Constantius II	Obv. CONSTAN[-] Rev. GLORI-AEXERC-ITVS	Copy as 8TR 117	337+	sw/uw
13/5	1800	Helena	Obv. FLIVLHE-LENAEAVG Rev. PA-XPV-BLICA	8TR 63	337-41	sw/sw
14/20	1902	Valentinian I	Obv. DNVALENTINI-ANVSPFAVG Rev. GLORIARO-MANORVM	LRBC2.338	367-75	uw/uw
15/13	1421		Obv. DNVALENTINI-ANVSPFAVG Rev. SECVRITAS REIPVBLICAE	LRBC.2. 712	367-75	w/vw
16/17	1500	Valens	Obv. DNVALEN-SPFAVG Rev. SECVRITAS REIPVBLICAE	LRBC2. 340	367-75	w/w
17/16	1100		Obv. DNVALEN-SPFAVG Rev. SECVRITAS PREIPVBLICAE	LRBC2. 528	367-75	uw/uw
18/15	1000		Obv. DNVALEN-SPFAVG Rev. SECVRITAS REIPVBLICAE	LRBC2. 528	367-75	vw/w
19/8	1421		Obv. DNVALEN-SPFAVG Rev. SECVRITAS REIPUVBLICAE	LRBC2.578	367-75	w/w
20/21	1100		Obv. DNGRATIA-NVSPFAVG Rev. VOT/XV/MVLT/XX	LRBC2. 378	378-83	uw/uw
21/7	912		Obv. DNTHEOD-OSIVSPFAVG Rev. SALVSREI-PVBLICAE	as LRBC2. 797	388-92	uw/c
22/10	001	George V.	Obv. GEORGIVS V DEI GRA BRITT: OMN: REX FID:DEF:IND:IMP Rev. HALF PENNY		1923	w/w

Comment

This small assemblage exhibits no material from the mid – late 3rd century and, as such, since such coins normally constitute about a third of finds on RB sites, precludes 3rd century activity on the area from which it was gathered. The absence of copies of the issues of 348-60 – Fel Temp Reparatio/falling horseman series -is to be noted since it might suggest that site activity is largely confined to the second half of the 4th century. However, a small

sample such as this does not offer a statistically appropriate conspectus and it would be safer to expect site activity from at least the 330's to the end of the 4th century or beyond.

Appendix 5

The wood

By Maisie Taylor

Two pieces of wood from the excavation were examined. Both are roundwood and both are possibly modified.

200 Roundwood with side stems, broken when excavated, bark attached. At least one of the side stems may have been trimmed off and one end appears to have been modified, probably from three directions to a tapering point. The quality of preservation is not particularly good, and no facets survive.
Length: 390mm (min) Diameter: 24mm

208 Roundwood with heel, broken when excavated, some bark attached and heartwood rot in heel. The heel is possibly worn so that no evidence for working survives, but there is clear evidence for working on other end. This end has been shaped to a blunt point from three directions with reasonably clear, smooth facets
Length: 400mm (min) Diameter: 22mm

The wood is not well enough preserved for detailed analysis but both pieces are from trees with diffuse porous wood, such as willow, poplar, alder, hazel etc. This category of wood covers most of the small tree species which were once common all over the fens. The facets, such as they are, are not clearly enough preserved to be able to distinguish exactly what type of tool may have been used. There is, however, nothing about them to suggest that they are not prehistoric.

Appendix 6

The Metal Finds

By Jane Cowgill

Introduction

A total of 112 registered finds and three pieces of slag were submitted for recording by Archaeological Project Services who undertook the evaluation at the Hoplands in Sleaford in advance of the land being developed for housing. The finds consist of nine copper-alloy objects, 15 of lead and 64 iron (including 45 nails). Three additional finds were recorded from the environmental samples and two fragments of slag. The objects were examined before they had been X-raydiographed and therefore the details recorded, particularly for the iron objects, are rather cursory. The objects are currently stored in Stewart boxes with non-indicating silica gel and humidity indicator strips.

Catalogue of the Registered finds in Context order

Maximum measurements are given.

Context 001, RF 22, Copper-alloy and ?lead stud, Roman.
Slightly domed stud head; diameter 28mm.

Context 001, RF 23, Copper-alloy strip.
Roughly cut thin strip with crude perforation towards one end; 21mm x 16mm.

Context 001, RF 29, Copper-alloy token, Modern.
Inscribed: L / LCM / M
With on the reverse: 'SPECIAL AWARD' and around the margins 'VALUE IN KIND ONLY·VALUE IN KIND ONLY·'

Context 001, RF 33, Lead waste.
3 pieces of casting spill, weight 111g.

Context 001, RF 40, Iron object.
Cast disc with straight opposing sides; diameter 92mm.

Context 001, RF 41, Iron nails.
2 nails; ?complete length 54mm.

Context 200, RF 42, Iron sheet, Post Medieval or Modern.
Shaped with one perforation; 97mm x 46mm x 1mm.

Context 210, RF 80, Sample 11, Glass.
Very small fragment of thin clear glass, probably from a vessel.

Context 406, RF 43, Iron nail.
Length 70mm.

Context 500, RF 44, Iron rod, Post Medieval or Modern.
Diamond head, square then rectangular sectioned shaft; length 105mm.

Context 800, RF 34, Copper-alloy object with iron core, Modern.
Cylindrical object with outer screw thread; height 10mm, diameter 9mm.

Context 912, RF 24, Natural ironstone ball.
Weight 1g. Discarded.

Context 912, RF 39, Lead waste.

Casting spill; weight 3g.
Context 912, RF 45, Iron nail.
Length 50mm.

Context 1000, RF 25, Copper-alloy ring.
Crudely cast; slightly irregular – small buckle? Diameter 13mm, internal diameter 8mm.
Context 1000, RF 26, Copper-alloy object.
Irregularly cast small oval disc; 7mm x 6mm.
Context 1000, RF 35, Lead waste.
6 pieces of casting spill; weight 73g.
Context 1000, RF 46, Iron nail, Post Medieval or Modern.
Length 77mm.
Context 1000, RF 47, Iron nail.
Large head; corroding.
Context 1000, RF 48, Iron object.
Corroded.
Context 1000, RF 49, Iron rod.
Square section, corroded; 78mm x 5mm x 5mm.
Context 1000, RF 50, Iron rod.
Square section, corroded; 28mm x 8mm x 8mm.
Context 1000, RF 51, Iron bar.
Square section, tapers towards one end; 80mm x 10mm x 3mm.
Context 1000, RF 52, Iron horseshoe nail.

Context 1100, RF 31, Lead sheet.
Torn edges; weight 7g, 33mm x 22mm x2mm.
Context 1100, RF 37, Lead.
Irregular flattish piece, ?waste ?weight. Weight 5g.

Context 1301, RF 53, Iron object.
Cast?

Context 1303, RF 54, Iron object.

Context 1421, RF 36, Lead waste.
Flat casting spill; weight 11g.
Context 1421, RF 55, Iron nails.
2 nails, both small. Length of one complete nail 40mm.
Context 1421, RF 56, Iron horseshoe nails.
3 nails.
Context 1421, RF 57, Iron link.
Loop with splayed ends; 42mm x 24mm x 9mm.
Context 1421, RF 58, Iron bar.
Similar to RF 51; length 78mm.
Context 1421, RF 59, Iron object.
Round shaft tapers to flat damaged head, ?key. 98mm x 15mm x 15mm.

Context 1500, RF 30, Copper-alloy sheet strip.
Damaged strip with clipped decorative triangular terminal; dress fitting? Length 29mm.

Context 1527, RF 60, Iron object.

Nail?

Context 1600, RF 27, Copper-alloy ring, Post Medieval.
Regular cast ring; diameter 26mm, internal diameter 22.5mm.

Context 1609, RF 28, Copper-alloy button, Post Medieval.
Cast and plated; diameter 30mm.

Context 1614, RF 81, Sample 14, Iron strip.
18mm x 5mm x 3mm.

Context 1800, RF 38, Lead waste.
Casting spill; weight 9g.
Context 1800, RF 61, Iron nail.
Complete; length 65mm.

Context 1801, RF 62, Iron nail.
Complete; length 30mm.

Context 1802, RF 63, Iron nail.
Complete; length 70mm.
Context 1802, RF 64, Iron nail.
Complete; length 95mm.

Context 1805, RF 65, Iron nails.
9 nails; lengths of the complete examples 72mm; 65mm; 55mm; 40mm; 30mm.
Context 1805, RF 66, Iron nail, Modern.
Complete; length 75mm.
Context 1805, RF 67, Iron nails.
6 nails one with wood attached; lengths of the complete examples 57mm; 45mm; 42mm; 38mm.
Context 1805, RF 68, Iron object.
Nail or staple?
Context 1805, RF 69, Iron object.
Wood attached.

Context 1808, RF 70, Iron nail.
Large, wood attached.

Context 1809, RF 71, Iron nails.
7 nails, 2 have wood attached; lengths of the complete examples 100mm; 90mm x 2; 85mm; 70mm; 48mm; 45mm.

Context 1901, RF 72, Iron nails.
2 nails, 1 with wood attached; lengths 110mm; 65mm.
Context 1901, RF 73, Iron bar.
Round section? 35mm x 9mm x 8mm.
Context 1901, RF 74, Iron object.
Context 1901, RF 82, Sample 18, Iron ?nail shank.
Context 1902, RF 32, Lead sheet.
Casting spill? Weight 3g, 33mm x 9mm x 2mm.

Context1902, RF 75, Iron nail.
Length 112mm.
Context 1902, RF 76, Iron object.
Tapering strip; length 54mm.
Context 1902, RF 77, Iron and Aluminium screw top; Modern.
?Petrol cap or ?Jerry can lid; diameter 58mm (2.25 inches).

Context 1903, RF 78, Iron nail.
Complete; length 70mm.

Context 1904, RF 79, Iron nail.
Complete, length 55mm.

Catalogue of the slag

Context	Type	Count	Weight	Craft	Fuel	Condition
1324	HB	1	147g	FESMITH	CHARCOAL	ABRADED
1529	HB	1	75g	FESMITH	CHARCOAL	ABRADED
1901	HB	1	85g	FESMITH	COAL + CHARCOAL?	
1912	FAS	1	1g			

HB – Plano-convex slag accumulation, commonly known as a hearth bottom.
FAS – Fuel ash slag.

Discussion

The majority of the finds are in a reasonable condition although some of the iron objects are too corroded to identify without the aid of X-radiographs. Most of the objects are probably either Post Medieval or Modern in date although the copper-alloy and ?lead domed stud (RF 22, context 001) is probably Romano-British and the crudely cast ring or ?buckle (RF 25, context 1000) may be of medieval date. It is not possible to date any of the unidentified iron objects although object 59 (context 1421) vaguely resembles the form of the shaft and broken bit of a Romano-British key; this can only be confirmed after the X-radiograph has been examined.

The three pieces of slag are all hearth bottom fragments, generated during the smithing of iron. The two from contexts 1324 and 1529 probably pre-date the Post-Medieval period because charcoal, rather than coal, was the fuel used in the smithing hearth.

Appendix 7

The Other Finds

By Hilary Healey, Rachael Hall, Tom Lane and Gary Taylor
with comments by Jane Cowgill and James Rackham

Provenance
The material was recovered from varied deposits across the site. The Prehistoric, Iron Age/Early Roman finds were recovered from trenches in the eastern half of the site whilst the Roman dated remains were concentrated to the west.

Most of the pottery was made in moderate proximity to Sleaford, at Stamford and Bourne to the south. Some of the later pieces may also be fairly local though there are fragments from Nottingham and Staffordshire. The brick and tile is likely to be relatively local to Sleaford, with the Roman examples perhaps made at nearby Heckington where there are known tile kilns of the period.

Range
The range of material is detailed in the table.

Fragments of pottery of probable 10th-12h century date is the earliest material recovered, though there is an equal quantity of slightly later material, dating from the 13th-14th century. There is also a moderate amount of later post-medieval material, including pottery, clay pipe, brick/tile and glass. Mollusc shell was also retrieved. Other artefacts and environmental and faunal remains are reported elsewhere.

Table 1: Medieval and Later Pottery

Context	Description	Context Date
001	1x Midlands Purple-type ware, 17th-18th century	17th-18th century
	1x Stamford ware, 10th-12th century	
410	1x red painted earthenware, black glazed	18th-early 19th century
500	2x Nottingham salt-glazed stoneware, separate vessels, 18th century	19th-20th century
	1x blue and white transfer printed tableware, 19th century	
	1x Mocha ware, 2 linked pieces, 19th century	
	1x plant pot, 2 linked pieces, 19th-20th century	
600	4x blue and white transfer printed pottery, 19th century	19th century
	1x Staffordshire slipware, abraded, 18th century	
	1x plant pot, ?19th century	
1303	9x Bourne A ware jug, in lots of 2 and 4 linking pieces, 13th- 14th century	13th-14th century
	3x Bourne A ware, 12th-14th century	
	1x Nottingham ?splash glazed ware, 12th-14th century	
	1x Stamford ware, 10th-12th century	
1311	1x Stamford ware	10th-12th century
1406	4x Stamford ware, separate vessels, 1 sooted	10th-12th century

1600	1x red painted earthenware, black glazed	18th-early 19th century
1700	1x Nottingham salt-glazed stoneware	18th century
1801	1x Staffordshire black ware	17th-18th century
1825	2x Stamford ware, 10th-12th century 1x Midlands Yellow ware, 17th-18th century	17th-18th century
1901	3x Stamford ware, separate vessels, 10th-12th century	13th-14th century
	4x Bourne A ware, 2 link, 3 separate vessels, 13th-14th century	
1904	1x Bourne D ware	16th-17th century
1914	11x Bourne A ware jug, in two groups of 5 and 2 linking pieces	13th-14th century
1916	1x Bourne A ware, 13th-14th century	13th-14th century
	1x Stamford ware, 10th-12th century	

The two largest groups of medieval pottery, from (1303) and (1914), largely comprise broken single vessels, both of them jugs made at Bourne.

Although not a substantial quantity, the medieval pottery occurs as unworn pieces, some of them quite large. As such, these are not likely to have been moved far from their original place of deposition, and do not appear to have experienced much post-depositional disturbance. The medieval artefacts therefore reflect some activity of the period on the site. However, the quantity of material is not large, which suggests that it does not constitute settlement debris but derives from some other, non-habitation, activity.

Table 2: Brick/Tile

Context	Description	Date
600	1x brick/tile	
1101	1x brick, ?waster	?Roman
1301	1x tile, abraded, 15mm thick, Roman	?Roman
	1x tile, 18mm thick	
1303	1x tile, 18mm thick	
	1x brick/tile	
1311	1x natural iron panning	
1324	4x glazed ridge tile, 3 link	13th-14th century
1334	1x machine-made brick, 19th-20th century	19th-20th century
	1x brick/tile	
	1x brick/tile, Roman	
	2x tile, 1 is 22mm thick	
1612	1x probable daub fragment. Fired clay; moderately hard fired; Buff exterior, dark grey interior;'Internal' surface contains imprint of two twigs or reeds, one 5mm in diameter, the other unmeasurable.	Roman
1701	1x tile/brick, mortar adhering, 35mm thick	Roman

1801	9x fired clay, very small amorphous fragments	
1901	1x tile, with finger tip 'signature', 25mm thick, Roman	Roman
	1x tile, very smooth upper surface, 188mm thick, Roman	
	4x brick/tile	
1917	1x tile, 25mm thick	Roman

The glazed ridge tile from (1324) is probably a single object and is likely to have derived from a higher status medieval structural, possibly the medieval manorial complex at Old Place or perhaps the church of St. Giles, both located a little to the west of the present investigation site.

Although some of the brick/tile is Roman there are no unequivocal *tegulae* or *imbrices* roof tiles, and the quantity of the material as a whole is low. This perhaps suggests that buildings in the area did not have tiled roofs, or possibly that tiles were removed from the area for re-use elsewhere.

Table 3: Other Artefacts

Context	Description	Date
001	1x flint flake removed from core. Maximum dimensions 36mm x 23mm; cortex remains in one part of outer surface; adjacent patination removed by later working; three narrow (*c*.5mm) blade-like flakes removed. Possibly Neolithic	Neolithic
	1x flint broken blade flake 13mm wide x 20mm long (broken); ?Neolithic	
	1x flint broken blade-flake 15mm wide by 25mm long (broken); ?Neolithic	
513	1x flint leaf-shaped arrowhead, broken, heavily patinated; 15mm wide x 20mm long (broken); point intact	prehistoric
600	1x Swithland slate	post-medieval
602	1x coal	
	2x coke/cinder	
904	1x clay pipe stem, bore 5/64"	18th-19th century
1302	1x clay pipe stem, 2 linked pieces, bore 8/64"	17th century
1303	1x flint fragment, natural	
1408	1x burnt limestone	
1535	1x coal	
1801	1x burnt clay mould, in 2 linked pieces; very sandy fabric; orange oxidized outer surface, dark grey-black reduced inner surface; has one set of 3 round-sectioned grooves, each groove about 3mm diameter, and second set of round-sectioned grooves 4.5mm in diameter	
	1x burnt stone	
	1x clinker	
1808	1x burnt stone	

1812	1x stone, ?burnt	
1901	1x wine bottle glass, pale green, very heavy iridescence, post-medieval	post-medieval
	1x window glass, pale green, ?Roman	
	5x burnt limestone	
	2x natural limestone	

The mould from (1081) is part of an investment mould probably for the casting of a copper alloy object, though there are no obvious metallic traces on the fragments. There are two sets of round-sectioned linear grooves in groups of three and two. Both of the grooves in the set of two, and two of the set of three linear grooves, have fine longitudinal lines and may have been produced using reeds, rather than by the lost wax process. The group of 3 grooves are heavily reduced to a dark grey-black, caused by contact with molten metal. By contrast, the second set of two grooves is not reduced, and therefore was probably not used. Too little of the mould survives for the cast object to be definitively identified, though large pins, or a ribbed handle, are possible. Because such baked clay moulds are fragile and easily abraded or destroyed, the mould was probably deposited near the area of its use and is unlikely to have been disturbed much since.

The Swithland slate from (600) is probably post-medieval in date, as such material was not traded widely from its source in Leicestershire until the early 18th century, though it had been quarried in the Roman period and reached western Lincolnshire at that time (Ball and Jones 1976, 50-1).

Table 4: Mollusc Shell

Context	Species	Description
516	oyster, *Ostrea edulis*	1x shell, 64mm wide
820	fossil shell	1, in 2 linked parts
824	Lister's River snail, *Viviparus fasciatus*	1x shell
1000	mussel, *Mytilus edulis*	1x shell
1100	oyster, *Ostrea edulis*	1x shell fragment
1420	oyster, *Ostrea edulis*	1x shell, 60mm wide
1535	banded snail, *Helix nemoralis*	91x shells
1614	banded snail, *Helix nemoralis*	1x shell
1801	mussel, *Mytilus edulis*	4x shells
	whelk, *Buccinum undatum*	1x shell fragment
1901	oyster, *Ostrea edulis*	7x shells/fragments, between 43-48mm wide
1903	mussel, *Mytilus edulis*	1x shell fragment
1904	oyster, *Ostrea edulis*	1x shell fragment
	mussel, *Mytilus edulis*	1x shell
	banded snail, *Helix nemoralis*	3x shells

Several examples of marine mollusc shells, including oyster, mussel and whelk, were recovered and represent food waste. However, the banded snails and the single example of Lister's river snail lived in the area. Banded snails occur widely in calcareous regions and the river snail inhabits slow flowing hard rivers and was probably derived from the adjacent Slea (McMillan 1973, 124; 106). A very large quantity of banded snail shells from (1535) are

probably from molluscs that died during hibernation or rest in a drystone wall or stone pile. Most of the snail shells from (1535) can be discarded, as can the fossil shell from (820).

Condition
All the material is in good condition and present no long-term storage problems. Archive storage of the collection is by material class.

Documentation
There have been several previous archaeological investigations in the Hoplands area of Sleaford. These previous studies, which are the subjects of reports, have indicated that the present investigation site and the vicinity is an area of Romano-British settlement, with Iron Age, Saxon and medieval remains in proximity. Additionally, the present investigation site has been the subject of desk-based research that collated and examined the archaeological and historical evidence for the site and its vicinity, and geophysical survey which identified a number of predominantly linear magnetic anomalies of apparently archaeological origin. Details of archaeological sites and discoveries in the area are maintained in the files of the North Kesteven Heritage Officer and the Lincolnshire County Council Sites and Monuments Record.

Potential
Although in limited quantity, the medieval aspect of the assemblage is of moderate potential and indicates probable non-habitation activity at the site during the medieval period. The small quantity of flint work has some potential, particularly by supplementing previous discoveries of the prehistoric artefacts in the area. The post-medieval aspect of the assemblage has limited potential. Although a single object, the casting mould has moderate potential and indicates the production of metal objects at the site.

References

Ball, M. E. and Jones, M. D., 1976 'The Extractive Industries', in I. M. Evans (ed), *Charnwood's Heritage*, Leicestershire Museums, Art Galleries and Records Service

McMillan, N. F., 1973 *British Shells*

Appendix 8

The Radiocarbon Dates

By Beta Analysis Inc.

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 154684	9370 +/- 70 BP	-25.0* o/oo	9370 +/- 70* BP
SAMPLE : THSA01/19			
ANALYSIS : Radiometric-Standard delivery			
MATERIAL/PRETREATMENT : (wood): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal BC 8780 to 8450 (Cal BP 10730 to 10400)			
Beta - 154685	1660 +/- 50 BP	-19.0* o/oo	1760 +/- 50* BP
SAMPLE : THSA01/20			
ANALYSIS : Radiometric-Standard delivery (collagen analysis)			
MATERIAL/PRETREATMENT : (bone collagen): collagen extraction with alkali			
2 SIGMA CALIBRATION : Cal AD 130 to 400 (Cal BP 1820 to 1550)			

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: est. C13/C12=-25:lab. mult=1)

Laboratory number: **Beta-154684**

Conventional radiocarbon age[1]: **9370±70 BP**

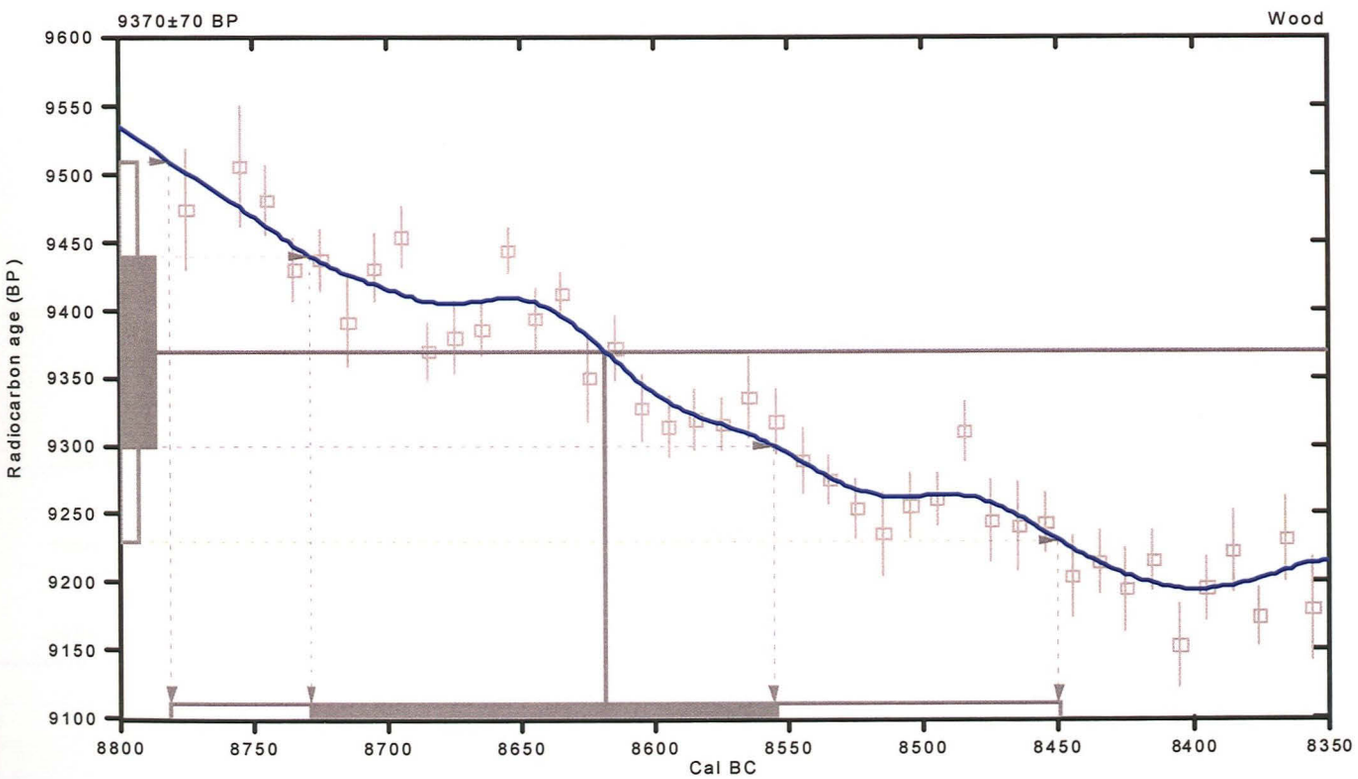
2 Sigma calibrated result: (95% probability) **Cal BC 8780 to 8450 (Cal BP 10730 to 10400)**

[1] *C13/C12 ratio estimated*

Intercept data

Intercept of radiocarbon age with calibration curve: Cal BC 8620 (Cal BP 10570)

1 Sigma calibrated result: (68% probability) Cal BC 8730 to 8560 (Cal BP 10680 to 10510)



References:

Database used

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: est. C13/C12=-19:lab. mult=1)

Laboratory number: **Beta-154685**

Conventional radiocarbon age[1]: **1760±50 BP**

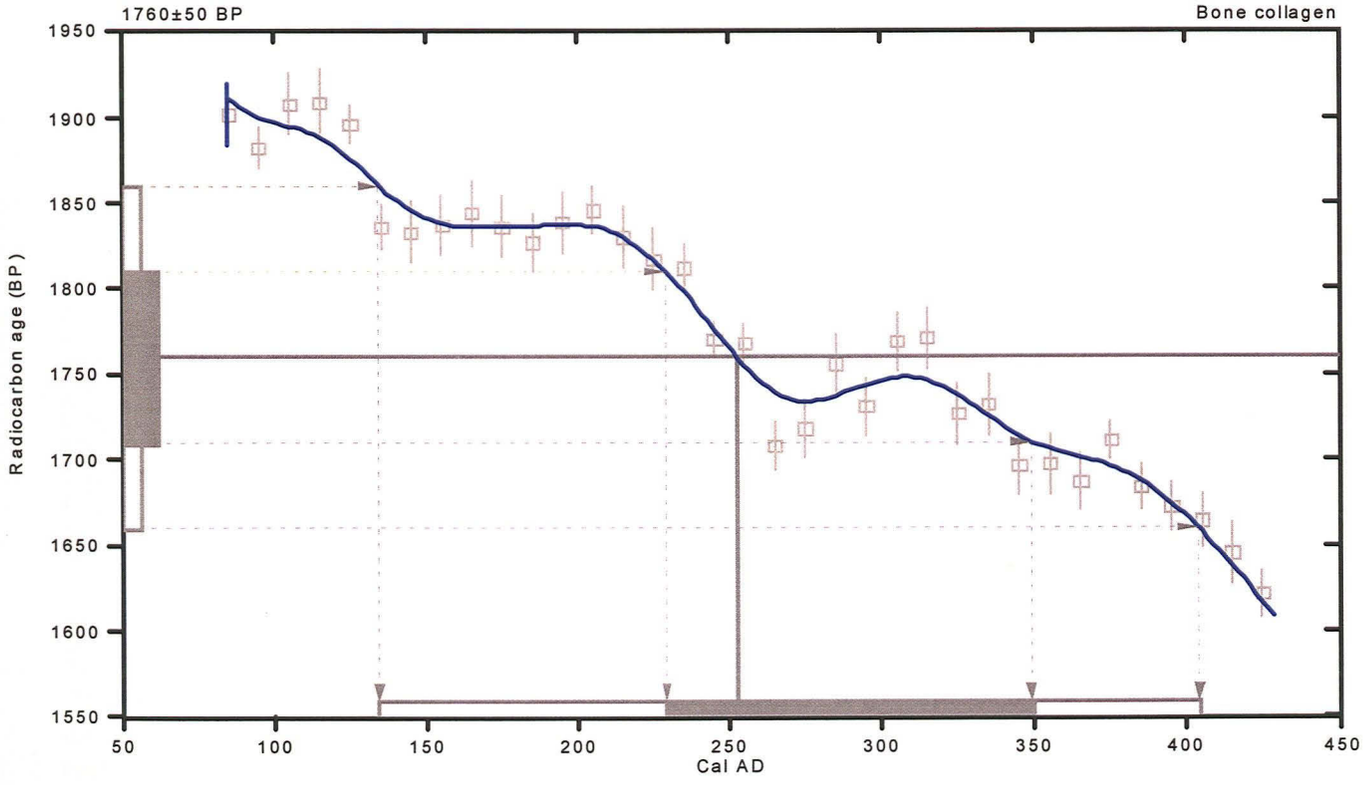
2 Sigma calibrated result: (95% probability) **Cal AD 130 to 400 (Cal BP 1820 to 1550)**

[1] C13/C12 ratio estimated

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 250 (Cal BP 1700)

1 Sigma calibrated result: (68% probability) Cal AD 230 to 350 (Cal BP 1720 to 1600)



References:

Database used

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii

INTCAL98 Radiocarbon Age Calibration

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Appendix 9

The Environmental Assessment

By J Rackham and A Snelling

Introduction

Evaluation excavations were conducted by a team from Archaeological Project Services on the site of a proposed development at The Hoplands, Sleaford. Twenty evaluation trenches were excavated and from these twenty samples were taken for environmental assessment (Table 1) and radiocarbon dating, and a small assemblage of animal bone was collected by hand. The deposits date from the Roman, late Saxon and post-medieval periods with a radiocarbon result indicating a mesolithic date for one of the deposits (see below).

Table 1: The Hoplands. Samples taken for environmental assessment and dating

sample no.	trench	context	sample vol. l.	sample wt kg	feature type	date
1	14	1425	10	11.25	Rubbish dump in pit 1419	?mid 2-3rd C
2	12	1209	18	20	Organic deposit in base ditch 1210	?Roman
3	2	208	20	14.25	Organic deposit, riverine	Mesolithic!
4	6	605	12	24.5??	Peaty layer	?Roman
5	5	513	3	4	Fill of ditch	?Prehistoric
6	5	502	4	5	Fill of ditch	Undated
7	3	309	11	13	Peaty band	10-12th C
8	18	1812	10	12	Fill of gully	2-3rd C
9	15	1529	12	14	Fill of ditch	Mid 2-3rd C
10	9	907	9	11	Fill of ditch	IA – early Roman
11	2	210	8	12.5	Grey sand layer	Early-mid 2nd C
12	7	708	6	8	Fill of ditch	Undated
13	10	1004	8	10	Fill of pit	Undated ?Roman
14	16	1614	9	11	Fill of ditch	4th C.
15	14	1425	9	10.5	Rubbish dump in pit 1419	mid 2-3rd C.
16	19	1901	9	10	Dark earth	Post-medieval
17	19	1912	5	5	Ashy deposit	Post-medieval
18	19	1901	6	7.5	Dark earth	Post-medieval
19	2	208			Wood for C14	Mesolithic
20	18	1811			Human bone for C14	? 3rd C.

Methods

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

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The flot of each sample was studied under a low power binocular microscope at a magnification of x10. The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The flot was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results

are summarised below in Tables 2 to 6.

Results

The samples vary across the site reflecting the character of the deposits and their location. On the floodplain of the river a number of the samples produced waterlogged plant remains, while those on the terrace produced only charred material and a few recent contaminants, including seeds, beetles and larvae.

Archaeological finds are concentrated in the sampled deposits in Trenches 3, 9, 14, 15, 16 and 19. The samples from Trenches 2, 5, 6, 7, 12 and 18 produced very little (Table 2). Finds included pottery, a few small fragments of brick/tile, a little fired earth, a few flakes of hammerscale, tiny fragments of coal and cinder and a few finds of iron and glass. Fuel ash slag was present in four of the samples. The frequency of hammerscale is low and although it indicates iron smithing debris entering the deposits it cannot be used to confidently indicate smithing on the site. The very small flots for all those samples with charred material is indicative of the low density of charcoal as well as other charred plant remains.

Mesolithic and prehistoric samples

A worked wooden post point from context 208 in Trench 2 has been radiocarbon dated to the early mesolithic. The sample from this context was waterlogged and produced a number of fragments of small roundwood and twigs, beetle fragments and seeds of a few taxa (Table 4). The latter give little indication of the environment although a full analysis of the plant and insect material is likely to yield some data on the deposit and its contemporary environment. The occurrence of the freshwater limpet *Ancylus fluviatilis* suggests a current and reinforces the field interpretation that these deposits were waterlain in a channel of the river.

The occurrence of bones of horse and small cattle in this context throws some doubt on the mesolithic date, the latter not being consistent with such an early date. The possibility that the radiocarbon determination has been affected by hard water error or some other factor should be considered.

Context 513, the fill of a ditch in Trench 5 has been provisionally assigned a prehistoric date. Apart from a little unidentifiable animal bone no finds were recovered from the sample, although charcoal and a few waterlogged seeds were present. The snail assemblage (Table 6) shows a grassland environment with a damp ground or marshy component but little evidence for the abundant aquatic taxa that are characteristic of many of the other samples from the site.

Roman samples

The majority of the samples (11) have been assigned a Roman date. Two of these had a small waterlogged component, samples 4 and 5 (Table 4), but produced insufficient material for any interpretation. The remainder produced a range of environmental evidence with charred spelt wheat and barley grain in evidence in a number of the samples and a few weed seeds. Only one sample, context 210 an early-mid 2nd century deposit, produced any chaff and then only two fragments.

Mussel and oyster shells, cattle and sheep bones reflect other dietary elements and the presence of eel vertebrae in rubbish pit 1419 (sample 1) suggests consumption of this species too. The density of these remains is low and only pit 1419 produced much bone or charred cereal grain.

These few remains suggest domestic food refuse is entering the deposits but not in any great quantity.

The other environmental evidence – the snails and small vertebrates, indicate an open country grassland environment in most samples with varying, and sometimes considerable, evidence for marshy and aquatic habitats. The peaty layer, context 605, and the organic ditch fill, context 1209, both have a large aquatic mollusc fauna, presumably reflecting a probably permanently waterlogged environment at the time of deposition. Both of these features are in trenches near the river and probably lay within the floodplain. However even the trenches on the terrace, such as 9, 14 and 18 also produced aquatic elements (Table 6) but whether these derive from animals dying *in situ* or being introduced with other material into the deposits cannot be substantiated. One sample produced a woodland or shaded habitat component, context 1614 a 4th century ditch fill, in Trench 16. This might indicate that the ditch bank was hedged.

Table 4: The Hoplands, Sleaford. Waterlogged plant remains in samples

	context	1209	208	605	513
	sample	2	3	4	5
	vol. soil (l)	18	20	12	3
	Vol. flot (ml)	300$	400$	4	3
Wood					
Small roundwood		++	+		
Twigs		++	+		
Bark		+			
Sambucus spp. wood	Elder	+			
Plant stems				+	
Seeds					
Sambucus sp.	Elder	+			
cf *Sambucus* sp.	Elder		+		
Ranunculus spp.	Buttercups	+			
Ranunclulus cf *flammula* L.	Lesser spearwort		+		
Polygonaceae	Knotgrasses			+	
Polygonum spp.	Knotgrass		+++		
Rumex spp.	Docks	++			
Poacecae	Grasses	+			
Carex spp.	Sedges		+		
Indet.		2		2	1
Other seeds.			2		
Other remains					
Moss		+			
Fibrous plant matter		++++			
Fibrous rootlets			+++		
Beetles			++		
Larvae			+		
Mites		+			

+ = 1-10; ++ = 11-50; +++ = 51-150; ++++ = >150 fragments
1 = 1-3; 2 = 4-10; 3 = 11-25; 4 = 26-50 –diversity of taxa in unidentified component
$ a small fraction of the flot only was sorted for this assessment

Late Saxon deposits

One sample, context 309, has been assigned a late Saxon date. This sample from a peaty band produced pottery, a little fired earth, hammerscale, animal bone and mussel shell. A few indeterminate charred cereal grains and a grass seed was the limit of the charred plant remains and the molluscan fauna was fairly impoverished.

Post-Medieval deposits
Three samples, 16-18, have been assigned a Post-Medieval date. These are dark earth deposits with ceramics of a wide date range and presumably include much debris from all periods represented in the deposits. These comprise the richest samples from the site with pottery, animal bone and brick/tile relatively abundant (Table 2) and sample 16 has the second highest density of charred cereal remains on the site (Table 5). All these samples come from trenches on the terrace and the relative absence of aquatic molluscs in the samples (Table 6) reflects a much drier grassland environment.

Undated samples
Neither of the undated samples produced any evidence that might help date the deposits. The environmental evidence was limited, but both samples included a strong aquatic element in the molluscan fauna probably due to the fact that they derive from trenches lower on the floodplain.

The excavated animal bone and shell
A small assemblage of 471 animal and human bone fragments and four human skeletons, represented by two or more bones, were hand recovered during the evaluation. The bones were identified and recorded following the procedures of the Environmental Archaeology Consultancy (see key attached to archive catalogue) and an archive catalogue produced.

The bulk of the excavated animal bone derives from Trenches 18 and 19 at the extreme south western end of the site. The next largest assemblage comes from Trench 13 suggesting that the majority of the occupation debris is being deposited in these south western trenches. A similar concentration in the samples from Trench 19 implies that the most intense focus of archaeological activity is fairly restricted to this area of the site.

The bone is reasonably well preserved with little of it showing any signs of severe erosion. While fragmentation has not been quantified the assemblages from Trenches 18 and 19 from the dark earth deposits, 1801 and 1901, are fairly extensively fragmented and include a much lower proportion of identifiable fragments (Table 7). Horse, cattle, sheep/goat, pig, dog, possible fox, chicken and goose have been identified. The material from context 208 is derived from domestic animals and belies the early mesolithic radiocarbon date.

Sheep bones outnumber those of cattle in the whole sample, and pigs are fairly poorly represented. Horse bones are numerous and the presence of several fairly intact long bones suggests that these derive from disturbed burials. A large sample of human bones, including four partial skeletons of two or more bones, three of these babies, and the five excavated burials from trenches 15, 17, 18 and 19 suggests that the site lies on a heavily disturbed burial ground. Human bones are recorded in Trenches 2, 8, 10, 17, 18 and 19 which suggests that the cemetery was probably laid out on the terrace in the south western corner of the site.

Table 7: Frequency of fragments of animal bone of different taxa in each context

Context	Human	Man?	Horse	Cattle	Cattle size	Sheep/ goat	Sheep	Sheep size	Pig	Dog	Fox?	Chicken	Goose	Unid. Bird	Unident-ified
200			1	1	2			3							
208			3	1											
210	1		1		1	1									
304			2												
522					1										
600						1									
602									1						
708				1	1										
712				2											
802	1	1			1										
826			2	1	1										
828				1											
904				1											5
907					3				1						
1007				1											
1009						1		2							
1032	1		1	1											
1042					1										
1100			1	2		1									
1101					1										
1104					4	2		2							
1202				1	2	2	1								
1205				1	1										
1301					4	5		1							
1303				3	5	2			1						1
1334					4										
1406			1	2	3										3
1408										1					
1418				3	2	1		1							
1420								2							
1425						2									
1502				1	1										
1515			1	1											
1518			1		2	2									
1529				1											
1535						1									
1600			1	5	2	2			1	1					
1612			2		1	3		2	1						4
1614				2	1				1	1					
1700			1												
1701			1	1						1	1				
1703	1				1	2				1					
1705	1														
1709	1														
1800	1														
1801	1		9	9	34	15		19	1				1	1	12
1805	2	3		1	3			2							8
1808	1				1				1						
1809	2			2	5	4		3							
1820															1
1823	1				1	4		1							
1901	5		2	15	31	18		24	3			2			12
1902					1										
1903				2	3	1		1	2						3
1904	5			1	5	2		1	1						3
1914				1	1			1							1
1915				1	1	2			1						
1917				2											
2001								1							

A number of the bones show evidence of dog gnawing and a few are chopped. A number are burnt and the presence of two fragments in context 1805 which have been calcined and have the texture of human bone suggests that their may be cremations present in the burial ground.

A number of the bones were measurable and several mandibles were recovered that could be aged. The assemblages included juvenile and aged cattle, juvenile, adult and aged sheep. Unfortunately the dating of all the contexts that produced bone was not known at the time of writing and no assessment has been made of the assemblages by period. It is probable that the 'dark earth' layers in Trenches 18 and 19 include material of all dates and the size of some of the sheep bones in these groups is consistent with both Roman and Post-Medieval animals.

Column Samples

In addition to the samples discussed above a series of three monolith samples were taken through the organic sediments in Trenches 2, 3 and 7. The sequences were as follows:

Trench 2:

115-95cm	topsoil – friable silty clay loam with occasional stones and brick, and aquatic and marsh snails
95-53cm	grading from topsoil to alluvial clay silt. Becoming more mottled with depth, containing terrestrial and aquatic snails
53-40cm	grey alluvial silt with abundant freshwater snails
40-30cm	mixed silt and sand – disturbed, visible rootlets and many freshwater snails
30-20cm	mixed orange and grey slightly organic gravelly sands – laid down in lenses with occasional freshwater snails
20-10cm	slightly silty sandy small calcareous limestone gravel with many rootlets, organics and bits of wood, occasional mottles and fibrous matter; wood from this lens sampled for radiocarbon dating

Column sample for pollen analysis taken from 58-5cm. Reduced height of top of monolith sample 2.36m

Trench 3:

115-95cm	topsoil – silty clay loam with some sand
95-55cm	variable alluvial clay with freshwater snails in the lower half, mottling heavier towards the base of the layer
55-37cm	dark grey organic silt with freshwater snails and discontinuous marly layer
37-27cm	humified organic silt – radiocarbon sample taken at 37-32cm
27-15cm	medium fine poorly sorted sand
15-8cm	organic, fibrous silt with occasional wood fragments. Radiocarbon sample taken at 15-8
8-0cm	grey slightly silty fine sand with rootlets

Column sample for pollen analysis taken from 55-5cm.

Trench 7:

155-100cm	mid dark grey brown sandy silt loam, topsoil with post-medieval pottery
100-90cm	similar to above, lighter brown becoming clayier towards base
90-70cm	sandy silty clay, heavily mottled (orange) merges into peaty layer below, with occasional freshwater and pond snails
70-60cm	organic silt with possible charcoal fragments
60-53cm	humified silty peat with abundant wood fragments. Wood sample taken for radiocarbon dating
53-29cm	sandy gravel, with calcareous concretions
29-10cm	slightly silty peat, with visible plant fragments and wood. Wood sample taken for radiocarbon dating.
10-0cm	grey sand and limestone gravel

Two overlapping columns taken for pollen analysis. Column 1 from 90-50cm and column 2 at 55-5cm. Reduced height for top of column 2 = 2.46m

No further work has been undertaken on these samples. Before these sequences can be assessed radiocarbon dates need to be obtained from each of the columns to establish their date. Once these have been obtained the significance of the sequences can be assessed in terms of the local archaeology and a decision made as to the value of the samples and whether they warrant further study and post-excavation analysis.

Discussion

The presence of naturally deposited organic sediments at a number of locations on the site indicates that there is good potential for a local palaeoenvironmental study of the site, but until further radiocarbon dating is undertaken it is not known what periods are represented in these deposits. Organic survival in the archaeological features is limited although a few contexts have produced well preserved organic remains. The bulk of the information on the palaeoenvironment of the site obtained during this assessment has derived from the molluscan assemblages which indicate a wet and marshy environment on the floodplain, but a drier habitat on the terrace above. A general open grassland is indicated by the non-aquatic snail taxa although a woodland element in one ditch might reflect a hedged bank along the ditch side.

The bulk of the occupation debris from the samples and the hand excavated bone is concentrated in the south western part of the site. These samples and the bone assemblage indicate the disposal of food waste including charred barley and spelt, cattle, sheep and pig bones, mussel and oyster shells, bird eggshell (presumably chicken), eel bones and possibly other small fish. The lack of chaff and any abundance of weed seeds in the samples suggests that the cereal grain derives from cleaned crops and there is no evidence for agricultural processing. The few flakes of hammerscale from the site, while indicating that iron smithing is probably being undertaken contemporary with the formation of the deposits, is in no way indicative of smithing activities actually on the site.

The frequency of horse and human bones, the latter including associated bones from the same skeleton, and possible cremated human bone, indicates that the south western part of the site may be a heavily disturbed burial ground, perhaps severely disrupted or dug over during the late Saxon or post-medieval periods. This may in part explain the depth of 'dark earth' on the site.

Recommendations

The organic sediments beneath the floodplain have good potential for elucidating aspects of the palaeoenvironmental history of the site and Sleaford. However without dating the sediments the results of further analysis would not be relateable to the archaeology of the site. It is therefore recommended that radiocarbon samples from the three sequences sampled for pollen study are submitted for dating and the significance of these deposits re-assessed when the results have been received. The possible hard water error may be a problem with these samples and the dating laboratory will need to be informed of the possible problem.

The archaeologically rich area of the site appears to be limited to the south western part of the site although features have been uncovered elsewhere on the site. This area appears to be the focus of activity and further archaeological work and sampling may be appropriate.

It is clear that the site includes a much disturbed cemetery, certainly a number of discrete human burials have been disturbed by later activity, and possibly also cremations. The

distribution of the human bones from the excavated sample suggests that this is likely to occupy the same area of ground where the bulk of the other archaeological evidence was found, the south western part of the site on the gravel terrace. Clearly these would need excavation prior to any development that might disturb them further.

Acknowledgments
We should like to thank Jeremy Dubber for the sample processing.

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Table 2: Finds from the processed samples

sample no.	trench	context number	date	sample volume (l)	residue volume (l)	pot no/wt (g)	brick/ tile (g)	fired earth (g) *	mortar (g) *	hammer-scale no.	ferrous no/wt (g)	bone wt. (g)	coal / cinder	comments
1	14	1425	?mid 2-3rd C	10	950	3/2		3	+?			15		
2	12	1209	?Roman	18	3000		2						1	
3	2	208	Mesolithic!	20	1500									
4	6	605	?Roman	12	150		+					1		
5	5	513	?Prehistoric	3	275							<1		
6	5	502	Undated	4	300							1		
7	3	309	10-12th C	11	625	7/25		5		4		4		fuel ash slag
8	18	1812	2-3rd C	10	200		+					1	+	fuel ash slag
9	15	1529	mid 2-3rd C	12	1450	7/3		1		2		4		
10	9	907	IA – early Roman	9	750	3/2		+		1		2		
11	2	210	Early-mid 2nd C	8	2300							3		glass splinter
12	7	708	Undated	6	50			+				<1		
13	10	1004	Undated ?Roman	8	400	2/<1		1				1	+	
14	16	1614	4th C.	9	1500	6/2		+		2	1/1	5		
15	14	1425	mid 2-3rd C.	9	950	2/1		+				3		
16	19	1904	Post-medieval	9	600	10/14	9			5		27	+	glass splinter, fuel ash slag
17	19	1912	Post-medieval	5	400	6/37		27		6		40		fuel ash slag
18	19	1901	Post-medieval	6	700	16/40	18				1/3	19	+	

* sorted from >7mm residue fraction only; + present in the <7mm fraction

Table 3: Environmental finds from the processed samples

sample no.	context no.	date	sample volume (l)	flot volume (ml)	char-coal *	charred grain *	chaff *	charred seed *	un-charred seed */#	snails */#	egg-shell *	marine shell wt g.	comment
1	1425	?mid 2-3rd C	10	5	3	2		2	1/1	3/3			oak, cf. spelt, cf. barley, mussel, sheep, snake, vole, frog/toad, eel
2	1209	?Roman	18	300£					4/2	3/3			elder wood, small roundwood, moss, fibrous plant matter, mites
3	208	Mesolithic!	20	400£					5/2	2/2			small roundwood, twigs, beetles
4	605	?Roman	12	4£					2/1	4/3			plant stems, bank vole, cf water vole, small fish
5	513	?Prehistoric	3	3£	1				2/1	3/2			
6	502	Undated	4	3	2				1/1	4/3			vole
7	309	10-12th C	11	<1	1	1			1/1	2/2	1	1	indet grain, mussel, sheep, rodent, frog/toad
8	1812	2-3rd C	10	4	1	2			2/1	3/2			cf barley, wood, twigs, *Rubus* sp.
9	1529	mid 2-3rd C	12	2	1	1		1		3/2			
10	907	IA – early Roman	9	3	1	1			1/1	4/3	1		indet grain, small fish
11	210	Early-mid 2nd C	8	<1	1		1		1/1	3/2			dog
12	708	Undated	6	<1					2/2	3/3			wood
13	1004	Undated ?Roman	8	2.5	1	1				2/2	1		indet grain, rodent, snake/lizard,
14	1614	4th C.	9	2	3	1				3/3			cf barley, field vole, water vole, mole, frog/toad, small bird
15	1425	mid 2-3rd C.	9	2.5	2	2				3/3	1	1	indet grain, mussel, field vole, frog/toad
16	1904	Post-medieval	9	2	1					3/2	2	3	mussel, cattle, sheep, rodent
17	1912	Post-medieval	5	3	1	1		1/1	1/1	3/2	2	14	indet cereal, oyster, mussel, cattle, sheep, frog/toad
18	1901	Post-medieval	6	1	1	1		1/1	1/1	3/2	2	18	cf barley, oyster, mussel, field vole, frog/toad, small fish

*frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250; # diversity 1=1-3; 2=4-10; 3=11-25 taxa; £ waterlogged material

Table 5: Charred plant remains in the samples

	context	1425	513	309	1812	1529	907	210	1004	1414	1425	1904	1912	1901
	sample	1	5	7	8	9	10	11	13	14	15	16	17	18
	vol. soil (l)	10	3	11	10	12	9	8	8	9	9	9	5	6
	vol. flot (ml)	5	3	<1	4	2	3	<1	2.5	2	2.5	2	3	1
Cereal grain														
Triticum cf. *spelta*	cf Spelt wheat	1												
Triticum spp.	Wheat	3			3	1								
cf *Triticum* spp.	cf wheat						1					1		
cf. *Hordeum vulgaris*	cf barley	5			3					1				2
Indet. cereal		23		2	10	2				1	10	17	1	3
Indet cereal fragments		+										+		
Chaff														
Triticum spelta	Spelt wheat							2						
Weeds														
Ranunculus spp.	Buttercups								1*					+*
cf. *Ranunculus* spp.	Buttercups						1*							
Papaver sp.	Poppy							1*						
Quercus sp.	Oak, charcoal													
Chenopodium spp.	Goosefoots	7											1	
Polygonum spp.	Knotgrasses	1												
Polygonum lapathifolium L.	Pale persicaria	2												
Rumex spp.	Docks	5												2
Rumex acetosella Raf.	Sheep's sorrel	6												
Rubus spp.	Brambles				+++*									
Sambucus sp.	Elder												+*	+*
Compositae	Daises											1		
cf. *Anthemis cotula* L.	Stinking mayweed				1									
Carex spp.	Sedges	1									2			
Poacecae indet.	Grasses	7			7					3	4	3		
cf Poaceae	Grasses			1										
cf. *Avena* spp.	Oats	1				1				2				
cf. *Bromus* spp.	Bromes													1
Indet.		14	4		2	1	1*	1*		3*			1	3
Other frags.		++			++		1		2			+	+	++
Grain density per litre		3.2	0	0.18	1.6	0.25	0.11	0	0	0.22	1.11	2	0.2	0.83

+ = 1-10; ++ = 11-50; +++ = 51-150; ++++ = >150 fragments; * uncharred material, probably contaminants

Table 6: Molluscan taxa recorded from the samples

Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Context	1425	1209	208	605	513	502	309	1812	1529	907	210	708	1004	1614	1425	1904	1912	1901
Open country/grassland																		
Cecilioides acicula Muller	+			+	+			+	+	+	+		+	+	+	+	+	++
Vertigo pygmaea (Draparnaud)	+*					+			+	+	+	+			+	+	+*	
Vertigo sp.				+	+				+				+	+				+
Vallonia pulchella (Muller)	+			+		+			+	+			+					
Vallonia excentrica Sterki	+			+	+			+	+	++	+		+	+	+	+	+	+
Vallonia costata (Muller)														+	+	+		
Vallonia sp.							+			+		+						
Pupilla muscorum (L.)	+			+	+	+	+	+	+	+			+	+	+	+		+
Truncatellina sp.										+		+						
Woodland/Shaded habitat																		
Oxychilus sp.														+	+		+	
Nesovitrea hammonis (Strom)		+		+														
Aegopinella nitidula (Draparnaud)		+													+			
Vitrina sp.														+				
Vitrea sp.														+				
Ena obscura (Muller)														+				
Catholic																		
Cochlicopa sp.	+	+			+	+		+	+	+	+	+	+	+	+	+	+	+
Punctum pygmaeum (Draparnaud)	+					+					+						+	
Trichia hispida (L.)	+*	+		+	+	+	+	+	+	+	+		+	+	+	+	+	+
Helix aspersa Muller														+	+			
Helix sp.		+														+		+
Pyrimidula rupestris (Draparnaud)						+												
Marsh																		
Euconulus fulvus (Muller)		+																
Carychium sp.	+			+		+	+	+	+	+	+		+	+	+	+		
Vertigo antivertigo (Draparnaud)				+		+				+						+		
Vertigo angustior Jeffreys						+								+	+			
Succinea sp.	+	+		+	+	+		+		+		+	+	+	+			
Lymnaea truncatula (Muller)	+	+		+++	+	+	+			+++	++	+		+	+			
Aquatic																		
Valvata cristata Muller				+														
Segmentina nitida (Muller)				+														
Bithynia tentaculata (L.)	+	+		+		+	+	+				+	+				+	
Lymnaea palustris (Muller)	+			+						+				+				
Lymnaea peregra (Muller)	+											+						
Planorbis leucostoma Millet		+		+		+						+			+			
Planorbis carinatus Muller		+																
Planorbis planorbis (L.)		+				+						+						
Planorbis contortus (L.)		+																
Planorbis vortex (L.)		+																
Planorbis albus Muller								+										?
Planorbis laevis Alder				+	+		+				+	+						
Pisidium sp.		+	+	+			+	+		+	+	+						
Acroluxus lacustris Muller			+															

habitat groupings broadly taken from Evans, 1972; Ellis 1969; Kerney and Cameron 1979: Macan 1977.

+ - present; ++ and +++ particularly abundant but not quantified; * burnt shells

Archive Catalogue of animal bone

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	200	BOS	RAD	1	L	DF	4						PART OF DISTAL END	4
THSA01	200	CSZ	CDV	1	W	CFAF							COMPLETE	4
THSA01	200	CSZ	CEV	1	F	AN	3						PART POST EPIPHSYIS	4
THSA01	200	EQU	LM	1	R								MED TO WELL WORN	4
THSA01	200	SSZ	LBF	1	F								MIDSHAFT FRAGMENT- 4 PIECES	3
THSA01	200	SSZ	LBF	1	F								SHAFT FRAGMENT- POSS DOG?	4
THSA01	200	SSZ	RIB	1	L			CH					PROX HALF SHAFT-DISTAL CHOPPED	4
THSA01	208	BOS	HUM	1	L	DF	67890				BT-63.2 HT-37.3		DISTAL END AND MOST OF SHAFT-MINERAL ELEMENT REDUCED	4
THSA01	208	EQU	CAL	1	R		23						DISTAL END-MINERAL ELEMENT PARTLY LOST	4
THSA01	208	EQU	CEV	1	F	CFAF	2345						PERIPHERAL DAMAGE-MINERAL COMPONENT PARTLY LOST	4
THSA01	208	EQU	MTT	1	R	DF	3				Bd-42.9 Dd-32.5		DISTAL HALF-MINERAL ELEMENT PARTLY LOST	4
THSA01	210	CSZ	SCP	1	F								BLADE FRAGMENT WITH BASE SPINE	4
THSA01	210	EQU	ATL	1	F								ANT DORSAL FRAGMENT- 4 PIECES	4
THSA01	210	MAN	HUM	1	F	DF							DISTAL END AND SHAFT- TWO PIECES	4
THSA01	210	OVCA	HUM	1	L	DF	67890				SD-12 BT-25.8		DISTAL END AND MOST OF SHAFT-SMALL & GRACILE	4
THSA01	304	EQU	MTC	1	L	DF	123				GL-215 SD-31.8 Bd-45 Dd-32.6		COMPLETE- 3 PIECES PLUS SPLIT BONE	4
THSA01	304	EQU	RAD	1	L	PFDF	123456				GL-31 Bp-76 Bd-69.8 Dd-39.5 SD-36.7		COMPLETE BUT FRAGMENTED- 9 PIECES INCLUDING PART ULNA SHAFT	4
THSA01	522	CSZ	TIB	1	L				DG				MIDSHAFT FRAGMENT-DISTAL CHEWED- 2 PIECES	4
THSA01	600	OVCA	TIB	1	L		47		DG				SHAFT-DISTAL END CHEWED	4
THSA01	602	SUS	MAN	1	F								POST VENTRAL FRAGMENT OF ASC RAMUS	4
THSA01	708	BOS	TIB	1	R		4		DG				PROX SHAFT FRAGMENT-PROX CHEWED	4
THSA01	708	CSZ	SKL	1	F								DORSLA FRAGMENT CRANIUM	4
THSA01	712	BOS	MAN	1	R		123			G3H1I12J11K4			ANT RAMUS	4
THSA01	712	BOS	SKL	1	W		11223445 66778899	CH		I17K16			DAMAGED BUT INTACT-HORNS CHOPPED OFF-ALL ZONES-LARGE	4
THSA01	802	CSZ	UNI	1	F								INDET-POSS SPLIT SHAFT FRAGMENT	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	802	MAN	RIB	1	F								PROX SHAFT FRAGMENT	3
THSA01	802	MAN?	UNI	1	F								FRAGMENT-TEXTURE HUMAN	3
THSA01	826	BOS	RAD	1	R		3		DG				MID AND DISTAL SHAFT-DISTAL CHEWED	4
THSA01	826	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	826	EQU	LM	1	W					F			PM2-SL-MED WEAR	4
THSA01	826	EQU	SKL	1	F								FRAGMENTED- 16 PIECES INCLUDING 2 DECIDUOUS TEETH-WELL WORN	4
THSA01	828	BOS	MTT	1	R		12						PROX END AND SHAFT-SMALL-SURFACE ERODED	3
THSA01	904	BOS	UM1	1	L					I15			COMPLETE	4
THSA01	904	UNI	UNI	5	F								INDET SMALL FRAGMENTS	4
THSA01	907	CSZ	RIB	1	F								SHAFT FRAGMENT- 7 PIECES	4
THSA01	907	CSZ	UNI	2	F								INDET	3
THSA01	907	SUS	SKL	1	R		8						TEMPORAL FACET	3
THSA01	1007	BOS	FEM	1	R				DG				PROX SHAFT-PORX CHOPPED	3
THSA01	1009	OVCA	TIB	1	R		4		DG				PROX SHAFT-DISTAL CHEWED	4
THSA01	1009	SSZ	LBF	1	F				DG				SHAFT FRAGMENT-CHEWED	4
THSA01	1009	SSZ	SCP	1	R		12						GLENOID-3 PIECES	3
THSA01	1032	BOS	MTC	1	F								MIDSHAFT- 2 PIECES-PART MINERALISED	3
THSA01	1032	EQU	LI	1	L								WELL WORN	4
THSA01	1032	MAN	HUM	1	F								DISTAL SHAFT FRAGMENT-PART MINERALISED	3
THSA01	1042	CSZ	HUM	1	F								DISTAL SHAFT FRAGMENT-PART MINERALISED	3
THSA01	1100	BOS	MAN	1	F								POST PART CORONOID	4
THSA01	1100	BOS	PH1	1	R	PN	2						PROX EPI LOST	4
THSA01	1100	EQU	CEV	1	F								FRAGMENT NEURAL ARCH AND CENTRUM- 2 PIECES	4
THSA01	1100	OVCA	HUM	1	L	DF	6789	CH					DISTAL END-CONDYLE CHOPPED	4
THSA01	1101	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1104	CSZ	RIB	3	F								SHAFT FRAGMENT	4
THSA01	1104	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1104	OVCA	TIB	1	L	DF	567				Bd-25.7 Dd-18.4		DISTAL END AND PART OF SHAFT- 3 PIECES	4
THSA01	1104	OVCA	UM2	1	R					J13			COMPLETE	4
THSA01	1104	SSZ	LBF	1	F								SHAFT FRAGMENT	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1104	SSZ	UNI	1	F								PROBABLY ACCESORY CARPAL-ERODED	3
THSA01	1202	BOS	MAN	1	R			CH					POST ASC RAMUS-CHOPPED	4
THSA01	1202	CSZ	RIB	1	F			CH					SHAFT FRAGMENT-DISTAL CHOPPED	4
THSA01	1202	CSZ	UNI	1	F								SHAFT FRAGMENT	4
THSA01	1202	OVCA	RAD	1	L								MIDSHAFT FRAGMENT	4
THSA01	1202	OVCA	TIB	1	R	DF	567		DG				DISTAL END-CHEWED	4
THSA01	1202	OVI	MTT	1	R		5						SHAFT-GRACILE	4
THSA01	1205	BOS	LM1	1	L					I16			COMPLETE	4
THSA01	1205	CSZ	UNI	1	F								SHAFT FRAGMENT	4
THSA01	1301	CSZ	HUM	1	F								DISTAL SHAFT FRAGMENT	4
THSA01	1301	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1301	CSZ	SCP	1	F								BLADE FRAGMENT	4
THSA01	1301	CSZ	UNI	1	F								INDET	4
THSA01	1301	OVCA	FEM	1	L		4						SHAFT	4
THSA01	1301	OVCA	INN	1	F		6						ANT PUBIC SYMPHYSIS	4
THSA01	1301	OVCA	INN	1	L	EF	23579						ILIAL AND ISCHIAL SHAFT	4
THSA01	1301	OVCA	LMV	1	F	CF	24						ANT CENTRUM	4
THSA01	1301	OVCA	TIB	1	L	DF	4567				SD-15.9 Bd-28.2 Dd-21.4		DISTAL END AND SHAFT- 2 PIECES	4
THSA01	1301	SSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1303	BOS	INN	1	R		4						ANT PUBIC FRAGMENT	4
THSA01	1303	BOS	LM2	1	R					J9				4
THSA01	1303	BOS	SKL	1	F								TEMPORAL FRAGMENT	4
THSA01	1303	CSZ	LBF	3	F								SHAFT FRAGMENT	4
THSA01	1303	CSZ	UNI	2	F								INDET	4
THSA01	1303	OVCA	MTC	1	R								MIDSHAFT	4
THSA01	1303	OVCA	RAD	1	R								MIDSHAFT	4
THSA01	1303	SUS	LI	1	F								SPLIT CUSP	4
THSA01	1303	UNI	UNI	1	F								INDET	4
THSA01	1334	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1334	CSZ	LBF	3	F								SHAFT FRAGMENT-4 PIECES-PART MINERALISED	3
THSA01	1406	BOS	LM3	1	L					K11			COLUMN BROKEN	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1406	BOS	SKL	1	L								ZYGOMATIC ARCH	4
THSA01	1406	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1406	CSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1406	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1406	EQU	UM	1	R								MED-WELL WORN	4
THSA01	1406	UNI	RIB	1	F								SHAFT FRAG-SSZ OR HUMAN?	4
THSA01	1406	UNI	UNI	2	F								INDET	4
THSA01	1408	CAN	TIB	1	R		4		DG				SHAFT-PROX CHEWED- SMALL DOG-JUST POSSIBLY BIG FOX!	4
THSA01	1418	BOS	RAD	1	L	PF	12						PROXIMAL END	4
THSA01	1418	BOS	RAD	1	R	PF	1						SPLIT PROXIMAL END	4
THSA01	1418	BOS	ULN	1	R		23		DG				PROX ARTIC-OLECRANON CHEWED OFF	4
THSA01	1418	CSZ	CEV	1	F								ZYGAPOHYSIS	4
THSA01	1418	CSZ	RIB	1	L								PROX SHAFT FRAGMENT	4
THSA01	1418	OVCA	MTC	1	F				DG				MIDSHAFT-SPLIT- 2 PIECES	4
THSA01	1418	SSZ	LMV	1	F	CNAN	45						CENTRUM AND ARCH- 2 PIECES	4
THSA01	1420	SSZ	LBF	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1420	SSZ	RIB	1	R	PF	1						PROX END- POSS DOG	4
THSA01	1425	OVCA	RAD	1	R		3						PROX MIDSHAFT-VERY SMALL-JUV?	4
THSA01	1425	OVCA	TIB	1	L								SPLIT DISTAL SHAFT	4
THSA01	1502	BOS	MTC	1	R		1						SHAFT AND PART PROX END-ROBUST BUT SMALLISH	4
THSA01	1502	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1515	BOS	LM	1	F								CUSP FRAGMENT	4
THSA01	1515	EQU	INN	1	R								ANT HALF ISCHIAL SHAFT	4
THSA01	1518	CSZ	UNI	2	F								INDET	4
THSA01	1518	EQU	INN	1	R	EF	234579						ILIUM WITH ACETAB AND PART ISCHIUM-FRAGMENTED- 19 PIECES	4
THSA01	1518	OVCA	MTT	1	L								DISTAL HALF SHAFT	4
THSA01	1518	OVCA	RAD	1	L		3						SPLIT PROXIMAL SHAFT FRAGMENT	4
THSA01	1529	BOS	SKL	1	F		2288399005			FGHIJK			FRAGMENTED SKULL-ALL TEETH UP-SMALL FOREWARD CURVING HORNS- 51 PIECES	4
THSA01	1535	OVCA	UM2	1	L					J13				4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1600	BOS	CAL	1	L	PF	123				GL-136.4 Dp-39.2		COMPLETE	4
THSA01	1600	BOS	DLP4	1	L					h10				4
THSA01	1600	BOS	HUM	1	R		69						DISTAL SHAFT- 3 PIECES	4
THSA01	1600	BOS	INN	1	R	EF	579						ACETAB WITH PART ISCHIUM AND ILIUM FEMALE/CASTRATE?	4
THSA01	1600	BOS	LM2	1	F					J6			ANT CUSP-UNWORN	4
THSA01	1600	CAN	INN	1	R	EF	2345						POST ILIUM	4
THSA01	1600	CSZ	MAN	1	F								ALVEOLAR FRAGMENT	4
THSA01	1600	CSZ	UNI	1	F								INDET	4
THSA01	1600	EQU	PH1	1	W	PF	12				GL-84 Bp-52.4 SD-32.4 Bd-41.7		COMPLETE	4
THSA01	1600	OVCA	LM3	1	R					K6				4
THSA01	1600	OVCA	MAN	1	F								FRAG HORI RAMUS- 2 PIECES-JUV	4
THSA01	1600	SUS	RAD	1	R	PF	12						PROX END AND SPLIT SHAFT-SMALL-JUV- 2 PIECES	4
THSA01	1612	CSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1612	EQU	INN	1	F								ISCHIAL SHAFT FRAGMENT	4
THSA01	1612	EQU	MAN	1	L		11			FG			ANT RAMUS-FRAGMENTED- 17 PIECES INCLUDING SYMPHYSIS	4
THSA01	1612	OVCA	HUM	1	R								DISTAL SHAFT FRAGMENT	4
THSA01	1612	OVCA	MAN	1	F		4						CORONOID	4
THSA01	1612	OVCA	SCP	1	L		35						DISTAL BLADE FRAGMENT	4
THSA01	1612	SSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1612	SSZ	RIB	1	L								SHAFT	4
THSA01	1612	SUS	HUM	1	L	DF	690		DG				SHAFT AND PART DISTAL CONDYLE- DISTAL CHEWED	3
THSA01	1612	UNI	UNI	3	F								INDET	4
THSA01	1612	UNI	UNI	1	F								INDET	4
THSA01	1614	BOS	MTT	1	L	DF	125						PROX END AND SHAFT WITH FRAG DISTAL END- 3 PIECES	4
THSA01	1614	BOS	SCP	1	R		2345						PART DISTAL ENFD AND BLADE WITH SPINE- 4 PIECES-JUVENILE	4
THSA01	1614	CAN	ULN	1	R	PF	123						PROX HALF-SMALL SHORT LIMBED DOG-SMALLER THAN FOX	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1614	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1614	SUS	PH1	1	L	PJ	12						COMPLETE	4
THSA01	1700	EQU	MTC	1	R	DF	123				GL-221 Bp-49.3 Dp-34.1 SD-32.1		DISTAL SL DAMAGED	4
THSA01	1701	BOS	TIB	1	R	PN							PROX ANT SHAFT FRAGMENT	4
THSA01	1701	CAN	LC	1	L								CANINE	4
THSA01	1701	EQU	TIB	1	L	PJDF	1234567				GL-340 SD-39 Bd-69.3 Dd-42.4		PROX END DAMAGED	4
THSA01	1701	FOX?	HUM	1	R								DISTAL HALF SHAFT	4
THSA01	1703	CAN	INN	1	L	EF	1234579						ILIUM AND ANT ISCHIUM AND PUBIS	4
THSA01	1703	CSZ	UNI	1	F								INDET	4
THSA01	1703	MAN	SKEL	1	P								FRAGMENTS- VERT-PHAL-CARP-RIB-36 PIECES AND FRAGMENTS	4
THSA01	1703	OVCA	HUM	1	L	DF	69						DISTAL FRAGMENT SHAFT	4
THSA01	1703	OVCA	UM1	1	L					I14			ROOT PROKEN	4
THSA01	1705	MAN	SKL	1	F								MOST OF CRANIUM-FRAGMENTED- VERY THICK WALLED LARGE ROBUST SKULL- 35 FRAGMENTS	4
THSA01	1709	MAN	FEM	1	F	DF							DISTAL EPIPHYSIS	3
THSA01	1800	MAN	SKEL	1	P								SMALL BABY- MAN-ULN-CLV-RAD-RIBX2	4
THSA01	1801	BOS	CAL	1	L		2						PART OF ARTICULATION	4
THSA01	1801	BOS	CAR	1	F		1						COMPLETE	4
THSA01	1801	BOS	LM3	1	L					K10				4
THSA01	1801	BOS	MTT	1	F								FRAGMENT PROX END	4
THSA01	1801	BOS	MTT	1	L	DF	345				Bd-59.4		DISTAL END- 3 PIECES	4
THSA01	1801	BOS	PH2	1	R	PF	12						COMPLETE	4
THSA01	1801	BOS	SKL	1	F								DORSAL MEDIAL FRAG FRONTAL	4
THSA01	1801	BOS	TIB	1	R	DF							FRAGMENT OF DISTAL CONDYLE	4
THSA01	1801	BOS	UM2	1	L					J11				4
THSA01	1801	CSZ	CDV	1	F	CNAN							CENTRUM	4
THSA01	1801	CSZ	CEV	1	F								ZYGAPOPHYSIS	4
THSA01	1801	CSZ	LBF	6	F								SHAFT FRAGMENT	4
THSA01	1801	CSZ	LBF	1	F			C					CALCINED SHAFT FRAGMENT	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1801	CSZ	LBF	1	F			C					CALCINED SHAFT FRAGMENT	4
THSA01	1801	CSZ	MAN	1	F								ALVEOLAR FRAGMENT	4
THSA01	1801	CSZ	RIB	3	F								SHAFT FRAGMENT	4
THSA01	1801	CSZ	RIB	2	F								SHAFT FRAGMENT	4
THSA01	1801	CSZ	RIB	1	F								POSS HUMAN/ERODED	3
THSA01	1801	CSZ	RIB	1	F			C					CALCINED SHAFT FRAGMENT	4
THSA01	1801	CSZ	SCP	1	F								BLADE FRAGMENT	4
THSA01	1801	CSZ	SKL	2	F								INDET	4
THSA01	1801	CSZ	UNI	1	F								INDET	4
THSA01	1801	CSZ	UNI	2	F								INDET	4
THSA01	1801	CSZ	UNI	1	F			C					INDET-CHARRED	4
THSA01	1801	CSZ	UNI	1	F								INDET	4
THSA01	1801	CSZ	UNI	8	F								INDET	4
THSA01	1801	EQU	FEM	1	F								SHAFT FRAGMENT	4
THSA01	1801	EQU	LM	1	F								ONE CUSP-VERY WORN	4
THSA01	1801	EQU	MAN	1	F								POST VENTRAL FRAGMENT RAMUS- 2 PIECES	4
THSA01	1801	EQU	MAN	1	F								VENTRAL FRAG HORI RAMUS	4
THSA01	1801	EQU	MAN	1	L		6	CH					ANGLE POST CHOPPED	4
THSA01	1801	EQU	MAN	1	R					FG			ANT TOOTH ROW-VERY HEAVILY WORN	4
THSA01	1801	EQU	PH1	1	L	PF							SPLIT DOWN MIDDLE	4
THSA01	1801	EQU	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1801	EQU	UI	1	W								VERY WELL WORN	4
THSA01	1801	GOOS	STN	1	F								ANT STERNUM	4
THSA01	1801	MAN	LC	1	W								SL WEAR	4
THSA01	1801	OVCA	INN	1	R		2						ANT ILIAL SHAFT	4
THSA01	1801	OVCA	INN	1	R		2						ANT ILIAL SHAFT	4
THSA01	1801	OVCA	LM2	1	L					J11				4
THSA01	1801	OVCA	LPM4	1	L					H6				4
THSA01	1801	OVCA	MAN	1	L		123						SYMPHYSIS AND PART RAMUS- INCISORS UNERUPTED- 3 PIECES	4
THSA01	1801	OVCA	MAN	1	R								ANT FRAG CORONOID	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1801	OVCA	MAN	1	R		4						TIP CORONOID	4
THSA01	1801	OVCA	MAN	1	R		1235678			fgh17I12J4K0			INCISORS UNERUPTED	4
THSA01	1801	OVCA	MAN	1	R		45						DORSAL FRAG ASC RAMUS	4
THSA01	1801	OVCA	MTC	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1801	OVCA	MTT	1	F								SHAFT FRAGMENT	4
THSA01	1801	OVCA	MTT	1	F								SPLIT SHAFT	4
THSA01	1801	OVCA	RAD	1	L				DG				SPLIT SHAFT-PROX CHEWED	4
THSA01	1801	OVCA	TIB	1	R								DISTAL SHAFT	4
THSA01	1801	OVCA]	MAN	1	R		4						CORONOID	4
THSA01	1801	SSZ	FEM	1	F								SHAFT-JUVENILE-VERY SMALL-PIG/SHEEP?	4
THSA01	1801	SSZ	LBF	9	F								SHAFT FRAGMENT	4
THSA01	1801	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1801	SSZ	MTT	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1801	SSZ	MTT	1	F								POST SHAFT FRAGMENT	4
THSA01	1801	SSZ	RIB	3	F								SHAFT FRAGMENT	4
THSA01	1801	SSZ	SKL	1	F								ANT NASAL-SMALL	4
THSA01	1801	SSZ	TIB	2	F								SHAFT FRAGMENT	4
THSA01	1801	SUS	MAN	1	R		6						ANGLE OF JAW	4
THSA01	1801	UNI	LBF	2	F			C					CALCINED SHAFT FRAGMENT	4
THSA01	1801	UNI	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1801	UNI	UNI	9	F								INDET	4
THSA01	1801	UNIB	MTT	1	F								DISTAL END AND SHAFT-UNFORMED-JUV	4
THSA01	1805	BOS	TIB	1	L		4						SPLIT PROX SHAFT FRAGMENT	4
THSA01	1805	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1805	CSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1805	CSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1805	MAN	RIB	2	F								SHAFT FRAGMENT	3
THSA01	1805	MAN?	LBF	1	F			C					CALCINED SHAFT FRAGMENT-HUMAN TEXTURE	4
THSA01	1805	MAN?	UNI	2	F			C					CALCINED-TEXTURE OF HUMAN	4
THSA01	1805	SSZ	LBF	1	F				DG				SHAFT FRAGMENT-CHEWED	4
THSA01	1805	SSZ	UNI	1	F								INDET	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1805	UNI	UNI	2	F								INDET? HUMAN	3
THSA01	1805	UNI	UNI	6	F								INDET	4
THSA01	1808	CSZ	UNI	1	F			C					INDET CALCINED FRAGMENT	4
THSA01	1808	MAN	RIB	1	F								SHAFT	3
THSA01	1808	SUS	TIB	1	F	DN	7		DG			P	DISTAL SHAFT-PROX CHEWED-VERY VERY SWOLLEN SHAFT- POSSIBLE BREAK? POOR HEAL	4
THSA01	1809	BOS	FEM	1	R		4						DISTAL SHAFT	4
THSA01	1809	BOS	PH1	1	L	PF	12		DG				DAMAGED-LARGE AND ROBUST	4
THSA01	1809	CSZ	CEV	1	F			C					CALCINED ZYGAPOPHYSIS	4
THSA01	1809	CSZ	FEM	1	F				DG				PROX SHAFT FRAGMENT-PROX CHEWED	4
THSA01	1809	CSZ	TRV	1	F		5						BASE SPINE- 4 PIECES	4
THSA01	1809	CSZ	UNI	2	F								INDET	4
THSA01	1809	MAN	MTP	1	W								METAPODIAL	4
THSA01	1809	MAN	SKEL	1	P								BABY-PELVIS AND SCAPULA	4
THSA01	1809	OVCA	HUM	1	L		9						DISTAL SHAFT FRAGMENT	4
THSA01	1809	OVCA	INN	1	R	EF	23579		DG				ILIAL AND ISCHIAL SHAFT WITH PART ACETAB-ANT CHEWED	4
THSA01	1809	OVCA	MAN	1	R		12367			I17J14K14			RAMUS- 6 PIECES	4
THSA01	1809	OVCA	TIB	1	L		4		DG				PROXIMAL SHAFT-PROX CHEWED	4
THSA01	1809	SSZ	FEM	1	F								SHAFT FRAGMENT	4
THSA01	1809	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1809	SSZ	RIB	1	F								SHAFT FRAGMENT	4
THSA01	1820	SMA	RAD	1	F								SHAFT FRAGMENT-POSS RABBIT/HARE	4
THSA01	1823	CSZ	HUM	1	F								SHAFT FRAGMENT	4
THSA01	1823	MAN	SKEL	1	P								FEM AND PELVIS-LARGE BABY	4
THSA01	1823	OVCA	CAL	1	R	PN	23						PROX EPI LOST	4
THSA01	1823	OVCA	INN	1	L		23		DG				ILIAL SHAFT AND SCAR-ANT CHEWED-MALE?	4
THSA01	1823	OVCA	TIB	1	R		4		DG				PROX HALF SHAFT-PROX CHEWED	4
THSA01	1823	OVCA	UM2	1	R					J12				4
THSA01	1823	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1901	BOS	FEM	1	F								DISTAL ANT SHAFT FRAGMENT	4
THSA01	1901	BOS	HUM	1	R	DF	78						DISTAL CONDYLE	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1901	BOS	HUM	1	R	DF	78		DG				DISTAL CONDYLE-CHEWED	4
THSA01	1901	BOS	HYD	1	F								ONE END	4
THSA01	1901	BOS	INN	1	R	EF	4	CH					ANT PUBIS-CHOPPED WITH ACETAB FRAGMENT-FEMALE/CASTRATE?	4
THSA01	1901	BOS	LI	1	L								WELL WORN	4
THSA01	1901	BOS	MAN	1	F								VENTRAL FRAG HORI RAMUS	4
THSA01	1901	BOS	MAN	1	L		8						FRAG ASC RAMUS	4
THSA01	1901	BOS	MTT	1	L		12						PROXIMAL HALF	4
THSA01	1901	BOS	PH3	1	L		1						DAMAGED	4
THSA01	1901	BOS	RAD	1	R	PN	45						DISTAL; EPIPHYSIS	4
THSA01	1901	BOS	SCP	1	L		45						DISTAL BLADE AND SPINE-LARGE	4
THSA01	1901	BOS	SKL	1	L		9			H12I16J15K15			MAXIALL- 2 PIECES	4
THSA01	1901	BOS	TIB	1	F								MIDSHAFT FRAGMENT	4
THSA01	1901	BOS	ULN	1	L	PF	1						OLECRANON	4
THSA01	1901	CHIK	RAD	1	L								DISTAL HALF-IDENTIFIABLE	4
THSA01	1901	CHIK	ULN	1	L								DISTAL END	4
THSA01	1901	CSZ	LBF	5	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	LBF	2	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	LBF	4	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	LBF	1	F								SHAFT FRAGMENT	3
THSA01	1901	CSZ	RIB	3	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1901	CSZ	RIB	2	F								SHAFT FRAGMENT	4
THSA01	1901	CSZ	RIB	2	F			KN					SHAFT FRAGMENT-CUT	4
THSA01	1901	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
THSA01	1901	CSZ	SKL	1	F								INDET	4
THSA01	1901	CSZ	UNI	6	F								INDET	4
THSA01	1901	CSZ	UNI	1	F								INDET	4
THSA01	1901	CSZ	UNI	1	F								INDET	4
THSA01	1901	EQU	HUM	1	L	DF	7						PART DIATL END	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1901	EQU	LBF	1	F								SHAFT FRAGMENT- 2 PIECES	4
THSA01	1901	MAN	MTP	1	F								ERODED	3
THSA01	1901	MAN	RIB	1	F								SHAFT	4
THSA01	1901	MAN	SKL	3	F								TEMPORAL FRAGMENTS	3
THSA01	1901	OVCA	HUM	1	L	DF	6789				BT-33.4 HT-20		DISTAL END	4
THSA01	1901	OVCA	HUM	1	L				DG				DISTAL SHAFT FRAGMENT-LARGISH-CHEWED	4
THSA01	1901	OVCA	INN	1	L	EF		CH					ACETABULAR FRAGMENT-CHOPPED	4
THSA01	1901	OVCA	LM2	1	L					J11			ROOTS LOST	4
THSA01	1901	OVCA	LM2	1	L					J12			COMPLETE	4
THSA01	1901	OVCA	MAN	1	L		7			FGH10I13J12K10			FRAGMENTED- 7 PIECES	4
THSA01	1901	OVCA	MAN	1	L		4						CORONOID	4
THSA01	1901	OVCA	MTT	1	F				DG				SPLIT SHAFT FRAGMENT-CHEWED	4
THSA01	1901	OVCA	MTT	1	L								MID AND DISTAL SHAFT	4
THSA01	1901	OVCA	MTT	1	L								SHAFT-LARGE	3
THSA01	1901	OVCA	RAD	1	L								MIDSHAFT-LARGE	4
THSA01	1901	OVCA	RAD	1	R		3		DG				PROX MIDSHAFT-PROX CHEWED-LARGE	4
THSA01	1901	OVCA	RAD	1	R								MIDSHAFT FRAGMENT	4
THSA01	1901	OVCA	TIB	1	F								DISTAL SHAFT FRAGMENT	4
THSA01	1901	OVCA	TIB	1	L				DG				DISTAL SHAFT-DISTAL CHEWED	4
THSA01	1901	OVCA	TIB	1	R	DF	567				Bd-21 Dd-16.9		DISTAL END-SMALL	4
THSA01	1901	OVCA	TIB	1	R		4						PROX SHAFT FRAGMENT	4
THSA01	1901	OVCA	TTH	1	F								ENAMEL FRAGMENT	4
THSA01	1901	SSZ	FEM	1	F								PROX MIDSHAFT FRAGMENT	4
THSA01	1901	SSZ	FEM	1	F								MIDSHAFT-POROUS	4
THSA01	1901	SSZ	INN	1	F								ACETAB	4
THSA01	1901	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1901	SSZ	LBF	2	F								SHAFT FRAGMENT	4
THSA01	1901	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1901	SSZ	LBF	4	F								SHAFT FRAGMENT	4
THSA01	1901	SSZ	RIB	1	F			C					CALCINED SHAFT FRAGMENT	4
THSA01	1901	SSZ	RIB	2	F								SHAFT FRAGMENT	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1901	SSZ	RIB	1	F								PROX SHAFT FRAGMENT	4
THSA01	1901	SSZ	RIB	1	F								PROX SHAFT FRAGMENT	4
THSA01	1901	SSZ	RIB	1	L								SHAFT	4
THSA01	1901	SSZ	RIB	1	L								SHAFT	4
THSA01	1901	SSZ	SKL	1	F		2	CH					BASIOCCIPITAL-CHOPPED DOWN MIDLINE	4
THSA01	1901	SSZ	TIB	1	L								PROX SPINE	4
THSA01	1901	SSZ	TRV	1	F								SPINE FRAGMENT	4
THSA01	1901	SSZ	UNI	3	F								INDET	4
THSA01	1901	SUS	FEM	1	R		4		DG				DISTAL SHAFT FRAGMENT- CHEWED- 2 PIECES	4
THSA01	1901	SUS	HUM	1	R		690		DG				SHAFT-BOTH ENDS CHEWED	4
THSA01	1901	SUS	UM1	1	W					I16				4
THSA01	1901	UNI	RIB	1	F								PROBABLY HUMAN	4
THSA01	1901	UNI	SKL	2	F								INDET	4
THSA01	1901	UNI	UNI	1	F			C					INDET CALCINED FRAGMENT	4
THSA01	1901	UNI	UNI	1	F								INDET- 2PIECESPOROUS	4
THSA01	1901	UNI	UNI	1	F								INDET	4
THSA01	1901	UNI	UNI	1	F								INDET	4
THSA01	1901	UNI	UNI	1	F								INDET	4
THSA01	1901	UNI	UNI	4	F								INDET	4
THSA01	1902	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1903	BOS	PH2	1	L	PF	12						COMPLETE	4
THSA01	1903	BOS	UM1	1	L					I17				4
THSA01	1903	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1903	CSZ	RIB	1	L								PROX SHAFT	4
THSA01	1903	CSZ	SCP	1	F			CH					CALCINED BLADE FRAGMENT WITH BASE SPINE- 3 PIECES	4
THSA01	1903	OVCA	LM2	1	R					J12				4
THSA01	1903	SSZ	RIB	1	L								PROX SHAFT-VERY SMALL	4
THSA01	1903	SUS	FEM	1	F								MIDSHAFT FRAGMENT-POROUS	4
THSA01	1903	SUS	SCP	1	F								CAUDAL MARGIN OF BLADE	4
THSA01	1903	UNI	SKL	2	F								CRANIAL FRAGMENT	4

site	cont	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment	preservation
THSA01	1903	UNI	UNI	1	F								INDET	4
THSA01	1904	BOS	LI	1	L								VERY WORN-DISHED	4
THSA01	1904	CSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1904	CSZ	SCP	1	F								BLADE FRAGMENT	4
THSA01	1904	CSZ	SKL	1	F								INDET	4
THSA01	1904	CSZ	UNI	1	F			C					INDET-CHARRED	4
THSA01	1904	CSZ	UNI	1	F								INDET	4
THSA01	1904	MAN	RIB	3	F								SHAFT FRAGMENT-ERODED	3
THSA01	1904	MAN	SCP	1	F								GLENOID	4
THSA01	1904	MAN	UNI	1	F								ERODED	4
THSA01	1904	OVCA	INN	1	R	EF	239		DG				ILIAL SHAFT-PROX CHEWED	4
THSA01	1904	OVCA	MAN	1	R		7						ANT FRAGMENT ASC RAMUS	4
THSA01	1904	SSZ	CC	1	F								FRAGMENT	4
THSA01	1904	SUS	RAD	1	R	PF	12						PROX END	4
THSA01	1904	UNI	UNI	2	F								INDET	4
THSA01	1904	UNI	UNI	1	F			C					INDET-CHARRED	4
THSA01	1914	BOS	LM2	1	F					J10			ONE CUSP	4
THSA01	1914	CSZ	UNI	1	F								INDET-WORN	4
THSA01	1914	SSZ	LBF	1	F								SHAFT FRAGMENT	4
THSA01	1914	UNI	UNI	1	F								INDET	4
THSA01	1915	BOS	TIB	1	L								PROX SHAFT FRAGMENT	4
THSA01	1915	CSZ	SCP	1	F								FRAGMENT CAUDAL MARGIN	4
THSA01	1915	OVCA	CAL	1	L	PF	123				GL-55.9 Dp-14.9		COMPLETE	4
THSA01	1915	OVCA	HUM	1	L	DF	6789				BT-26 HT-17.3		DISTAL HALF	4
THSA01	1915	SUS	MAN	1	R		1						SYMPHYSIAL FRAGMENT WITH INCISOR- 2 PIECES	4
THSA01	1917	BOS	RAD	1	L	DN	4						HALF DISTAL EPIPHYS- 2 PIECES	4
THSA01	1917	BOS	RAD	1	R	DF	5						HALF DISTAL END	4
THSA01	2001	SSZ	RIB	1	R								SHAFT	4

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	ulnal 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

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. ectorbitale		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		
		INNOMINATE	1. tuber coxae
MANDIBLE	1. Symphyseal surface		2. tuber sacrale + scar
	2. diastema		3. body of illium with dorso-medial foramen
	3. lateral diastemal foramen		4. iliopubic eminence
	4. coronoid process		5. acetabular fossa
	5. condylar process		6. symphyseal branch of pubis
	6. angle		7. body of ischium
	7. anterior dorsal acsending ramus posterior M3		8. ischial tuberosity
	8. mandibular foramen		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
			6. lateral distal condyle
SCAPULA	1. supraglenoid tubercle		7. distal trochlea
	2. glenoid cavity		8. trochanter tertius
	3. origin of the distal spine		
	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
			5. medial malleolus
HUMERUS	1. head		6. lateral aspect of distal articulation
	2. greater tubercle		7. distal pre-epiphyseal portion of the diaphysis
	3. lesser tubercle		
	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 artciulation, MT3.
	9.		2. lateral facet of proximal articulation, MT4
	0.		3. medial distal condyle, MT3
RADIUS	1. medial half of proximal epiphysis		4. lateral distal condyle, MT4
	2. lateral half of proximal epiphysis		5. anterior distal groove and foramen
	3. posterior proximal ulna scar and foramen		6. medial or lateral distal condyle
	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		

Appendix 10

SECRETARY OF STATE'S CRITERIA FOR SCHEDULING ANCIENT MONUMENTS - extract from *Archaeology and Planning* DOE Planning Policy Guidance note 16, November 1990

The following criteria (which are not in any order of ranking), are used for assessing the national importance of an ancient monument and considering whether scheduling is appropriate. The criteria should not however be regarded as definitive; rather they are indicators which contribute to a wider judgement based on the individual circumstances of a case.

i *Period*: all types of monuments that characterise a category or period should be considered for preservation.

ii *Rarity*: there are some monument categories which in certain periods are so scarce that all surviving examples which retain some archaeological potential should be preserved. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. This process should take account of all aspects of the distribution of a particular class of monument, both in a national and regional context.

iii *Documentation*: the significance of a monument may be enhanced by the existence of records of previous investigation or, in the case of more recent monuments, by the supporting evidence of contemporary written records.

iv *Group value*: the value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement or cemetery) or with monuments of different periods. In some cases, it is preferable to protect the complete group of monuments, including associated and adjacent land, rather than to protect isolated monuments within the group.

v *Survival/Condition*: the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features.

vi *Fragility/Vulnerability*: highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or unsympathetic treatment; vulnerable monuments of this nature would particularly benefit from the statutory protection that scheduling confers. There are also existing standing structures of particular form or complexity whose value can again be severely reduced by neglect or careless treatment and which are similarly well suited by scheduled monument protection, even if these structures are already listed buildings.

vii *Diversity*: some monuments may be selected for scheduling because they possess a combination of high quality features, others because of a single important attribute.

viii *Potential*: on occasion, the nature of the evidence cannot be specified precisely but it may still be possible to document reasons anticipating its existence and importance and so to demonstrate the justification for scheduling. This is usually confined to sites rather than upstanding monuments.

Appendix 11

Glossary

Alluvium	Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.
Anglo-Saxon	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.
Border	Villager holding less land than a *villein*
Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC.
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, *e.g.* [004].
Crop mark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, *etc*. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Domesday Survey	A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s).
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Mesolithic	The 'Middle Stone Age' period, part of the prehistoric era, dating from approximately 11000 - 4500 BC.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500-2250 BC.

Palaeolithic	The 'Old Stone Age' period, part of the prehistoric era, dating from approximately 500000 - 11000 BC in Britain.
Post hole	The hole cut to take a timber post, usually in an upright position. The hole may have been dug larger than the post and contain soil or stones to support the post. Alternatively, the posthole may have been formed through the process of driving the post into the ground.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Ridge and Furrow	The remains of arable cultivation consisting of raised rounded strips separated by furrows. It is characteristic of open field agriculture.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.
Saxon	Pertaining to the period dating from AD 410-1066 when England was largely settled by tribes from northern Germany
Transformed	Soil deposits that have been changed. The agencies of such changes include natural processes, such as fluctuating water tables, worm or root action, and human activities such as gardening or agriculture. This transformation process serves to homogenise soil, erasing evidence of layering or features.

Appendix 12

The Archive

The archive consists of:

489 Context records
117 Drawing sheets
17 Daily record sheets
33 Context record sheets
5 Section record sheets
1 Plan record sheet
11 Photographic record sheets
1 Small Finds record sheet
17 Level sheets
2 Sample record sheets
1 Boxes of finds
20 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:	2001.59
Archaeological Project Services Site Code:	THSA01

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.