
ARCHAEOLOGICAL SOLUTIONS LTD

**SPRING FARM, RAINHAM,
GREATER LONDON**

**COMBINED ARCHAEOLOGICAL EXCAVATION
RESEARCH ARCHIVE REPORT**

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NGR: TQ 5365 8230	Report No. 3160
Borough: Havering	Site Code: SFC-07
Approved:	Project No. 2862
Signed:	Date: September 2008

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OASIS SUMMARY SHEET

Project details			
Project name	<i>Spring Farm, Rainham, Greater London. Combined Archaeological Excavation Research Archive Report</i>		
Project description:	<p><i>Archaeological Solutions Ltd (AS) conducted two phases of archaeological excavation on land at Spring Farm, Rainham, Greater London (NGR TQ 5365 8230). Phase I was undertaken during October 2007 and Phase II during May and June 2008. Dateable material fell into five chronological phases. Late Bronze Age- early Iron Age activity was attested by one pit, one posthole and two cremations. Medieval activity was concentrated at the centre of the site and included an enclosure and several ditches. Post-medieval activity was present in the form of boundary ditches and two pits. The majority of dateable features on the site were modern. These included thirteen ditches, two pits and a surface layer.</i></p>		
Project dates (fieldwork)	<i>October 2007, May-June 2008</i>		
Previous work (Y/N/?)	<i>Y</i>	Future work (Y/N/?)	<i>TBC</i>
P. number	<i>2862</i>	Site code	<i>SFC- 07</i>
Type of project	<i>Archaeological Excavation</i>		
Site status	<i>Archaeological Priority Area</i>		
Current land use	<i>Agricultural</i>		
Planned development	<i>Proposed Mineral Extraction</i>		
Main features (+dates)	<i>Late Iron Age Cremations and Pit</i>		
Significant finds (+dates)	<i>Late Iron Age Pottery</i>		
Project location			
County/ District/ Parish	<i>Greater London</i>	<i>Havering</i>	<i>Rainham</i>
HER/ SMR for area	<i>Greater London Sites and Monuments Record (GLSMR)</i>		
Post code (if known)			
Area of site	<i>2.5ha</i>		
NGR	<i>TQ 5365 8230</i>		
Height AOD (max/ min)	<i>7-8 AOD</i>		
Project creators			
Brief issued by	<i>CGMS following advice from EHGLAAS</i>		
Project supervisor/s (PO)	<i>Davies, C & Pozorski, Z.</i>		
Funded by	<i>Havering Aggregates Ltd</i>		
Bibliography			
Full title	<i>Spring Farm, Rainham, Greater London. Combined Archaeological Excavation Research Archive Report.</i>		
Authors	<i>Stone, P., Henry, K., & Woolhouse, T.</i>		
Report no.	<i>3160</i>		
Date (of report)	<i>September 2008</i>		

SPRING FARM, RAINHAM, GREATER LONDON COMBINED ARCHAEOLOGICAL EXCAVATION RESEARCH ARCHIVE REPORT

1 INTRODUCTION

This report comprises the combined research archive for two phases of excavation at Spring Farm, Rainham, Greater London (centred on TQ 5365 8230) (Figs. 1 & 2) carried out by Archaeological Solutions Ltd in October 2007 (Unger, Brogan and Davies 2007) and May and June 2008 (Pozorski, Unger and Sparrow 2008). It has been compiled in accordance with EH MAP 2, Section 7 and Appendix 6. It follows the interim site narrative (Doyle, Pozorski and Unger 2008).

Part I of the report comprises the analytical reports which have arisen from post-excavation research. This is supported by Part II, in which the relevant catalogues and other records are presented, as well as plans/ section drawings (Figs. 1 - 9) and illustrations drawn during finds analysis.

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2 SITE NARRATIVE

2.1 Overview

Archaeological Solutions Limited (AS) conducted two phases of archaeological excavation on land at Spring Farm, Rainham, Greater London (NGR TQ 5365 8230; Figs. 1 - 2). Phase I was undertaken during October 2007 (Unger, Brogan and Davies 2007), while Phase II was conducted during May and June 2008 (Pozorski, Unger and Sparrow 2008). The investigations were commissioned by Havering Aggregates Limited as part of a planning condition requiring a programme of archaeological works prior to proposed mineral extraction (Planning Ref: P2098.04; GLA 2005).

The archaeological excavations were conducted in accordance with a specification prepared by CGMS Consulting Ltd (dated 10/2006) following an advice note from English Heritage Greater London Archaeological Advisory Service (EH GLAAS). The project followed the procedures outlined in the Institute of Field Archaeologists' *Code of Conduct and Standard and Guidance for Archaeological Excavation* (revised 2001). It also adhered to the relevant sections of *Standards for Field Archaeology in the East of England* (Gurney 2003).

The site is located *c.* 3km north of the River Thames and approximately 3.5km to the west of the M25 London Orbital motorway. The site is bounded on the north by the Rainham Jewish cemetery and Spring Farm Park and the south by the A1306 New Road. To the east, it is bounded by the western bank of the Common Watercourse and by Launder's Lane, and to the west by Lambs Lane North. There are numerous other quarry sites in the area; Launder's Lane separates Spring Farm from Rainham Quarry, to the east. Sand and gravel extraction also takes place in South Hall Farm Quarry, located to the south of the proposed quarry site, on the opposite side of the A1306

New Road.

2.2 Historical and archaeological background

The Ingrebourne and Thames terraces have attracted a wide range of human activity from prehistory to the present day. The earliest activity in the area surrounding the site was attested by excavations between 1977 and 1981 at Moor Hall Farm, south-east of the site, which produced a wealth of prehistoric material ranging from the early Palaeolithic through to the Iron Age (Collcutt 1990, 21). Investigations at South Hall Farm Quarry, c. 750m from Spring Farm, discovered further prehistoric archaeology, spanning from the Mesolithic to the Iron Age. Excavations at Great Arnold's Field, a quarry site since 1963, discovered a circular Neolithic enclosure with a probable hearth and numerous other multi-period features (Collcutt 1990, 21). Rescue excavations beside Launder's Lane have revealed part of a Bronze Age cemetery containing at least ten cremations and associated features (GLSMR MLO54018). Further afield, late Bronze Age/early Iron Age field systems are known locally from Rainham, Upminster and Aveley, and the Hertfordshire Archaeological Trust (now AS) excavated a large late Bronze Age settlement site on the west side of the Ingrebourne at Scott & Albyns Farm, South Hornchurch (Guttmann & Last 2000).

Early Roman activity has been attested by local excavations at Moor Hall Farm, where a Roman field system was revealed, the boundaries of which extended westwards towards the area of Launder's Lane. A late Roman farmstead or rural settlement stood at South Hall Farm (GLSMR MLO54028), only c. 300m from the south-eastern boundary of the site at Spring Farm. South Hall Farm, which had extensive prehistoric remains, also contained a small number of boundary ditches and other features dating to the Roman period.

Saxo-Norman activity was revealed by the investigations at Great Arnold's Field, where a farmstead was excavated. Further evidence of Anglo-Saxon occupation has been found at Gerpins Lane/Berwick Ponds Farm, where a cemetery and settlement site have been excavated (GLSMR 060049).

The area surrounding Spring Farm has produced significant medieval remains. Domesday Book (1086) lists Great Arnold's Field and Moor Hall Farm (as well as possibly Spring Farm) as lying within the site of a medieval manor known as Launder's Manor. Excavations in 1963 on Moor Hall Farm discovered an early medieval farmstead and numerous medieval features, including a barn (GLSMR MLO66600; GLSMR MLO26632). The Jewish cemetery which adjoins Spring Farm has yielded numerous multi-period stray finds including a considerable number of medieval finds (Haverling Aggregates 2004).

2.3 Phasing

Dateable material fell into the five chronological phases outlined below (Table 1; Fig. 3):

CHRONOLOGICAL PHASE	DATE
Phase 1	Late Bronze Age/ early Iron Age
Phase 2	Medieval
Phase 3	Post-medieval
Phase 4	Modern
Unphased	

Table 1: Chronological phasing

2.4 Phase 1: late Bronze Age/ early Iron Age (Fig. 4)

Late Bronze Age - early Iron Age activity on site was attested by four features: one pit, one posthole and two cremations.

Two Iron Age cremations

Cremation Pit F2023 (Fig. 4; Grid Ref. Q3) was roughly circular in plan with a U-shaped profile and flat base. It measured 0.61m x 0.52m x 0.12m and had a single fill, comprising greyish-brown clayey silt with occasional flint inclusions. The pit contained a large amount (658g) of Iron Age pottery, which represents a minimum of four vessels and includes both fine and coarse flint fabrics (Thompson, this report). The vessels were apparently destroyed by ploughing after their deposition; several fragments remained in-situ, forming a circular shape. This post-depositional truncation probably accounts for the absence of cremated remains; however, the feature is thought to be a burial due to its similarities with a second cremation in nearby Pit F2026.

Cremation Pit F2026 (Fig. 4; Grid Ref. R3) was circular in plan and U-shaped in profile, with a rounded base. It was located c. 11m to the south-east of Cremation Pit F2023. Pit F2026 (0.43m x 0.32m x 0.09m) contained a mid greyish-brown loose clayey silt. Also contained within the cremation pit was an Iron Age vessel with scored or combed vertical lines down the body (Thompson, this report). The pot contained abundant charcoal and small fragments of burnt human bone (106.6g; Phillips, this report). The vessel had been severely damaged, probably during agricultural activity.

Cremation was the primary way of disposing of the dead during the first part of the first millennium BC (Cunliffe 2005). Cremations dating to this period were both urned and un-urned. They were sometimes located beneath earlier barrows or monuments, and occasionally interred under their own individual purpose-built barrows. There is a long tradition of continuous use of cemeteries during the Iron Age (*ibid*). It is likely that other Iron Age remains originally present on the site might have been destroyed by recent ploughing activity which has also affected the more recent features.

Iron Age posthole

Posthole F1138 (Fig. 4; Grid Ref. N5) (0.30m x 0.30m x 0.30m) was circular in plan; it had vertical sides and a rounded base. It contained a fill of silty clay (L1139), which yielded 49 sherds (135g) of well-fired Iron Age pottery, from a single

(incomplete) fine ware vessel. No other associated postholes were identified, suggesting that F1138 might instead have been a small pit created specifically for the deposition of the broken vessel. However, structured deposition in postholes has been attested at other Iron Age sites (Lally 2008) and based on its size and steep-sided profile, F1138 is more likely to have been a posthole. The burial of part of a broken pot at a site with little other Iron Age activity in the immediate vicinity could have been an act of structured deposition. The pottery was very fragmented but was in a reasonable condition, perhaps indicating that it had been deliberately broken prior to deposition rather than truncated by later activity.

The late Bronze Age – early Iron Age pit

Pit F2011 (Fig. 4; Grid Ref. T13) (0.78m x 0.65m x 0.19m) was roughly rectangular in plan and U-shaped in section. Its fill (L2012) varied from dark greyish-brown to light orangey-yellow sandy silt and contained frequent charcoal flecks and occasional inclusions of natural gravel. It yielded a large assemblage of late Bronze Age to early Iron Age pottery, belonging to at least seven vessels. No other features were found nearby; however, scattered single sherds of Iron Age pottery were recovered during the stripping of topsoil from the area around F2011.

It is possible that other late Bronze Age/ early Iron Age remains on site might have been destroyed by ploughing. Several of the post-medieval/ early modern features showed signs of truncation from relatively recent agricultural activity. The Iron Age posthole (F1138) was also situated in close proximity to a Phase 2 enclosure and its associated postholes; these features may have destroyed any earlier archaeological features associated with the surviving Iron Age posthole. Greenwood (1995) notes that Iron Age settlement sites and finds are scarce in the Rainham area. Therefore, while not affording much of an insight into the nature of Iron Age activity, the cremations, pit, posthole, and associated pottery at Spring Farm are of some local significance. The features might have been associated with the Iron Age activity identified at Moor Hall Farm and South Hall Farm, although the manner in which they might have been linked to the other contemporary sites in the vicinity remains unknown. Further phases of archaeological investigation at Spring Farm are scheduled, which have the potential to reveal further Iron Age remains.

A 6th - 3rd century BC Iron Age settlement has been identified c. 650m east of the site (GLSMR MLO23664). The settlement may have been associated with an organised field system found at South Hall Farm (Website 1). Nearby, a late Iron Age/early Roman triple-ditched enclosure has been identified at Moor Hall Farm and is thought to have been created as a temporary defensive camp during the Roman Conquest (Wilkinson 1978, 1980; Greenwood 1981). This change in settlement location perhaps shows that the local late Iron Age population felt threatened by the arrival of the Romans, or as a result of disputes with neighbouring communities. The structured deposition of part of a broken pottery vessel in Posthole F1138 could also have been a response to an unsettled political and social situation; perhaps it was an attempt to reinforce a community's right to the land. However, this interpretation is speculative and the lack of associated features renders any further analysis impossible.

2.5 Phase 2: medieval (Fig. 4)

The medieval activity was concentrated in the approximate centre of the site, between Phase 4 Ditches F1008 and F2005 (see below). A cluster of features, which were originally thought to be either post-medieval or modern, or had been left unphased, were located in this area. Following further post-excavation analysis, these features have now been reclassified as medieval.

Enclosure 1

Enclosure 1 was made up three ditches: F1046, F1211 and F1232. Within the area enclosed by these ditches were Pits F1203 and F1230.

Ditch F1046 was L-shaped in plan and was over 67m in length (Fig. 4; Grid Ref. J4-L4-L6). It varied in width (from 0.35m to 1.04m) and depth (0.06m to 0.09m). It was initially aligned north-west to south-east, then turned through 90° at its south-east end to run north-eastwards. Throughout its length, its fill (L1047) was a mid to dark greyish-orangey-brown silty sand with frequent charcoal inclusions. The ditch yielded two sherds of medieval pottery (12g). At its north-east end, F1046 turned to the north-west, where it was recorded as Ditch F1211 (Fig. 4; Grid Ref. L6-K6). Ditch F1211 (10m+ x 0.63m x 0.08m) had gently-sloping sides and an uneven base. Its fill (L1212) was a mid orangey-brown silty sand. Two sherds of medieval pottery were recovered from the ditch terminus. Ditch F1232, which formed part of the same enclosure, appears to have been cut by Ditch F1211. It ran parallel to the north-east to south-west arm of Ditch F1046 (Fig. 4; Grid Ref. K6). Ditch F1232 (12m+ x 0.31m x 0.09m) had gently-sloping sides and a flattish base. Its fill (L1233) was a light yellowish-brown silty sand from which no finds were recovered.

Pit F1230 was located at the southern end of Ditch F1232 (Fig. 4; Grid Ref. K5). It was a small irregular feature (0.33m x 0.35m x 0.17m) with moderately-sloping sides and an irregular base. Its fill was a firm mid orange-brown silty sand, from which no finds were recovered. Pit F1203 was situated within Enclosure 1 (Fig. 4; Grid Ref. L5). It was oval in plan, with gently-sloping sides and a concave base. Its fill was a firm, dark orange-brown silty sand. One sherd (8g) of medieval pottery was recovered from this. It is probable that the enclosure and associated pits were agricultural in function.

Further medieval ditches

To the north of Enclosure 1 was Ditch F1016 (Fig. 4; Grid Ref. I13 to J7). It was around 1.45m wide and 0.24m deep along most of its length and contained a fill of dark orangey-brown silty sand. This ditch was originally thought to be post-medieval and associated with the Phase 3 field system formed by Ditches F1012, F1106, F1004 and F1010 (see below). However, stratigraphically it appears to have preceded these features, as it was cut by Ditch F1012 (Fig. 4; Grid Ref. I13). It also contained five sherds (60g) of medieval pottery. Ditch F1016 was traced for 100m+ before being cut by F1012.

Ditch F1260 (Fig. 4; Grid Ref. I7 and I8) was cut by post-medieval (Phase 3) Ditch F1012. It was *c.* 10m in length, and was parallel to undated Ditch F1207. It is

probable that it turned through 90° and continued to the west of post-medieval Ditch F1012 as Ditch F1042 (Fig. 4; Grid Ref. E7 to I6). Ditch F1260 had gradually-sloping sides with a concave base. Its fill was a loose mid grey-brown silty clay. Ditch F1042 had moderately-sloping sides and an irregular flat base. Its fill was a firm to friable mid grey-orange-brown silty sand. A very small amount of slag (176g) was recovered from the feature and is thought to be from a hearth or furnace, perhaps indicating that some metalworking was occurring in the vicinity. In plan, Ditches F1260 and F1042 appeared to form two sides of an enclosure, of similar form and dimensions to Enclosure 1.

Ditch F1006 was situated at the far western edge of the site (Fig. 4; Grid Ref. A8 - C8). It was similar in plan to the right-angled alignments formed by Phase 2 Ditches F1046/F1211 and F1042/F1260. It extended from the north-western edge of the site and ran in a south-eastward direction for *c.* 15m, before turning through 90° and running north-east for a further 10m+. The ditch contained just one sherd of early medieval pottery (Thompson, this report). However, based on the morphological similarities between this feature and Ditch F1046, a Phase 2 date and a similar probable agricultural function are tentatively assigned.

Ditches F1006, F1042/F1260 and F1046/F1211/F1232 were all similar in plan and alignment and appeared to form parts of a medieval field and enclosure system. Dating evidence was scarce, but the small pottery assemblage found in the features of Enclosure 1 indicates a date of *c.* AD 1000 – 1300 (Thompson, this report). It is probable that all the medieval features were associated with agricultural land use. Given the shallow surviving depths of all the medieval ditches, it is likely that other contemporary remains on the site have been destroyed by modern ploughing. The area surrounding Spring Farm has produced significant medieval remains. Domesday Book (1086) lists Great Arnold's Field and Moor Hall Farm (as well as possibly Spring Farm itself) as being within Launder's Manor. Excavations in 1963 on Moor Hall Farm discovered an early medieval farmstead and numerous medieval features, including a barn (GLSMR MLO66600; GLSMR MLO26632). The division of this part of Rainham's medieval landscape into a series of small individual fields/enclosures is notable. Medieval villages across much of southern and Midland England typically had large open fields without boundary ditches or hedges; the fields were farmed communally, with each peasant holding a number of small 'strips'. In contrast, the separate enclosures at Spring Farm are suggestive of a dispersed medieval landscape of scattered peasant farmsteads and smallholdings, each with associated field systems. This would fit with Rackham's (1986, 4-5) characterisation of Essex, and much of East Anglia, as 'ancient' rather than 'planned' countryside. The precise use of the enclosures is impossible to define; based on their size and layout, use as either stock enclosures or small arable crofts is equally plausible.

2.6 Phase 3: post-medieval (Fig. 5)

Five boundary ditches (F1012, F1004, F1106, F1010 and F1221) and two pits (F1258 and F1122) were present within the excavation area. The ditches divided the western portion of the site into three fields. Ditch F1106 and lengths of F1016, F1012 and F1010 are depicted on cartographic sources dating from 1839 onwards (see Figs. 10, 11 and 12).

Post-medieval pits

Large Pit F1122 (Fig. 5; Grid Ref. G14) was located directly north of Ditch F1106. Pit F1122 (3.40m x 2.40m x 0.70m) was circular in plan, with moderately-sloping sides and a concave base. It contained 62g of 19th century pottery, glass fragments and two clay pipe fragments. It was probably a rubbish pit. Pit F1258 (Fig. 5; Grid Ref. E2) was the southernmost Phase 3 feature. It was oval in plan, with moderately-sloping sides and a concave base. Its fill, L1259, was dark greyish-brown silty sand. It contained post-medieval pottery (246g).

The post-medieval field system

Ditch F1010 was traced for 140m+ on a south-east to north-west alignment. It had steep regular sides and a concave base; its fill was a dark grey-brown clayey sand. Ditch F1010 contained 150g of 19th century pottery, 1108g of CBM and 2005g of metal. At its south-eastern end, it was cut by Ditch F1221 (Fig. 5; Grid Ref. I3 & J3). This short recut had irregular steep sides and a concave base (2.20m wide x 0.70m deep). It contained four separate fills, L1222, which was a dark grey-brown silty sand, L1223, which was a mid grey-brown silty sand, L1224, which was a mid brown-orange clayey sand, and L1225, which was a light yellow-brown silty sand. Ditch F1221 contained no finds.

Ditch F1010/F1221 cut Ditch F1012 at its south-western end (Fig. 5; Grid Ref. J3). Ditch F1012 ran north-eastwards from this point and was traced for 205m+. Its profile was variable along its length, although its sides were largely found to be steep and straight and its fill (L1013) was consistently a mid grey-brown silty sand. It contained 154g of 19th century pottery, 598g of CBM and 525g of metal. Ditch F1012 cut Phase 2 Ditch F1016 at its northern end (Fig. 5; Grid Ref. I13 & I14). Ditch F1010/F1221 is visible on cartographic sources dating from 1839 onwards (Figs. 10, 11 and 12).

Roughly halfway along its length, Ditch F1012 cut perpendicular Ditch F1004 (Fig. 5; Grid Ref. I7). Ditch F1004 (120m+ x 1.53m x 0.39m) ran on a straight north-west to south-east alignment, approximately parallel to Ditch F1010. Its fill was a mid orange-brown sandy silt with stone inclusions. It contained a sherd of post-medieval pottery and a fragment of clay tobacco pipe, as well as a residual sherd of Iron Age pottery and four residual sherds of Roman pottery.

Ditch F1106 was the northernmost of the ditches within this post-medieval field system. It was over 110m in length and cut Ditch F1012 at approximately the same place as the latter cut Phase 2 Ditch F1016. It ran south-east to north-west, broadly perpendicular to Ditches F1010 and F1004. It had steep sides and a flat base; its width was *c.* 1.00m and its depth *c.* 0.20m throughout. Its fill, L1107, was a dark grey-brown silty sand with stone inclusions, which contained no finds.

It is possible that these field ditches were associated with the enclosure of the site. The presence of a Frechen stoneware *Bartmann* bottle in Ditch F1004 suggests a date of *c.* 1650 for the field system (Thompson, this report). Ditches F1106 and lengths of F1012 and F1010 are depicted on cartographic sources from 1839 onwards (Figs. 10, 11 and 12). The absence of any documentary or cartographic evidence pertaining to an official enclosure of land in Rainham suggests that the enclosure was being carried

out privately by local landowners, rather than through an Act of Parliament.

2.7 Phase 4: modern (Figs. 6 & 7)

The majority of dateable features identified on the site were modern. These comprised thirteen ditches (F1008=2035, F1030=1217, F1052=2019, F2029, F1238, F1240, F1200=F1215, F1196=2005, F1198=2007, F2009, F2017, F2021 and F2003), 47 postholes (F1254, F1252, F1250, F1248, F1140, F1142, F1144, F1072, F1070, F1068, F1066, F1064, F1062, F1060, F1058, F1056, F1054, F1050, F1048, F1044, F1040, F1038, F1036, F1034, F1032, F1146, F1148, F1150, F1152, F1168, F1170, F1172, F1174, F1154, F1176, F1156, F1178, F1180, F1158, F1182, F1160, F1184, F1162, F1186, F1164, F1188 and F1166), two pits (F2015 and F2011) and a surface layer (L1200). These features are tabulated and presented in Appendix 1 and depicted on Figs. 6 and 7.

2.8 Unphased (Fig. 8)

The majority of features excavated on site remain unphased due to a lack of associated stratigraphic or artefactual evidence. Some of the features which were previously unphased have been able to be assigned a phase based on post-excavation analysis.

Possible continuation of the medieval ditch system

A number of ditches were similar to the Phase 2 (medieval) field/ enclosure system in terms of their plans, stratigraphic relationships and alignments. It is possible that these ditches were part of the same field system. Ditch F1124 was excavated in the centre of the site (Fig. 8; Grid Ref. M9 & N9). Ditch F1124 (28m x 0.65m x 0.06m) had regular, shallow, gently-sloping sides and a flat base and its fill (L1125) was a mid grey-brown silty clay. It is possible that it reappeared, 20m to the west, as short length of ditch F1234 (Fig. 8; Grid Ref. K8). Ditch F1234 (5m+ x 1.29m x 0.28m) was a short gully with gradually-sloping sides and a concave base. Its fill was a firm mid orange-brown silty sand. No finds were recovered from either feature.

Ditch F1246 (32.5m+ x 0.59m x 0.08m) ran parallel to Ditch F1124 (Fig. 8; Grid Ref. M6 - P6). Its fill (L1247) was a mid reddish-brown silty sand. It contained no finds. At its north-western end, Ditch F1246 was adjacent to Pit F1201. Pit F1201 (Fig. 8; Grid Ref. M5, M6, N5 and N6) (5m x 3.60m and 0.32m) had a dark orangey-brown sandy silt fill (L1202). It contained no finds.

Directly south of the south-eastern terminus of Ditch F1234 was Ditch F1207. This ditch, which was *c.* 10m long, was aligned parallel to other undated ditches (F1219, F1242, F1244, F1130, F1128, F1126 etc; see below); it was similar in size, shape and profile to Ditches F1213 (see below) and F1046 (Phase 2). Its fill (L1208) was a mid grey-brown silty clay with orange-brown mottling and gravel inclusions. No finds were recovered from the ditch. Ditch F1213 (Fig. 8; Grid Ref. M4, M5, N4 and N5) was a single feature which formed an open-ended rectangular enclosure. In total, it was *c.* 30m long; it ran in a north-north-eastward direction for *c.* 15m, before turning to the north-west through 90° for a further 2m, and then turning back on itself through 90° again, onto a south-westward alignment. The sides of the feature were fairly

straight and the base flat. Its fill (L1214) was a mid orange-brown silty sand. It is possible that Ditch F1213 was a beam-slot for a structure such as a pen, which was situated between Ditches F1246 and F1052.

Pit F1209 and Posthole F1205 were located within medieval (Phase 2) Enclosure 1. Pit F1209 (1.64m x 0.80m x 0.09m) was an irregular oval in plan, with shallow, gently-sloping sides and an uneven base. Its fill (L1210) was a mid orangey-brown silty sand. Posthole F1205 (0.46m x 0.41m x 0.12m) was circular with gently-sloping sides and a concave base. Its fill (L1206) was also a mid orangey-brown sandy silt. It is likely that these features were related to the agricultural activity taking place within the enclosure.

Ditches and pits on the south-western boundary of the site

Ditches F1018, F1020 and F1022 formed the most westerly group of unphased ditches (Fig. 8; Grid Ref. C1). They were arranged in a rough 'H' shape. Ditch F1018 (c. 7m x 1.15m x 0.10m) had regular, parallel, gently-sloping sides and a flat base. Its fill (L1019) was a dark greyish-brown silty sand. Ditch F1020 (c. 12m x 1.12m x 0.13m) was virtually parallel to F1018; both cut F1022. F1020 had moderately-sloping sides and an irregular base. Its one fill, L1021, was a mid grey-orange-brown silty sand. The full extents of F1018 and F1020 could not be established; however, F1018 was over 5m long and F1020 was over 13m in length. Ditch F1022 (c. 10m x 0.57m x 0.15m) had parallel, moderately-sloping sides and a concave base. Its fill was a dark brown-grey clayey sand. All three ditches had shallow to moderately-sloping sides. Directly to the south-east of these features was Pit F1024. Pit F1024 (c. 2m x 0.55m x 0.06m) was roughly oval, with moderately-sloping sides and an uneven, slightly concave base. Its fill, L1025, was a mid grey-orange-brown silty sand, which contained no finds.

Pits F1256 (Fig. 8; Grid Ref. D2) and F1132 (Fig. 8; Grid Ref. F2) were c. 5 and c. 10m (respectively) to the southeast of Pit F1024. All three may have had some kind of association with the post-medieval pit, F1258, which lay between F1256 and F1132. Pit F1256 (0.45m x 0.27m x 0.22m) was oval with steeply-sloping sides and a concave base. Its fill (L1257) was a dark grey-brown silty sand. Pit F1132 (0.95m x 0.72m x 0.38m) was a circular feature with regular, steeply-sloping sides and a concave base. Its fill (L1133) was a very dark grey-brown silty clay. Neither pit contained any finds.

Three ditches (F1126, F1128 and F1130) were located in Grid Refs. G2 and H2. All ran north-eastwards. Ditches F1130 (c. 7.00m x 0.94m x 0.18m) and F1126 (c. 10m x 0.50m x 0.05m) were roughly parallel with each other and with Ditches F1018 and F1020. However, Ditch F1128 (c. 7m x 0.90m x 0.13m) slanted slightly to the north and was cut by Ditch F1130. The fills of all three (L1127, L1129 and L1131) consisted of similar mid grey-brown silty clays with occasional gravel. Once again, all were devoid of finds. A similar group of three ditches was located c. 35m to the south-east of Ditches F1126, F1128 and F1130. Ditches F1219, F1242 and F1244 were all roughly parallel with each other and with Ditches F1130, F1126, F1018 and F1020. Ditch F1219 (c. 5m x 0.75m x 0.10m), Ditch F1242 (c. 6m x 1.03m x 0.30m) and Ditch F1244 (c. 6m x 0.57m x 0.13m) were c. 5m in length. They did not quite extend far enough to the north-north-east to encounter Phase 4 Ditch F1008. The fills

of F1219 (L1220) and F1242 (L1243) were light to mid grey-brown sandy silts, while the fill of F1244 (L1245) was a dark grey-brown silty sand.

Situated between the two clusters of ditches (F1126, F1128 and F1130, and F1219, F1242 and F1244) was a large group of 21 unphased postholes (Fig. 8; F1074, F1076, F1078, F1080, F1082, F1084, F1086, F1088, F1090, F1092, F1094, F1096, F1098, F1100, F1102, F1104, F1112, F1114, F1116, F1118 and F1120 – see Appendix 2 for details). All the postholes had steeply-sloping sides and most had concave or tapering bases. All were devoid of finds. This cluster of postholes may have been associated with a small structure, as some alignments could be discerned, for example: between Postholes F1098, F1100, F1102, F1118 and F1120, and between F1094, F1096, F1112 and F1114, both groups of which formed lines aligned north to south spaced *c.* 2m away from each other.

Miscellaneous unphased pits

Numerous unphased pits were excavated across the site. The largest of these, F1201 and F2031, were very similar in size and shape. F2031 (Fig. 8; Grid Ref. V3) (5.20m x 3.80m x 0.23m) was U-shaped in section with a flat base. Its fill (L2032) was a loose mid greyish-brown clayey silt, with substantial amounts of charcoal and occasional flint inclusions. It contained one sherd of prehistoric pottery, as well as modern CBM. It is likely that the CBM was deposited during modern farming activity. Pit F1201 (Fig. 8; Grid Ref. M5, M6, N5 and N6) (5m x 3.60m x 0.32m) had a dark orangey-brown sandy silt fill (L1202). It contained no finds. Directly to the north-east of this pit was Ditch F1246 (32.5m+ x 0.59m x 0.08m). This feature ran parallel to many of the modern field boundary ditches and could have been part of the same field system. Its fill (L1247) was a mid reddish-brown silty sand. It is possible that Pit F1201 was associated with this modern activity, or alternatively, that it was associated with the possible rectangular structure/ pen formed by Ditch F1213.

Around 10m south of Phase 2 Ditch F1042, and on the same alignment, was Ditch F1002. It had irregularly-sloping sides and base, and was traced for over 100m. Its fill (L1003) was a mid grey-orange-brown silty sand. This ditch cut post-medieval Ditch F1004, so must be later than post-medieval; however, its alignment contradicts those of the modern field system. No finds were recovered from this ditch, making it impossible to date with certainty.

Pit F1026 (Fig. 8; Grid Ref. B7) (0.29m x 0.29m x 0.13m) was located between medieval Ditch F1006 and undated Ditch F1002; it was circular with regular steeply-sloping sides and an irregular base. Its fill (L1027) was a grey mottled with black and orange silty clay. It contained no finds. Pit F1028 (Fig. 8; Grid Ref. C4) (1.08m x 0.97m x 0.20m) was located *c.* 30m south of Ditch F1002; it was circular with regular moderately-sloping sides and contained a mid grey-brown silty clay fill with gravel inclusions (L1029). Pit F1028 also contained no finds. To the east of this was large irregular Pit F1014 (Fig. 8; Grid Ref. C9) (2.70m x 1.00m x 0.26m). This pit was roughly oval in plan, with moderately-sloping sides and an irregular base. Its fill (L1015) was a mid grey-brown silty sand. Pit F1014 contained a very small amount of medieval pottery (5g) and CBM (18g).

Short Ditches F1190 and F1193 (Fig. 8; Grid Ref. G11 & G12) were aligned parallel

with each other, with medieval Ditch F1016, and with post-medieval Ditch F1012. They were similar in size (c. 10+ x 0.90 x c. 0.25m) and shape and were spaced c. 2m apart. Both contained two fills which were exactly the same; L1191 and L1194 were similar light yellow-brown silty sand mottled with orange in places, and L1192 and L1195 were mid grey-brown silty sand. To the east of these ditches were two adjacent moderate-sized pits: F1134 (1.70m x 1.60m x 0.36m) and F1136 (1.20m x 1.60m x 0.17m). Both had very similar fills (L1135 and L1137), of mid to light grey-yellow-brown silty sand with stone inclusions. The sides and bases of both were irregular.

3 SPECIALIST FINDS AND ENVIRONMENTAL REPORTS

3.1 The flint – by Andrew Peachey

A single flint blade (4g) was recovered from Topsoil L1000. The blade (35mm long; 15mm wide) comprises a relatively small primary flake in an unpatinated dark brown flint with a thin grey-brown cortex. One lateral edge has been steeply retouched, leaving a single sharp cutting edge. Such a blade may originate in the Neolithic or Bronze Age.

3.2 The pottery - by Peter Thompson

The combined excavations recovered 1079 sherds weighing 11.617kg. The pottery covers a range of chronological periods: Roman, Saxon, medieval, post-medieval and modern, but the majority (64.5% of sherds) can be dated to between the late Bronze Age and early Iron Age.

The prehistoric pottery is in mixed condition but is generally abraded. However, there are some large pieces of pottery with diagnostic attributes, which were probably found in their primary points of deposition. The prehistoric sherds can be broadly divided into fine (F1 and F4) and coarse wares, the former usually polished or burnished (Table 2).

<i>Fabric</i>	<i>Sherd number</i>	<i>% of prehistoric total</i>	<i>Fabric weight (g)</i>
F1 Fine Flint	110	15.8	669
F2 Coarse Flint	568	81.6	4536
F3 Flint and Sand	11	1.7	339
F4 Fine Flint & Organics	3	0.5	25
F5 Sand and Organics	1	0.1	15
F6 Shell	2	0.2	10
F7 Flint and Organics	1	0.1	5
<i>Total</i>	<i>696</i>	<i>100</i>	<i>5599</i>

Table 2: The prehistoric fabrics by sherd number and percentage and fabric weight

Fabrics:

F1 Fine Flint: Common fine to coarse crushed white flint, sparse quartz (sometimes rounded), and mica. Body sherds average 0.5cm across. Brown fabric throughout with polished surfaces.

F2 Coarse Flint: Abundant medium to mainly very coarse white flint temper. Rare quartz and mica. Grey fabric with brown or orange surfaces which can be combed or scratched. Sherds up to 1cm across.

F3 Coarse Flint and Sand: As for F2, but usually with a little less flint and more sub-angular to sub-rounded quartz sand.

F4 Fine Flint and Organics: As for F1, but with sparse grass or straw temper.

F5 Sand and Organics: Moderate to common sub-angular to sub-rounded quartz with sparse organics. Grey fabric with grey or brown surfaces.

F6 Shell: Moderate to common voids from dissolved shell. Grey fabric; grey or brown surfaces.

F7 Flint, Organics and Sand: Moderate to common medium to coarse calcined flint. Sparse to moderate voids from burnt grass. Sparse sub-angular to sub-rounded medium grey quartz. Grey fabric; brown surfaces. Middle to late Iron Age?

Prehistoric pottery description

F2023 contained a minimum of four vessels in both fine and coarse flint fabrics, including three rims from fine ware vessels. The latter include a simple fairly upright rim from a straight-sided burnished vessel (Figure xx 1) and a shouldered jar with geometric decoration on the shoulder and neck (Figure xx 2). The coarse wares include the only decorated coarse sherd, represented by a raised fingertip cordon (Figure xx 3).

F2011 (L2012) contained nearly 4kg of pottery, comprising a minimum number of seven vessels. Some coarse ware sherds were large and relatively unabraded, with vertical wiping or scoring running horizontally; rims were simple but flat (Figures xx 4 and xx 5). One fine vessel had triple horizontal incised lines below the rim and on the shoulder (Figure xx 6). F2026 (L1028) contained body sherds from one vessel with fairly well-ordered scored or combed vertical lines down the body (Figure xx 7).

Posthole F1138 (L1139) contained 49 Iron Age sherds (135g), all from the same vessel, in fine fabric F1. An abraded flint-tempered Iron Age sherd, also containing organics and a little sand, from Ditch F1004 (L1005), was associated with three small abraded Roman sherds. These were all residual, appearing with early modern pottery and clay pipe.

Discussion

The horizontal incised bands below the rim and at the shoulder on the vessel from L2012 (Figure 6) are paralleled at Mucking North and South Rings, Essex. The ceramic assemblages from both these sites begin in the 9th/ 8th century BC (Barrett and Bond 1988, 33 and 37). At Monkton Court Farm, Thanet (Kent), similarly decorated vessels were dated to 850/800-600 BC (Perkins *et al.* 1994, 253-286). Complex geometric incisions below the rim are also paralleled at late Bronze Age

sites including North Shoebury, Essex (Brown 1995, 81). A further dating indicator is the presence of quite heavily calcined flint bases from F2011 (L2012). This is a late Bronze Age trait, found on sites including Mucking and Runneymede Bridge in Surrey (Philip 1984, 127), which died out by the end of the 5th century BC (Perkins *et al.* 1994, 278). The two sherds of shell-tempered prehistoric pottery suggest an early Iron Age date, when a shift from the use of flint temper to shell occurred in coastal south-east Essex (Brown 1995, 87).

The later pottery

Ditch F1006 (L1007) contained a grass-tempered sherd (16g) with micaceous surfaces. The sherd is broken at the base angle but it suggests the beginning of a sagging base. This is probably of early to middle Saxon date (*c.* 450-850), with a 6th to 7th century date most likely (Hamerow 1993, 31).

Ditch F1016 (L1017) contained five sherds of abraded South Essex Medieval Shelly Ware (SEMS - *c.* AD 1100-1300), which exhibit large voids from the dissolved shell. This assemblage includes a jug rim. Pit F1203 (L1204) also contained an abraded body sherd of SEMS and Pit F1014 (L1015) contained a tiny sherd each of SEMS and Early Medieval Sandy Ware. Ditch F1046 (L1047) also contained two sherds (12g), indicating a date of *c.* 1000-1250.

Ditch F1004 (Seg. E) (L1003) contained 11 large fragments of a Frechen stoneware *Bartmann* bottle with a sub-heraldic medallion comprising a crowned heart. Similar examples were found on a Dutch East Indies Company wreck off Western Australia and were dated to *c.* 1650; they were not manufactured before 1630. This vessel type was also found in destruction levels at the Woolwich kiln and provides dating evidence for some of the earliest stonewares manufactured in Britain (Gaimster 1997, 109 -10).

The later pottery includes post-medieval red earthenwares, English stoneware, porcelain and factory-made white earthenwares including creamware and Transfer Printed Ware. Among this later pottery, Ditch F1240 (L1241) contained the rim of a preserve jar dated *c.* 1850-1900 and Ditch F1030 (L1031) contained a Hartley's marmalade jar datable to 1890-1920.

List of illustrations

- Figure 1 F2023 Burnished upper profile
- Figure 2 F2023 Incised decorated fine jar rim
- Figure 3 F2023 Finger-decorated cordon
- Figure 4 F2011 Coarse jar rim
- Figure 5 F2011 Coarse jar rim
- Figure 6 F2011 Incised fine jar rim
- Figure 7 F2026 Comb-decorated coarse jar

3.3 The ceramic building materials – by Andrew Peachey

The excavations produced a total of 100 fragments (9.44kg) of CBM, primarily composed of substantially abraded and fragmented early modern to modern CBM

with a small element that may be derived from the Iron Age, Roman or Saxon periods. The CBM was quantified by fragment count and weight, with all data entered into a Microsoft Excel spreadsheet that will be deposited as part of the site archive. Brick types were classified according to Ryan (1996), with the form and fabric of the remaining CBM described below.

Fabric types

Fabric 1 (Brick): The fabric is oxidised red (10R 4/6) throughout. Inclusions comprise abundant poorly-sorted quartz (0.2-1mm) including mono- and poly-crystalline grains, sparse black iron ore (0.1-0.25mm) and sparse to occasional flint (10-40mm). The fabric is hard, with an abrasive feel.

Fabric 2 (Peg Tile/Ridge Tile/Drain): The fabric has oxidised red-orange (2.5YR 5/8) surfaces and a slightly redder core. Inclusions comprise common poorly-sorted quartz (0.2-1mm) including mono- and poly-crystalline grains and sparse black iron ore (0.1-0.25mm). The fabric is hard, with a slightly abrasive feel.

Fabric 3 (Brick): The fabric is oxidised red (2.5YR 4/6) throughout. Inclusions comprise sparse quartz and iron ore (0.1-0.25mm), with sparse clay pellets, grog and ash (0.5-20mm). The fabric is very hard, with a soapy to slightly abrasive feel.

Fabric 4 (Brick): Suffolk white-type brick (Ryan 1996, 95).

Fabric 5: The fabric has slightly mottled dull brown-red surfaces with an oxidised core. Inclusions comprise common calcined flint (0.5-4mm) and sparse quartz (0.1-0.2mm). The fabric is friable and highly abrasive.

Discussion

The earliest CBM in the assemblage comprises 29 fragments (154g) of Fabric 5 recovered from Pit F2011 (L2012). These fragments are highly abraded (probably due to the friable nature of Fabric 5 rather than subsequent processes) and appear to be cross-joining. The fragments are derived from a clay plate *c.* 20mm thick with a slight lip on its edge. Surviving impressions on the small fragments suggest that the plate was perforated, and while these fragments do not confirm the fact, it would probably have been circular or oval in shape. Such a plate may have been utilised as a piece of portable kiln or oven furniture in the late Iron Age, Roman or Saxon period. However, these fragments alone are not sufficient to suggest a narrower date range.

The post-medieval to early modern CBM is poorly-preserved and sparsely distributed, predominantly in ditches, with a low concentration recovered from Ditch F1217. The bulk of the assemblage is comprised of brick, primarily Fabric 1 and 3 fragments of 'soft red brick' (Ryan 1996, 95) that date to the 18th to early 19th centuries. Sparse fragments of Suffolk white-type bricks (Ryan 1996, 95) are also present and are of comparable date. The 18th/early 19th century 'soft red bricks' account for a total of 26 fragments (4827g) of the assemblage and the Suffolk white-type bricks two fragments (1991g). The only low concentration of brick was present in Ditch F1217 (L1218) (three fragments weighing 2039g), with the remaining fragments sparsely scattered in Ditches F1030, F1238, F1240, F2003, F2017, F2029 and Pit F1014. Ditches F1217 and F1240 also contained fragments of Suffolk white-type brick that have a significantly larger fragment size than the 18th/early 19th century red brick they occur

alongside, probably due to a greater degree of hardness resulting from a higher firing temperature. Also present in Fabric 1 are sparse fragments of 19th-20th century 'soft red bricks' (Ryan 1996, 95) that are noticeably more regular in their manufacture. These are present in Ditches F1010 and F1012 (in total five fragments; 1155g) and, although they do not occur alongside fragments of the other two types of brick, could feasibly be either contemporary or fractionally later.

The remaining CBM in the assemblage comprises a sparse distribution of small, abraded fragments (average fragment weight: 34.61g) of peg tile and ridge tile/drain in Fabric 2, which could date to the 18th-19th centuries, and field drain that probably dates to the 19th-early 20th centuries. The fragments are so small and abraded that no typological characteristics or dimensions beyond thickness are extant. Due to this, the definition between fragments that may be derived from ridge roof tile and fragments from larger tubular drains remains unclear. Fragments of peg tile were present in Ditches F1008, F1012, F1217, F2003, F2007, F2009 and F2029, Pits F1122 and F2015 and Posthole F1176. Ridge tile/drain fragments were present in Ditches F1010, F1012 and F1030, and Postholes F1040 and F1170; field drain fragments were found in Ditches F1030, F1110 and F1217.

The poor preservation and low quantity of the CBM in this assemblage is probably the result of repeated redeposition and disturbance during agricultural processes. It does not appear to represent debris from any identifiable structures, and probably derives partly from drains and culverts utilised for field drainage in the later post-medieval/early modern periods.

3.4 The metalwork, slag and clay pipe – by Nina Crummy

TO ADD

3.5 The human bone – by Carina Phillips

Introduction

An urned cremation burial in Pit F2026 (L2028) represents the only human bone recovered during the excavations at Spring Farm. The burial dates to Phase 1, the late Bronze Age to early Iron Age. The uppermost portion of the vessel was destroyed by ploughing, which may have resulted in the loss of some cremated bone.

Method

The cremation burials were separated into four fractions for analysis: fraction 1 (>10mm), fraction 2 (10-5mm), fraction 3 (5-2mm) and fraction 4 (>2mm), which has been excluded from total weights as this consists mainly of extraneous material; it was visually scanned for identifiable bone fragments.

Each fraction was then separated into four broad categories: skull, axial skeleton, upper limbs and lower limbs, where possible. Weights for each category have been recorded. The fragments from each category were further recorded by identification to skeletal element where possible. The identification of multiple individuals in one cremation burial is based on the presence of bones from different aged individuals

and/or the presence of duplicate bones. If there is no evidence of multiple individuals, it is assumed that the bones represent one individual. Any non-human bone was excluded during weighing and simply recorded as present. The bone fragments were analysed in order to determine age and sex, where possible. Any evidence of pathological change was also recorded.

Results

Cremation burial F2026 (L2028) consists of only 106.6g of human bone. All the bone is highly oxidised (white in colour). The size of the bones suggests that the individual was an adult; a closer age estimate and an estimation of sex are not possible. Bone fragments range between 2mm and 32.9mm in size (minimum-maximum); however, the cremated bone is notably fragmented, with only 12% measuring over 10mm (fraction 1), 51% ranging from 10mm to 5mm in size (fraction 2) and 36% measuring less than 5mm in size (fraction 3). Skull fragments, fragments of humerus, femur, and tibia, and a fragment of vertebra, were identified during analysis.

Discussion

The dead are generally invisible in British Iron Age archaeology (Taylor 2001, 65). A more casual attitude to the disposal of the dead during this period, in contrast to the preceding Bronze Age, is thought to have contributed to this scarcity of human remains in the archaeological record (*ibid*). It is widely accepted that excarnation and cremation were the major mortuary rites during this period, and both would have contributed significantly to this low representation of the dead in the Iron Age archaeological record (Lally 2008).

The cremation burial recovered at Spring Farm is therefore notable evidence of cremation practices being carried out in the area in the late Bronze Age/ early Iron Age. However, only a limited amount of information could be gleaned from this single truncated cremation.

The amount of bone recovered from adult cremation burial F2026 is notably low in weight when compared to a sample of *c.* 4000 undisturbed adult burials from multi-period sites analysed by McKinley (1997, 139; 1994), which were found to range from 57g to 2200g. This is possibly related to the high level of plough damage to the vessel containing the cremation. These differing weights illustrate considerable variation in the amount of bone which was collected from the pyre and deposited in the cremation vessel.

The colour of cremated bone ranges from brown or black (charred bone), through to blue, grey or white; white is associated with oxidised bone (McKinley 2001, 282). All the bone in F2026 is white in colour. Experiments with the colour of bone and temperature have produced varying results, but generally it is apparent that human bone becomes white in colour when subjected to temperatures over 645° (Mays 2000, 217; Shipman *et al.* 1984, 307).

3.6 The animal bone - by Carina Phillips

Introduction

Only eight fragments of animal bone were found during the excavation. Bone was recovered by hand and the assemblage is therefore subject to the usual biases associated with manual recovery. Animal bone was recovered from five contexts: L1011, L1013, L1033, L1038 and L1202. The bones are in a moderate state of preservation.

Method

The animal bone was identified and recorded to species and element when possible. The category sheep/goat has been used due to the difficulties in clearly identifying the species sheep (*Ovis* sp.) or goat (*Capra* sp.). Fragments which could not be identified to a particular species were recorded under the categories of ‘large-sized’, consisting of cattle, large deer and horse (*Equus* sp.), ‘medium-sized fragments’, and ‘small-sized’, consisting of sheep/goat, pig and dog (*Canis familiaris*) bone fragments. The unidentifiable bone fragments were recorded. Ageing evidence is not present in the assemblage. It was not possible to measure any of the bones present due to their comparatively poor preservation. Evidence of burning, sawing, chopping, knife-cutting and gnawing was recorded, as was deliberately smashed bone.

Results

Species	NISP	Chopped	Sawn	Gnawed
Sheep/goat	3	0	1	1
Large sized	3	1	0	0
Small sized	2	0	0	0
Total	8	1	1	1

Table 3: Number of Identified Specimens/ fragments (NISP) of animal bone

Three fragments were identifiable: all were identified as sheep/goat (*Ovis/Capra* sp.) (Table 3). The other five could only be categorised by size: three as large-sized and two as small-sized. Two fragments exhibit butchery evidence in the form of chopping and sawing. A fragment of large-sized pelvis exhibits new periosteal bone growth on the medial surface of the ilium.

Discussion

Discussion of the animal bone is not possible due to the small number of fragments.

3.7 The shell – by Carina Philips

A total of 19 fragments of marine shell were hand recovered from 10 features. The shells have been identified as oyster (*Ostrea edulis*), whelk (*Buccinum undatum*) and mussel (*Mytilus edulis*). One individual mussel shell and four individual whelk shells are present, as well as 14 fragments of oyster shell from a minimum of four oysters (Table 4). Both species are common finds on archaeological sites due to their use as food.

	Individual Count	Upper Bivalve	Lower Bivalve	Fragment Count
Oyster	0	4	4	6

Whelk	4	0	0	0
Mussel	1	0	0	0
<i>Total</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>6</i>

Table 4: Marine shell

3.8 The environmental samples

TO ADD

APPENDIX 1 – The modern features

Feature	Context	Dimensions (m)	Plan/profile	Fill	Find date	Relationship
F1008=2035	L1009	200+ x 2.30(max) x 0.31(max)	Linear, near vertical sides with concave base. Aligned south-east-north-west.	Friable, Light grey-brown silty sand.	18 th /19 th century peg tile. 1750-1900 pottery.	Cut by F1010
1030	L1301	50+ x 1.05 x 0.35	Linear, steep sides, concave base. Aligned west-east	Very dark brown-grey, friable silty sand.	Pottery 1890 – 1920 & 1900+. 19 th – 20 th century red brick. Oyster shell, clay pipe stems, shotgun cartridge end and glass fragments.	
1052=2019	L1053	10 + 1.30 x 0.19	Linear. Gradually sloping sides with flat base. NE-SW	Mid grey-brown soft clayey sand.		
1196=2005	L1197	160+ x 0.76 x 0.80	Slightly curved linear. Bowl shaped – gradually sloping sides with concave base. ENE - WSW			
1198=2007	L1199	130+ 1.15 x 0.08	Slightly curved linear. Gentle slope to concave base. ENE – WSW.	Medium grey-brown silty clay. Loose.		Parallel to F1196
-	L1200	1+ x 0.29 x 0.05	Layer	White chalk, dense to solid bordered by gravel mixed with natural.	19 th – 20 th century pottery. Iron Nail fragment.	
1215	L1216	8+ x 0.54 x 0.15	Linear, moderately sloping sides with concave base. NE – SW.	Medium grey-brown with orange brown mottling silty clay with gravel. Loose.		Cut by L1200
1217	L1218	25+ x 1.40 x 0.58	Linear, concave base and gradually sloping sides. NW – SE.	Mid yellow-brown, very compacted clayey sand.	18 th -19 th century Suffolk white type brick, 18 th -19 th century red brick, 18 th -19 th century peg tile.	Cut by F1030.

1238	L1239	15 x 0.32 x 0.11	Linear, gradual slope, NW – SE	Black/dark brown, friable and gravelly charcoal and sand.	Pottery 1800-1900+, 18 th -19 th century red brick. Oyster and whelk shell with glass fragments.	Parallel to F1240
1240	L1241	16 x 0.53 x 0.12	Linear, gradual slope, with irregular base. NW-SE. Truncated by plough.	Black/dark brown, gravel with charcoal and sand.	Pottery 1850-1950+, Suffolk white brick 18 th -19 th century & 18 th -19 th century red brick. Oyster and whelk shell, glass fragments and clay pipe stem,	Parallel to F1238
2003	L2004	200+ x 0.78 x 0.19	Linear, difficult to define, slightly undulating sides. Slightly concave base.	Mid orangey-grey brown sandy silt.	Fragments of a glazed vessel.	Parallel to F1198=2007 and F1196=2005 Cuts Ditch F2017
2009	L2010	30+ x 0.65 x 0.15	Linear, moderately sloping sides, slightly concave base.	Mid orange-brown sandy silt. Friable.	Modern CBM Brick and Tile.	Parallel to F2017
2017	L2018	? x 0.26 x 0.10	Slightly curving linear, rectangular sides.	Mid orangey-brown, sandy silt. Friable.		Parallel to F2009 Cut by Ditch F2003
2021	L2022	3.90 x 0.72 x 0.29	Linear, U-Shaped sides with a concave base.	Mid orangey-brown sandy silt. Friable		Cut by F2007
2029	L1030	? x 2.10 x 0.80	Linear, U-Shaped, Curved Base.	Light to mid brownish-grey. Clayey silt. Loose.		Cuts F2035

The modern ditches

Feature	Context	Dimensions (m)	Plan/ profile	Fill	Finds date	Relationship
F1226	L1227	0.56 x 0.58 x 0.15	Circular. Gently sloping sides with irregular concave base.	Mid orange-brown silty sand. Firm.	-	Associated with Ditch F1046

F1228	L1229	0.36 x 0.31 x 0.21	Oval. Steep sloping sides. Flat base.	Dark grey-brown silty sand. Firm.	-	Associated with Ditch F1046 and Posthole F1226
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The modern pits

Feature	Context	Dimensions (m)	Plan/profile	Fill	Find date	Relationship
F1036 (J4)	L1037	0.28 x 0.20 x 0.23	Oval. U shaped – steep sloping sides. Un-even slightly concave base.	Mid orange-brown, silty sand. Compact.	1750-1900 pottery. 2 Fe nails.	Possibly cut by F1046
F1038 (J4)	L1039	0.26 x 0.17 x 0.18	Circular. U shaped. Uneven base.	Dark greyish brown. Silty sand, Compact.	-	Possibly cut by F1046
F1040 (J4)	L1041	0.28 x 0.21 x 0.16	Circular. Steep sided. Concave base.	Mid orange brown, silty sand. Compact.	19 th -20 th century ridge tile and clay pipe stem.	Possibly cut by F1046
F1044 (K4)	L1045	0.31 x 0.30 x 0.06	Circular. Gradual slope with uneven base.	Mid orange-brown silty sand. Compact.	-	-
F1048 (K4)	L1049	0.21 x 0.15 x 0.14	Oval. Steep sloping sides. Concave base.	Dark orange-brown silty sand. Compact.	Glass fragment.	-
F1050 (K4)	L1051	0.27 x 0.18 x 0.21	Oval. Steep sloping sides. Slightly concave base.	Dark orange-brown silty sand. Compact.	Iron rod.	-
F1054 (K4)	L1055	0.24 x 0.19 x 0.29	Circular. Steep sloping sides. Concave base.	Dark orange-brown silty sand. Compact.	-	-
F1056 (L4)	L1057	0.26 x 0.20 x 0.18	Sub-rounded, E slope – vertical. W slope- gradual. Concave base.	Dark orange-brown silty sand. Compact.	-	-
F1058 (L4)	L1059	0.23 x 0.12 x 0.28	Irregular oval shape. Irregular, steep sides. Slightly concave base.	Dark grey-brown silty sand. Compact.	-	-
F1060 (L4)	L1061	0.22 x 0.14 x 0.30	Sub-rounded, steep sloping sides. Slightly concave base.	Dark grey-brown silty sand. Compact.	-	-
F1062	L1063	0.21 x 0.14 x 0.21	Sub-rounded. Steep sloping	Dark grey-brown silty sand.	-	-

(L4)			<i>sides, Slightly concave base.</i>	<i>Compact.</i>		
F1064 (L4)	L1065	0.28 x 0.24 x 0.15	<i>Irregular oval shape. Moderately sloping sides. Concave base.</i>	<i>Dark grey-brown silty sand. Compact.</i>	-	-
F1066 (L4)	L1067	0.26 x 0.20 x 0.19	<i>Circular. Slightly irregular, steep sloping sides. Uneven, slightly concave base.</i>	<i>Dark grey-brown silty sand. Compact.</i>	-	-
F1068 (M4)	L1069	0.33 x 0.19 x 0.14	<i>Oval. Moderate sloping sides. Almost flat base.</i>	<i>Dark greyish black-brown silty sand. Compact.</i>	-	-
F1070 (M4)	L1071	0.26 x 0.20 x 0.16	<i>Slightly irregular oval shape. Steep sloping sides. Concave base.</i>	<i>Dark greyish black-brown silty sand. Compact.</i>	-	-
F1072 (M4)	L1073	0.33 x 0.21 x 0.22	<i>Oval. Steep sloping sides. Flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1146 (L4)	L1147	0.18 x 0.20 x 0.06	<i>Sub-circular. Moderately steep sloping sides. Irregular base.</i>	<i>Mid orange-brown silty sand. Compact.</i>	-	-
F1148 (L4)	L1149	0.25 x 0.21 x 0.21	<i>Sub-circular. Steep sloping sides, concave base.</i>	<i>Dark grey-brown silty sand. Compact.</i>	<i>Whelk shell.</i>	-
F1150 (J4)	L1151	0.21 x 0.20 x 0.30	<i>Circular, steep sloping sides with concave base.</i>	<i>Dark greyish brown silty sand mottled with mid yellow-orange. Compact.</i>	-	-
F1152 (J4)	L1153	0.20 x 0.15 x 0.18	<i>Sub-oval. Steep sloping sides. Flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>Oyster shell.</i>	-
F1154 (H4)	L1155	0.20 x 0.16 x 0.14	<i>Sub-oval. Steep sloping sides. Very slightly concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1156 (H4)	L1157	0.24 x 0.18 x 0.15	<i>Oval. Steep sloping sides. Slightly concave base.</i>	<i>Dark greyish brown silty sand with orange flecks. Compact.</i>	-	-
F1158 (H4)	L1159	0.23 x 0.19 x 0.24	<i>Sub-circular. Steep sloping sides. Slightly concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1160 (H4)	L1161	0.27 x 0.18 x 0.11	<i>Oval. Moderately sloping E side. W side gentle slope. Flat</i>	<i>Dark orange-brown silty sand. Compact.</i>	-	-

			<i>base.</i>			
F1162 (G4)	L1163	0.21 x 0.14 x 0.11	<i>Sub-oval. Steep sloping sides. Flat base.</i>	<i>Dark orange-brown silty sand. Compact.</i>	<i>Glass fragment.</i>	-
F1164 (G4)	L1165	0.26 x 0.20 x 0.16	<i>Oval. Steep sloping sides. Almost flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1166 (G4)	L1167	0.26 x 0.20 x 0.16	<i>Circular. Steep sloping sides. Concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1168 (I4)	L1169	0.17 x 0.18 x 0.18	<i>Sub-circular. Moderately steep sloping sides. Concave base.</i>	<i>Mid orange-brown silty sand. Compact.</i>	-	-
F1170 (I4)	L1171	0.23 x 0.16 x 0.20	<i>Sub-oval, steep sloping sides, very slightly concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>19th-20th century ridge tile and glass fragments.</i>	-
F1172 (I4)	L1173	0.24 x 0.18 x 0.16	<i>Oval, steep sloping sides with flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>19th-20th century pottery with glass fragments.</i>	-
F1174 (H4)	L1175	0.29 x 0.24 x 0.19	<i>Oval, Steep sloping sides with concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>1840-1900+ pottery, clay pipe stem fragments.</i>	-
F1176 (H4)	L1177	0.26 x 0.19 x 0.09	<i>Oval, steep sloping sides with almost flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>18th-19th century peg tile.</i>	-
F1178 (H4)	L1179	0.25 x 0.20 x 0.14	<i>Oval, steep sloping sides with flat base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	<i>Glass fragments.</i>	-
F1180 (H4)	L1181	0.30 x 0.19 x 0.21	<i>Oval. Steep sloping sides with slightly concave base.</i>	<i>Dark greyish brown silty sand. Compact.</i>	-	-
F1182 (H4)	L1183	0.20 x 0.19 x 0.19	<i>Sub-circular. Moderately sloping sides with concave base.</i>	<i>Mid orange-brown. Silty sand. Compact.</i>	-	-
F1184 (G4)	L1185	0.21 x 0.22 x 0.15	<i>Sub-circular. Moderately sloping sides with slightly concave base.</i>	<i>Mid orange-brown. Silty sand. Compact.</i>	-	-
F1186 (G4)	L1187	0.16 x 0.16 x 0.15	<i>Circular. Moderately sloping sides with uneven base.</i>	<i>Dark grey-brown with orange mottles. Silty sand. Compact.</i>	-	-
F1188 (G4)	L1189	0.15 x 0.14 x 0.10	<i>Sub-circular. Steep sides with uneven base.</i>	<i>Dark grey-brown. Silty sand. Compact.</i>	-	-

*Double row of postholes***APPENDIX 2 – Cluster of undated postholes**

Feature	Context	Profile (dimensions)	Plan/Profile	Fill
F1074 (GR:I2)	L1075	0.29m x 0.27m x 0.08m	Circular, regular moderate sloping sides, concave base	Mid grey brown silty sand
F1076 (GR:I2)	L1077	0.46m x 0.39m x 0.09m	Circular, regular moderate sloping sides, concave base	Mid grey brown silty sand
F1078 (GR:I2)	L1079	0.06m x 0.06m x 0.03m	Circular, steep sloping sides, conical base	Mid grey brown silty sand
F1080 (GR:I2)	L1081	0.07m x 0.07m x 0.04m	Circular, steep sloping sides, conical base	Mid grey brown silty sand
F1082 (GR:I2)	L1083	0.08m x 0.10m x 0.03m	Circular, steep sloping sides, conical base	Mid grey brown silty sand
F1084 (GR:I2)	L1085	0.07m x 0.10m x 0.03	Circular, steep sloping sides, conical base	Mid grey brown silty sand
F1086 (GR:I2)	L1087	0.27 x 0.35m x 0.13m	Circular, moderately sloping sides, concave base	Mid grey brown silty sand
F1104 (GR:J2)	L1105	0.19m x 0.19m x 0.08m	Sub-circular, moderate sloping sides, concave base	Mid brown grey silty sand
F1088 (GR:J2)	L1089	0.15m x 0.28m x 0.03m	Sub-circular, gently sloping sides, concave base	Mid brown grey silty sand
F1090 (GR:J2)	L1091	0.30m x 0.39m x 0.15m	Circular, irregular moderate sloping sides, concave base	Mid brown grey silty sand
F1092 (GR:J2)	L1093	0.22m x 0.28m x 0.12m	Circular, irregular steep sloping sides, uneven base sloping towards NW	Mid brown grey silty sand
F1102 (GR:J2)	F1103	0.19m x 0.28m x 0.05m	Sub-circular, moderate sloping sides, more gentle on NW side,	Dark grey brown clayey sand

			concave base	
F1100 (GR:J2)	L1101	0.20m x 0.25m x 0.16m	Sub-circular, irregular steeply sloping sides, slightly concave base	Mid brown grey silty sand
F1098 (GR:J2)	L1099	0.40m x 0.34m x 0.09m	Circular, gently sloping sides, concave base	Mid grey brown silty sand
F1096 (GR:J2)	L1097	0.08m x 0.07m x 0.04	Circular, steeply sloping sides, conical base	Mid brown grey silty sand
F1094 (GR:J2)	L1095	0.30m x 0.34m x 0.11m	Circular, moderate sloping sides, concave base	Mid grey brown silty sand
F1112 (GR:J2)	L1113	0.27m x 0.24m x 0.05m	Circular, moderate sloping sides, slightly concave base	Mid brown grey silty sand
F1114 (GR:J2)	L1114	0.20m x 0.19m x 0.03m	Sub-circular, moderate sloping sides, concave base	Mid grey brown silty sand
F1120 (GR:J2)	L1121	0.07m x 0.08m x 0.03m	Circular, steeply sloping slides, conical base	Mid grey brown silty sand
F1116 (GR:J2)	L1117	0.08m x 0.07m x 0.03m	Circular, steeply sloping sides, conical base	Mid grey brown silty sand
F1118 (GR:J2)	L1119	0.07m x 0.09m x 0.03m	Sub-circular, steeply sloping sides, conical base	Mid brown grey silty sand

Bibliography

Barrett, J.C. and Bond, D. 1988 The Pottery in (Bond D. ed) Excavations at the North Ring, Mucking, Essex: A Late Bronze Age Enclosure. *East Anglian Archaeology* Report No. 43

Brown, N.R. 1995c 'The Prehistoric Pottery' in Wymer J.J. and Brown N.R. (eds.) *Excavations at North Shoebury: settlement and economy in south-east Essex 1500 BC- AD 1500*, *East Anglian Archaeology* Report No. 75

Brown, N. & Massey-Ryan, R. 2005 *The Finest Prospect; the archaeology of south Essex*. Essex County Council, Chelmsford

Collcutt, S. N. 1990 South Hall Farm, Rainham, London Borough of Havering; preliminary archaeological assessment. Oxford Archaeological Associates Ltd, Oxford

Cunliffe, B 2005 *Iron Age Communities in Britain*. London: Routledge

Doyle, K. 2007 Moor Hall Farm, Rainham, Essex; an archaeological desk-based assessment. Archaeological Solutions unpublished report No. 2170

Gaimster D. 1997 *German Stoneware 1200-1900 Archaeology and Cultural History*. British Museum Press

Greenwood, P. 1981 'Rainham, Moor Hall Farm' in Eddy, M.R. 'Excavations in Essex, 1980', *Essex Archaeology and History* 13

Greenwood, P. 1995 'Contribution by Pamela Greenwood' in Lawrence, D. *South Hall Farm, Rainham, London Borough of Havering: An Archaeological Evaluation*. Newham Museum Service unpublished report

Gurney, D. 2003 *Standards for Field Archaeology in the East of England*. East Anglian Archaeology Occasional Paper 14

Guttmann, E. B. A. & Last, J. 2000 'A late Bronze Age landscape at South Hornchurch, Essex, in; Proceedings of the Prehistoric Society. Volume 66, pp. 319 - 359

Lally, M. 2008. 'Bodies of Difference in Iron Age southern England' in Davies, O., Sharples, N. and Waddington, K. (eds.). *Changing perspectives on the first millennium BC*. Oxford: Oxbow Books.

Mays, S. 2000 *The Archaeology of Human Bones*, London: Routledge

McKinley, J. L. 1994 Bone fragment size in British cremations: have we missed something? *Antiquity* 68, 132-4

McKinley, J. I. 1997 Bronze Age barrows and funerary rites and rituals of cremation. *Proceedings of the Prehistoric Society* 63, 129-145

McKinley, J. I. 2001 'Cremated Bone' in Brothwell, D.R. and Pollard, A.M. *Handbook of Archaeological Sciences*. John Wiley & Sons Ltd.

Perkins D., MacPherson-Grant N., & Healy E. 1994 Monkton Court Farm Evaluation 1992 *Archaeologia Cantiana* 237-314

Philip B. 1984 The Prehistoric, Roman and Saxon Sites at Darenth. *Fourth Research Report in the Kent Monograph Series*. Kent Archaeological Rescue Unit

Pozorski, Z., Unger, S. & Sparrow, P. 2008 *Spring Farm, Rainham, Essex, Phase II; an archaeological excavation interim report*. Archaeological Solutions unpublished report

Rackham, O. 1986 *History of the Countryside*. Phoenix Press, London (2002 reprint)

Ryan, P. 1996 *Brick in Essex: from the Roman Conquest to the Reformation*. Privately Published

Shipman, P., Foster, G. and Schoeninger, M. 1984 'Burnt Bones and Teeth: an Experimental Study of Colour, Morphology, Crystal Structure and Shrinkage' *Journal of Archaeological Science* 11, 307-325

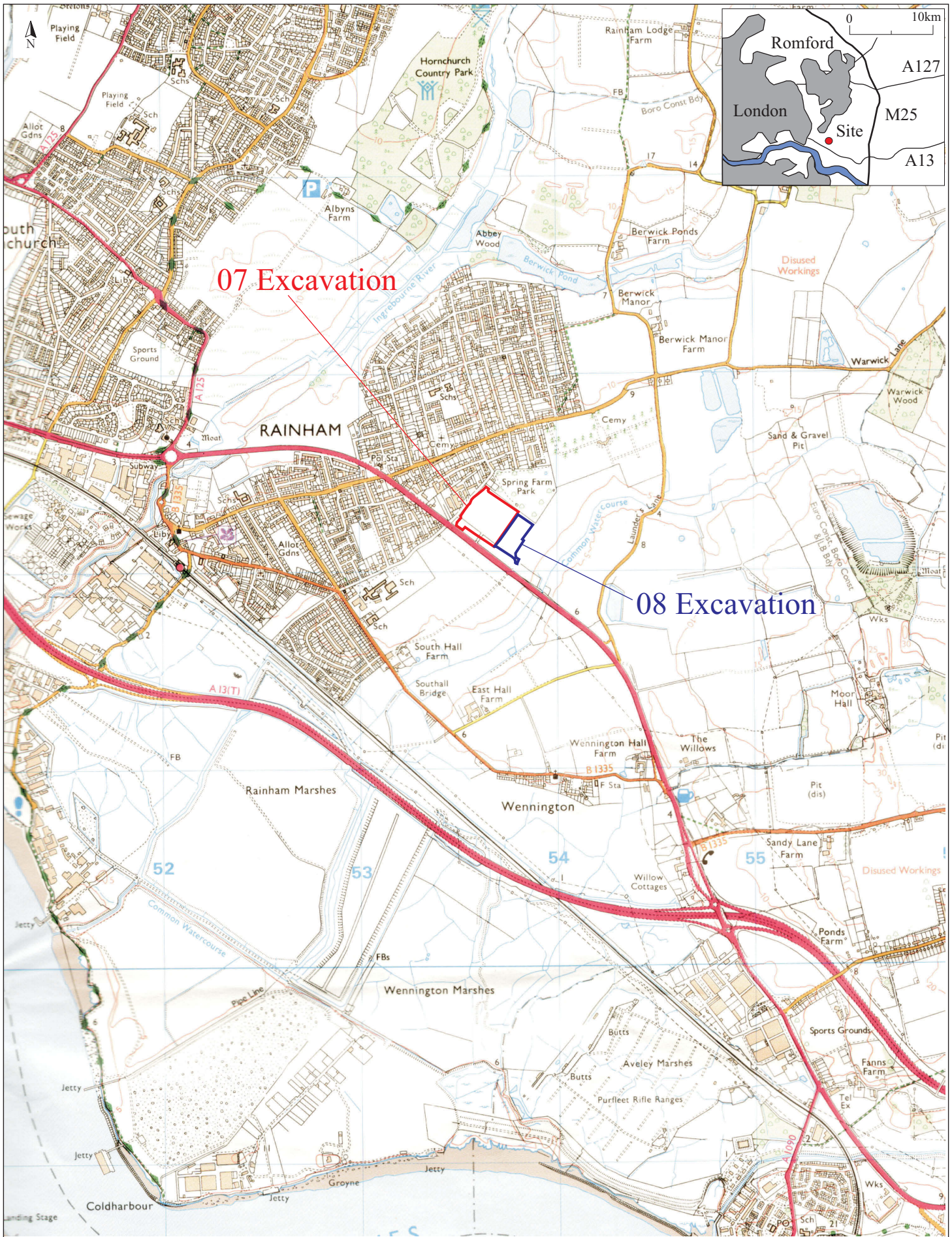
Taylor, A. 2001 *Burial Practice in Early England*. Tempus Publishing Ltd, Stroud

Unger, S., Brogan, G. & Davies, C. 2007 *Spring Farm, Rainham, Greater London. An archaeological excavation interim report*. Archaeological Solutions unpublished report No. 2963

Wilkinson, P. 1980 'Rainham, Moor Hall Farm' in Eddy, M.R. 'Excavations in Essex, 1979', *Essex Archaeology and History* 13

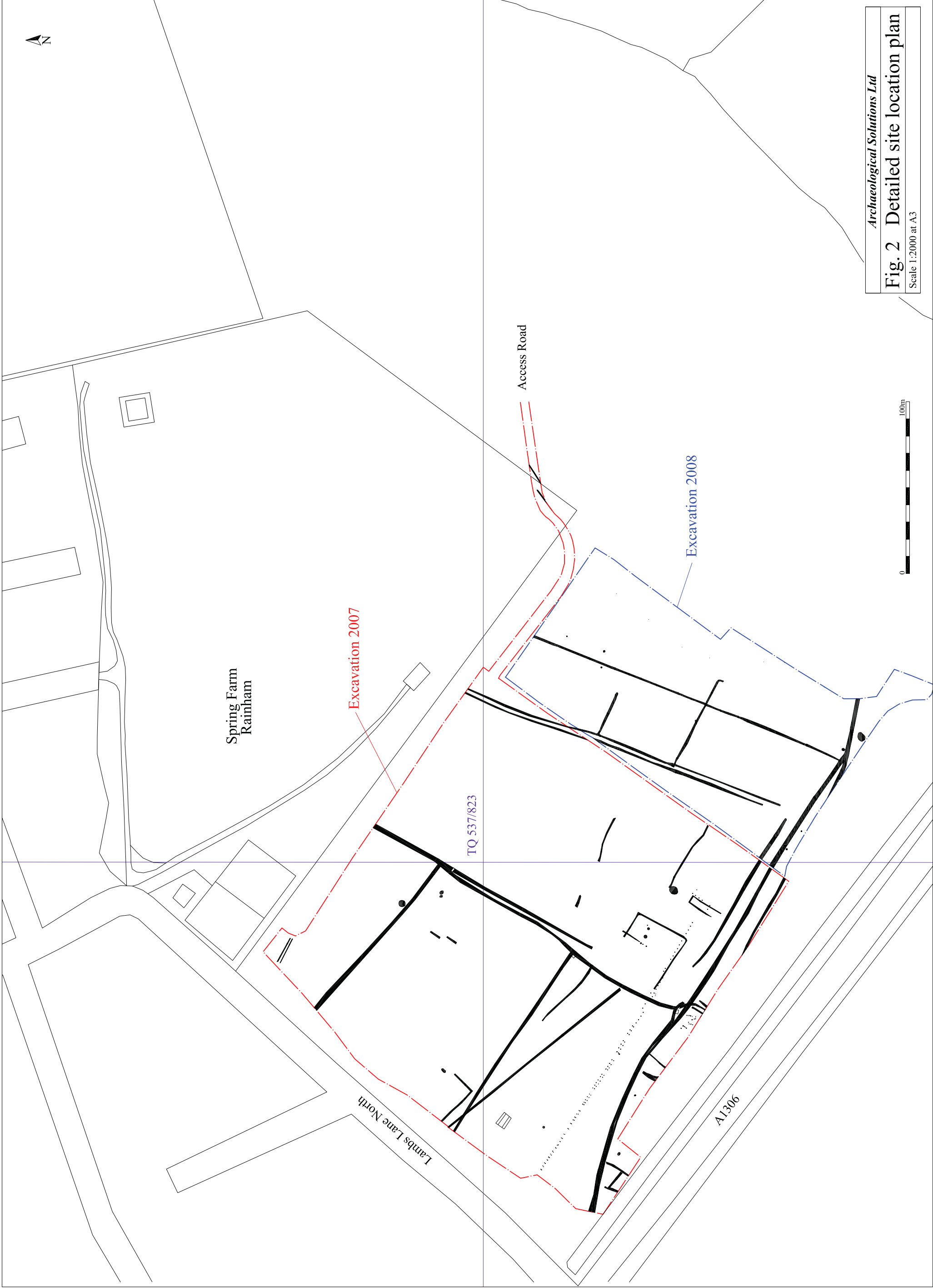
Websites

1) www.english-heritage.org.uk/upload/pdf/gla_annual_review_2004.pdf; 2004. 'Our Rural Landscape' 'Southall Farm, Rainham' (JSAC/AOC). Accessed 28/01/08



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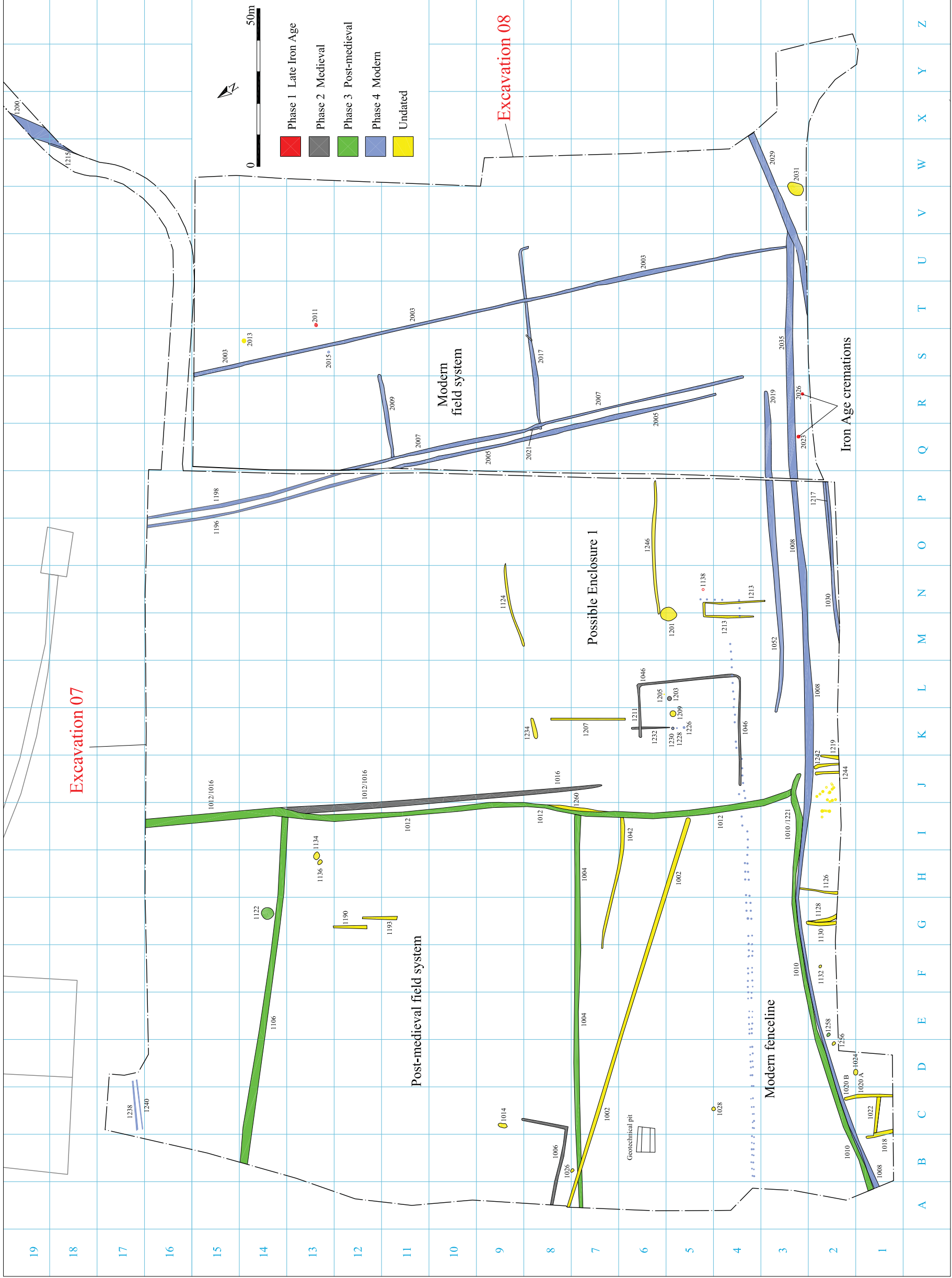
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Fig. 1 Site location plan
 Scale 1:25,000 at A4



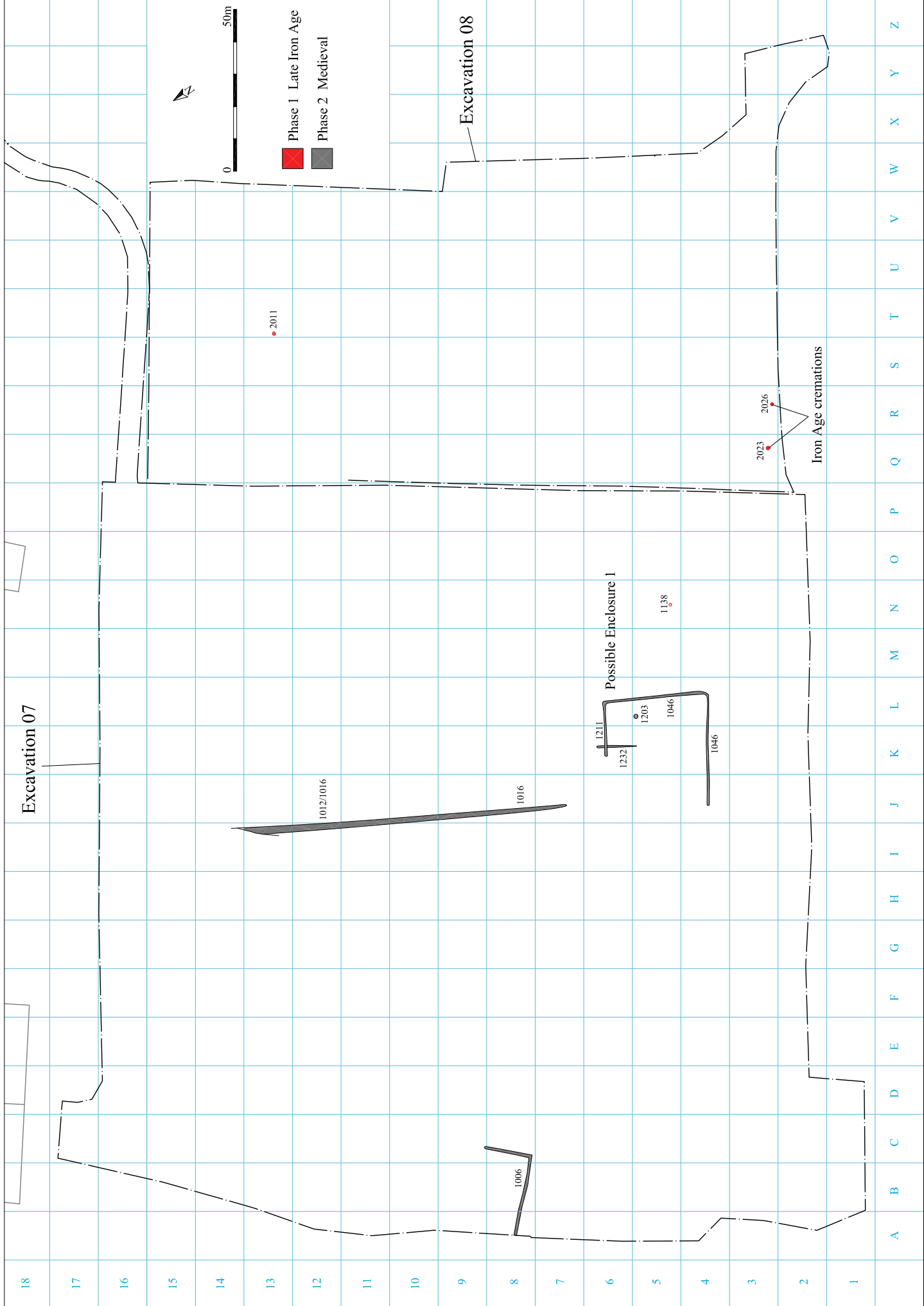
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Fig. 2 Detailed site location plan

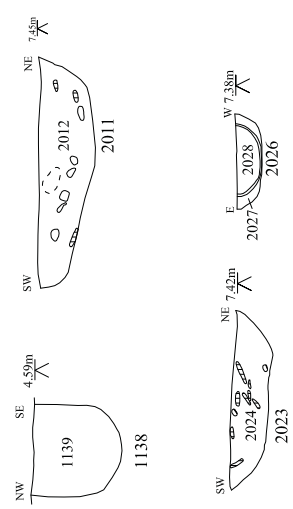
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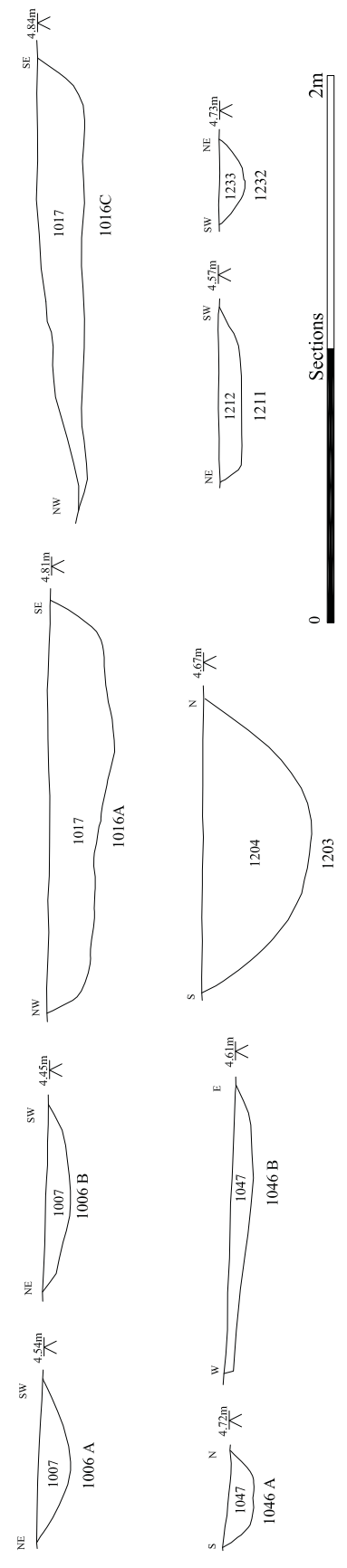
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Fig. 3 Phase plan
 Scale 1:1,250 at A3



Phase 1 Late Iron Age



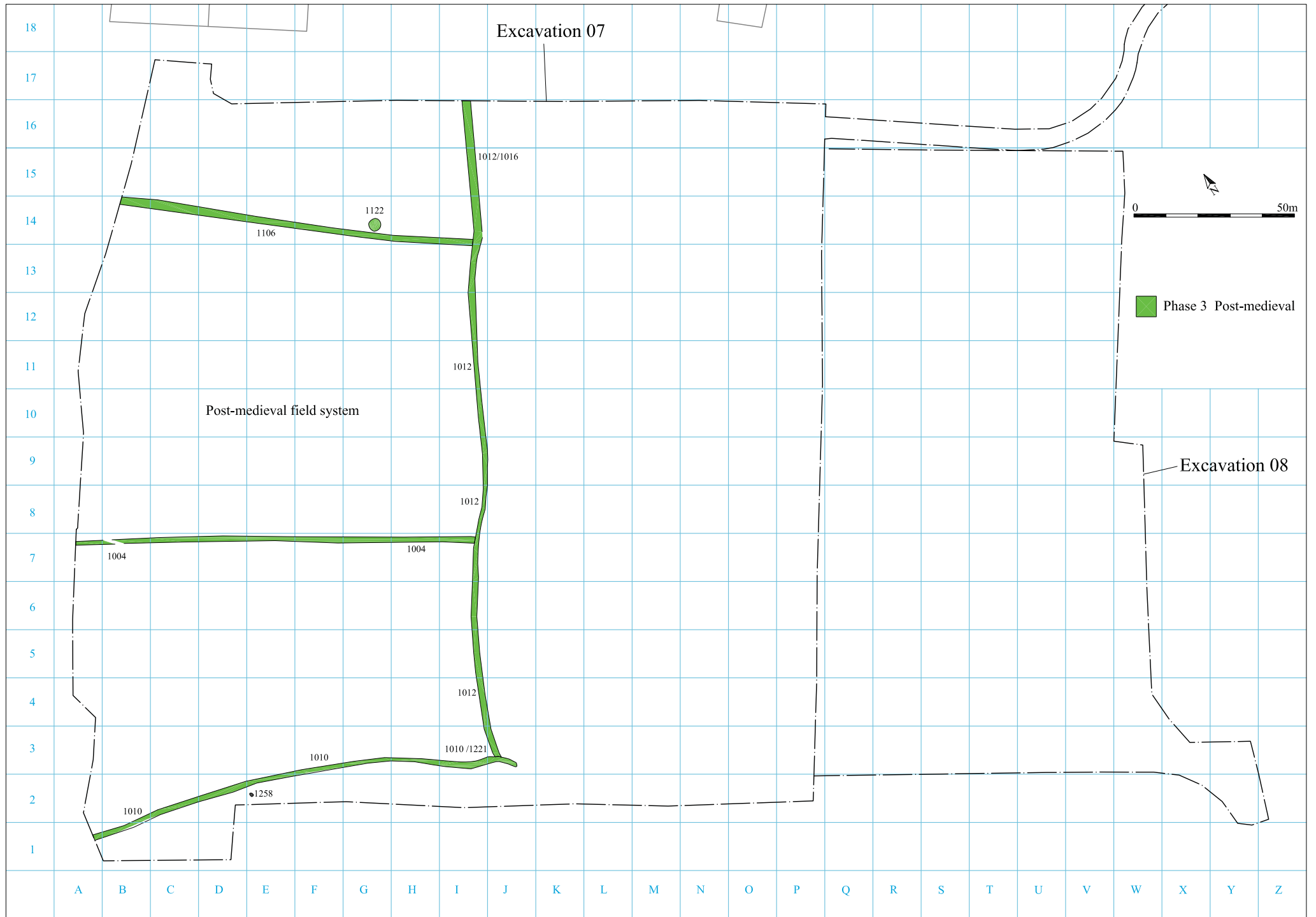
Phase 2 Medieval



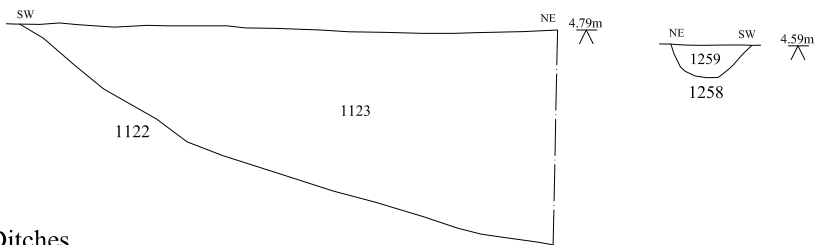
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Fig. 4 Phases 1 & 2 LIA and medieval

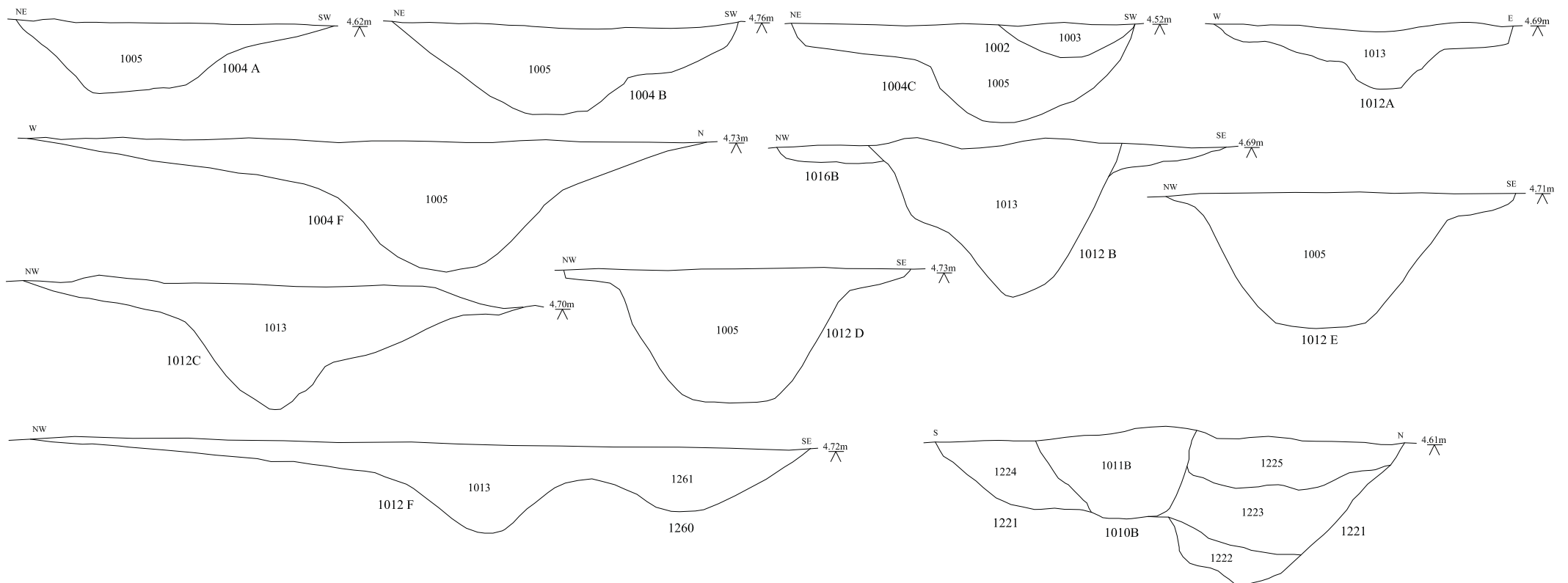
Scale Plan 1:1500, sections 1:25 at A3



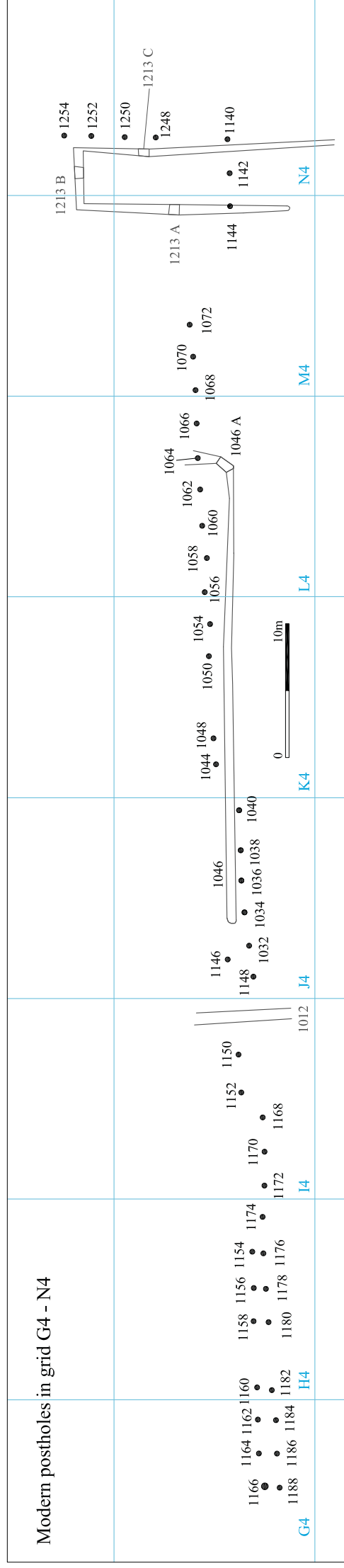
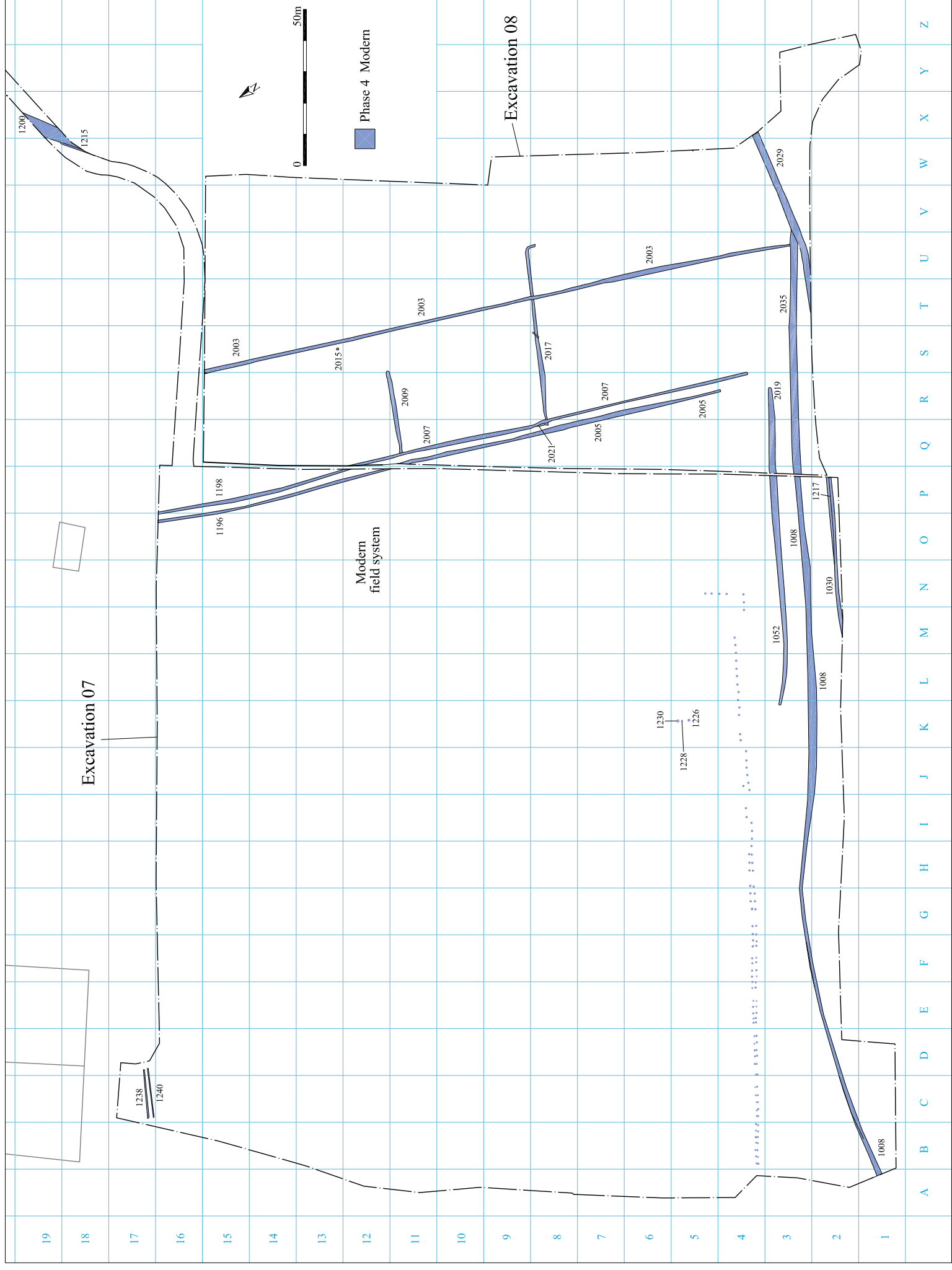
Phase 3 Post-medieval Pits and postholes



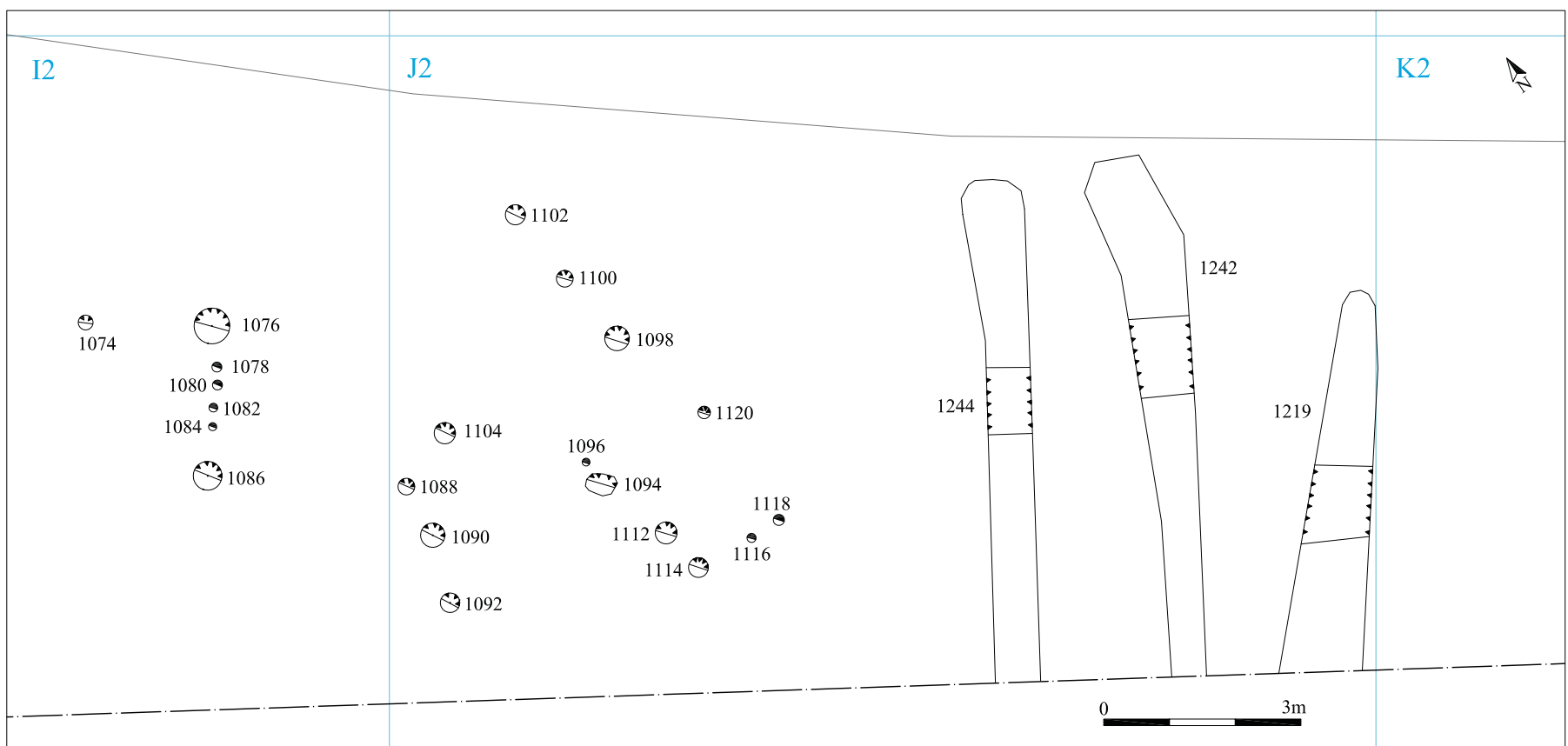
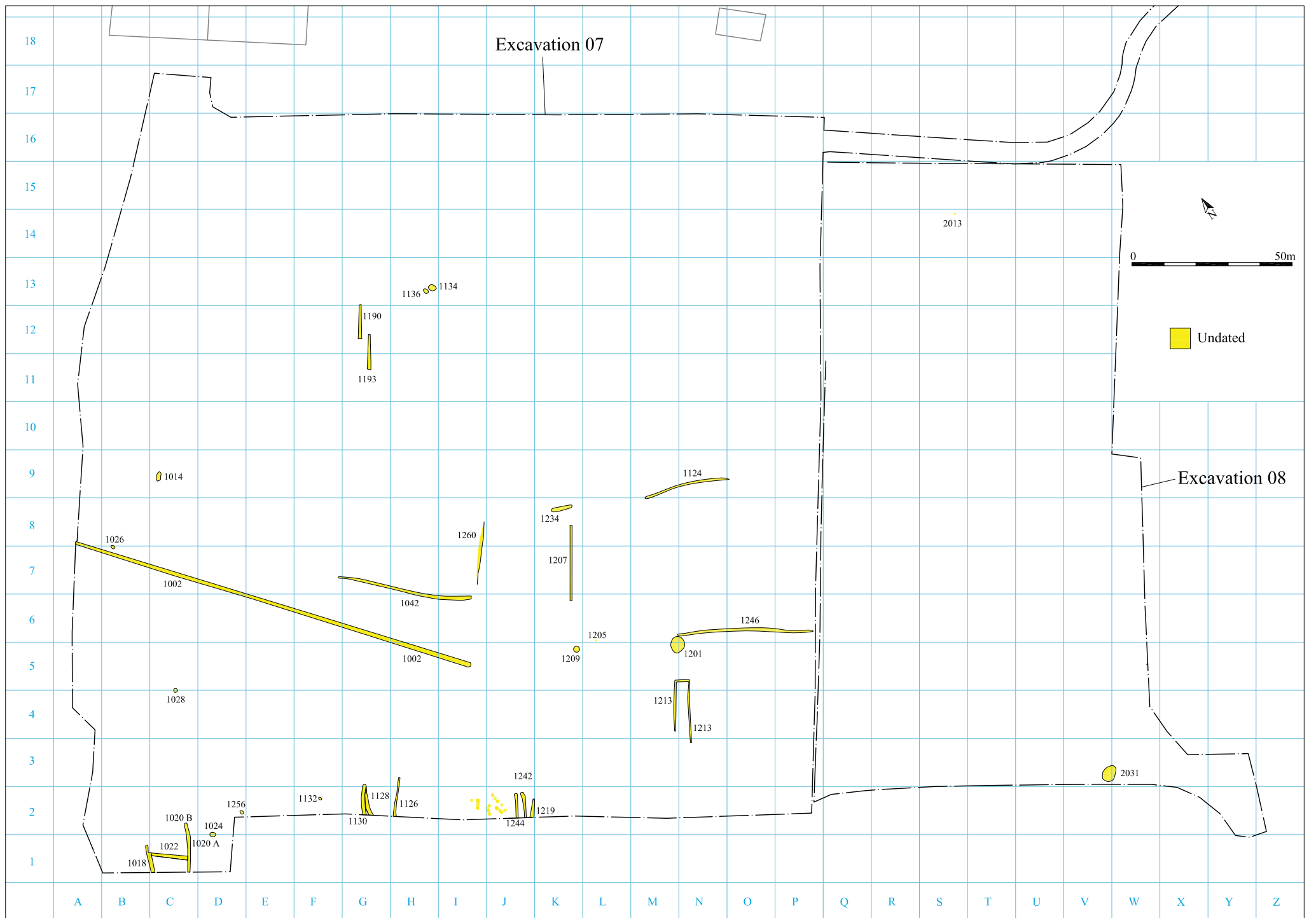
Ditches



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Fig. 5 Phase 3 Post-medieval
 Scale Plan 1:1500, sections 1:25 at A3



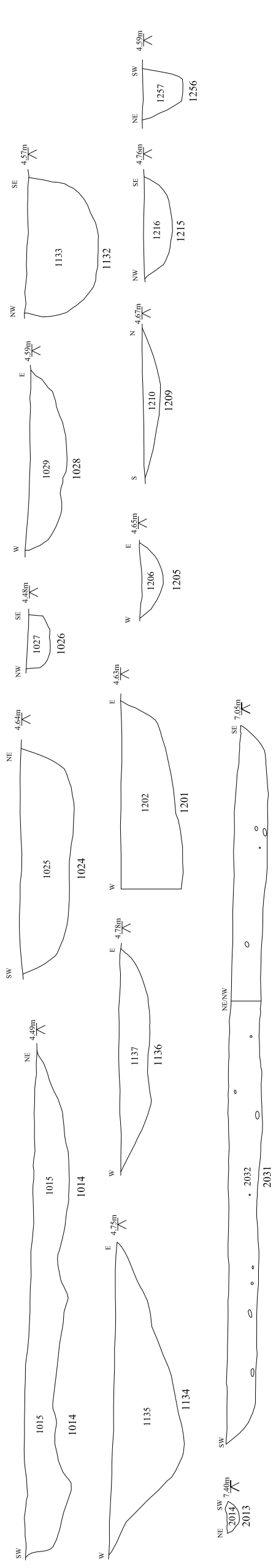
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Fig. 6 Phase 4 Modern
 Scale Plan 1:1500, insert 1:400, sections 1:25 at A3



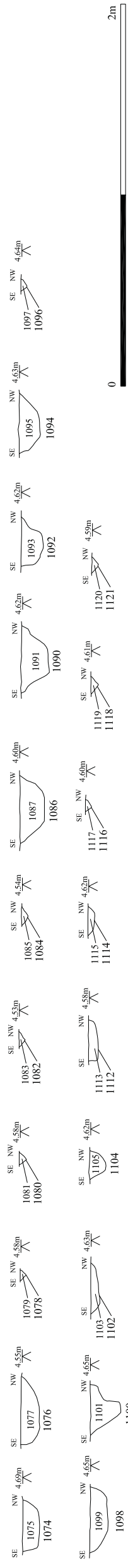
Undated postholes in grid I2 - J2

Undated

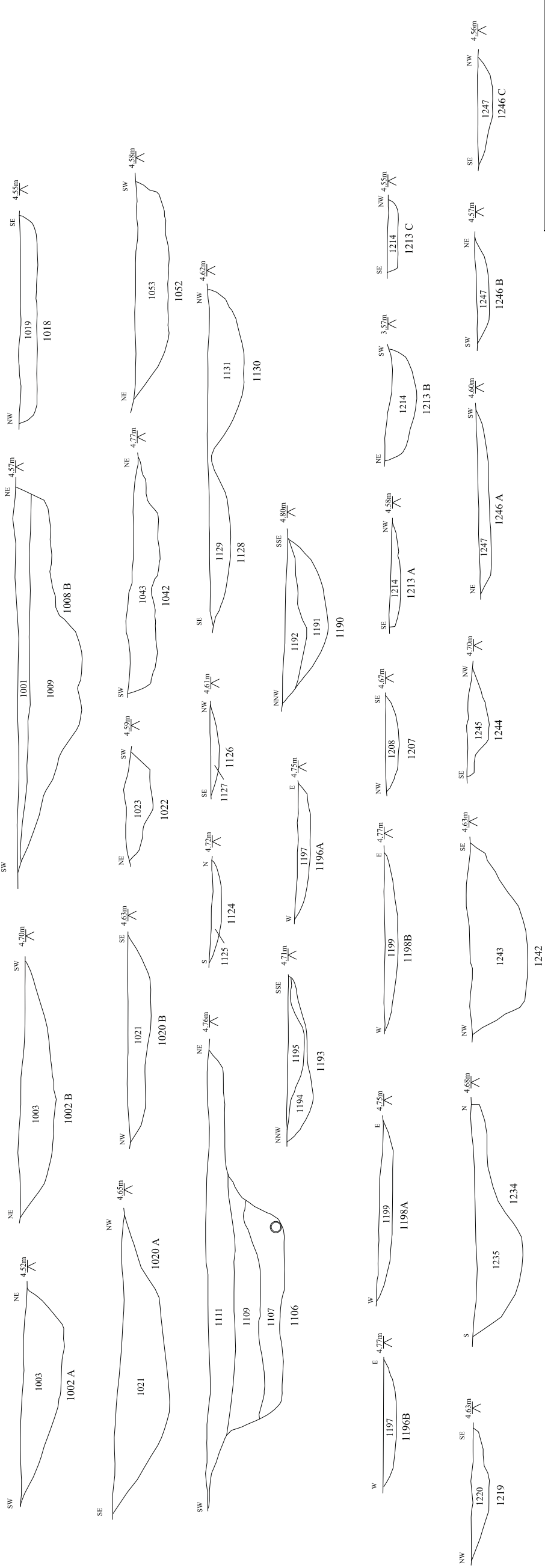
Pits & postholes



Undated postholes in grid I2 - J2



Ditches



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Fig. 9 Undated sections
 Scale 1:25 at A3