96 NORTH STREET, BARKING

RESEARCH ARCHIVE REPORT

ARCHAEOLOGICAL SOLUTIONS LTD

96 NORTH STREET, BARKING

RESEARCH ARCHIVE REPORT

Authors: Pip Stone BA					
Illustrations by: Charlotte Davie	Illustrations by: Charlotte Davies BA				
Edited by: Mike Lally MPhil PI	FA				
NGR: TQ 4405 8432 Report No.					
Borough:	Site Code: KRN.06				
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Signed:	Date: February 2008				

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OASIS SUMMARY SHEET

Project details	
Project name	96 North Street, Barking

Project description (250 words)

During October 2006, Archaeological Solutions Ltd (AS) carried out an archaeological excavation prior to the development of land, which was until recently occupied by Braintree House, 96 North Street, Barking, Essex (NGR TQ 4405 8432). The excavation was commissioned in advance of the proposed redevelopment of the site for residential use. It followed a recent archaeological evaluation also carried out by AS (Ginns & Ilson, 2006).

Forty-four archaeological features were identified during the excavation. The features were sub-divided into four dated phases. Two pits and residual pottery indicated that the site had been occupied during the early to high medieval period. The majority (15) of the features were sand quarry pits, and nine dated to the late medieval/post-medieval period. Three early modern features were also recorded. Twenty-one archaeological features produced no dateable finds and could not be phased.

Although sparse, Phase 1 (13^{th} to mid 14^{th} century) features are possibly indicative of settlement activity in the medieval period. The 15^{th} to 17^{th} century (Phase 2) saw a shift in land-use to industrial activity, represented by the nine quarry pits. An additional three undated pits of similar morphology may also be associated with this period of activity. The three Phase 2 rubbish pits may also be directly associated with quarrying. Quarrying appears to have ceased by the 17^{th} - 19^{th} century (Phase 3), possibly to be replaced by a butchery and/or tannery industry. The archaeology of Phase 4 relates to the early modern development of North Street.

Project dates (fieldwork)	October 2	2006			
Previous work (Y/N/?)	Y	Future	work (Y/N/?)	N	
P. number	2655	Site co	de	KRN.00	5
Type of project	Open Are	a Investigati	on		
Site status	Vacant				
Current land use	Demolitic	on site			
Planned development	Residenti	al			
Main features (+dates)		its (1400-160			
Significant finds (+dates)			al/early modern p one assemblage	ottery asse	mblage. Large 17 th –
Project location		-			
County/ District/ Parish	Greater I	London	Barking & Dag	enham	
HER/ SMR for area	GLSMR				
Post code (if known)					
Area of site	$1134m^2$				
NGR	TQ 4405 8432				
Height AOD (max/ min)	7.50 – 8.20m AOD				
Project creators					
Brief issued by	EH GLAA	4S			
Project supervisor/s (PO)	Andy Brown				
Funded by	Inner London Developments				
Full title	96 North Street, Barking. An Interim Report.				
Authors	Phil Weston				
Report no.	2190				
Date (of report)	Mar 2007				

RESEARCH ARCHIVE REPORT FOR EXCAVATIONS 96 NORTH STREET, BARKING.

1 INTRODUCTION

- 1.1 This report comprises the research archive for an evaluation and excavations at 96 North Street, Barking (NGR TQ 4405 8432) (*Fig. 1*) carried out by Archaeological Solutions Ltd (formerly the Hertfordshire Archaeological Trust) in June 2006 and October 2006. It has been compiled in accordance with EH MAP 2, Section 7 and Appendix 6. It follows the interim site narrative (Brown, Weston & Grassam 2007) and the post-excavation assessment and updated project design (Graham & Sparrow 2008).
- 1.2 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, other records and plan/section drawings are presented (*Figs. I 12*).

I ANALYTICAL REPORTS

2 SITE NARRATIVE

2.1 Overview

During June 2006 Archaeological Solutions Ltd (AS) carried out an archaeological evaluation, which was then followed, in October 2006, by an archaeological excavation, on land at 96 North Street, Barking (NGR TQ 4405 8432, *Fig. 1*). The project was commissioned by Richard Boast Associates on behalf of Inner London Development. Details of geography, geology and topography, as well as background information pertaining to the archaeology of the area, can be found in the site Updated Project Design (Graham & Sparrow 2008).

2.1.1 Phasing

Fig. 2

Many of the site's features were previously categorised as unphased during previous reporting (Ginns & Illson 2006 and Brown, Weston & Grassam 2007). A proposed rephasing of some of these features was discussed in the Updated Project Design (Graham & Sparrow 2007), and is clarified below. Some features have since been rephased based on their stratigraphic relationships with other features onsite. All of the site's unphased features predated Phase 5, as none of them truncated made ground deposits.

Dateable material fell into 5 phases.

Phase	Date	Period
1	AD 1200 – 1400	Early – late medieval
2	AD 1400 – 1600	Late medieval – early post- medieval
3	AD 1600 - 1800	Post-medieval – modern
4	AD 1400 – 1800	Unspecified post-medieval
5	AD 1800 onwards	Modern

Table 1: Summary of Phasing

2.2 Phase 1 (AD 1200 – 1400) Early – late medieval

Feature and context descriptions: Section 4.2

Figs. 3 & 4

Evidence for late medieval activity was attested by 5 pits (F1012, F2021, F2047, F2076 and F2144), a small linear feature (F2072), a large linear feature (F2049) and an occupation layer (L2080). These features were excavated in both the eastern and western areas of the site. The majority of the pits in the western area of the site are thought to represent backyard activity, associated with structures facing North Street, one of Barking's principal roads. This evidence for backyard activity suggests that there was a route in existence along the same alignment as North Street prior to 1456, when it was first acknowledged historically.

F2021 was a large pit excavated in the eastern area of the site (Fig. 3 - Grid Ref. J2). This kind of feature is indicative of open cast quarrying. It contained a small amount of pottery and CBM, both of which confirm a Phase 1 date. F2049 was a large linear feature, the purpose of which is unclear, though it too may represent open cast quarrying. It contained pottery sherds datable to phase 1. F1012 appears to have been the terminus for this feature.

F2047 (Fig. 3 - Grid Ref. C4) is likely to have been a posthole. It was the only one in this area, so cannot be attributed to the construction of a structure or boundary, The lack of surrounding postholes could be explained by the truncation and dominant presence of Phase 2, 3 and 4 features in the area surrounding F2047 (Fig. 3).

Two previously unphased features can now be attributed to Phase 1. Their rephasing is based on their stratigraphic relationships with other features onsite and material contained within them. L2080 (Fig. 3 - Grid Ref. B5 & B6) was an occupation layer. It contained pottery and CBM which attested a 1350 to 1550 AD date. This occupation layer was truncated by features from Phases 1, 2, 3 and 4, and as such has been assigned a Phase 1 date. F2072 (Fig. 3 - Grid Ref. B5) comprised a linear ditch, which was truncated by a large Phase 2 pit (F2069), and sealed by made ground, it contained no finds, and was phased based on stratigraphy alone. F2144 (Fig. 3 - Grid Ref. B6) was a small pit located in the western most area of the site. It was truncated by F2114, a Phase linear 2 feature, and sealed by L2080, confirming its Phase 1 date.

2.3 Phase 2 (AD 1400 – 1600) Late Medieval – early post-medieval

Feature and context descriptions: Section 4.3 Fig. 5-6

Phase 2 was attested by 11 features; 4 pits (F2040, F2074, F2120 and F2160) a linear feature (F2114) were discovered in the eastern area of the site, and 4 pits were excavated in the western area (F2005, F2007, F2009 and F2067) (Figs 5 & 6).

The size and stratigraphic nature of large Pits F2120, F2005, F2007 and F2009 suggests that they resulted through sand or gravel extraction for building activity. F2120, F2009 and F2007 (*Fig. 5 - Grid Ref. J4*) contained pottery, which dated from the 15th to 17th centuries, and F2120, F2009, F2007 and F2005 contained CBM of a similar date. Quarry pits were also identified during excavations at Barking Library, approximately 400m to the south-east of 96 North Street (MLO78364). After they had been exhausted it is likely that many of the quarry pits would have been used for the deposition of refuse.

F2040, F2067, F2074 and F2160, have been classified as rubbish pits. They were all substantially smaller than the presumed quarry pits and contained material allowing them to be dated to this phase (Fig. 5 - Grid Ref. B5, B6, C5 and J3).

F2114 (Fig. 5 - Grid Ref. B6) was previously dated to phase 1; however post-excavational reconsideration of the pottery and CBM from within the feature has suggested it was of a Phase 2 date. F2114 was a large curvilinear feature excavated in the western most area of the site. The feature undoubtedly continued beyond the reach of the excavation. It has been suggested (Brown, Weston & Grassam 2007) that if F2114 and F2015 continued along their projected trajectories, they would intersect at a point well beyond the perimeter of the site, and as such may have been the same feature. However, they have now been phased to different periods, making this interpretation unlikely. F2114 contained two fills from which an iron stud and fragments of oyster shell and plaster as well as 79g of pottery, 2690g of CBM, 96g of animal bone were retrieved.

2.4 Phase 3 (AD 1600 – 1800) Late post-medieval *Fig. 7 – 8*

Five features can be dated to Phase 3 (F2015, F2055, F2069, F2116 and F2129) (Figs. 7 & 8). These features comprised quarry and rubbish pits. Phase 2 and 3 quarrying activity represents the most intensive period of activity onsite. The site lies on Thames gravel terraces and sand, so it is probable that the pits were cut to access these raw materials. It is likely that Phase 2 represents a continuation of activity from Phase 1.

F2116 was a large quarry pit in the eastern area of the site (Fig. 7 - Grid Ref. C5, C6, D5 and D6). It cut Phase 2 feature F2120, and in turn was cut by a modern cinder pit and the foundations of Braintree House. F2116 seems to have been gradually filled in over time, presumably after the cessation of quarrying activities. F2055 was a contemporary pit, and was previously dated to Phase 1; however the presence of a Phase 3 iron nail in its bottom most fill suggests it belongs to this later date. Both of these features are indicative of open cast quarrying.

F2069 and F2129 were two rubbish pits. F2069 has previously been dated based on its pottery content to Phase 2, however the CBM and moderate number of metal objects,

including an Iron nail and shank fragment, a post-med iron knife blade, an iron strap with hooked end and an iron horseshoe branch, suggests it was of a Phase 3 date.

F2015 was a linear feature in the western area of the site (Fig. 7 - Grid Ref. C4). It cut ambiguous post-medieval feature F2017 and was dated by pottery and CBM, both of which confirmed a Phase 3 date. It is possible that F2015 represented a recut of Ditch F2017, which may have fallen out of use by this time. It is possible that Ditch F2015 (Fig. 8) once contained some kind of structure. This feature may have bounded the quarrying activity onsite.

2.5 Phase 4 (AD 1800 +) Modern

Feature and context descriptions: Section 4.4 Figs. 9 - 10

Phase 4 features date from the 19th to early 20th centuries. The stratigraphic evidence for Phase 4 was relatively limited, attested by only three features; a possible cinder trap (F2019 – *Fig. 9 - Grid Ref. C6*) and a pit (F2013 – *Fig. 9 - Grid Ref. C5*), and a large rectangular feature (F2028 – Fig. 9 - *Grid Ref. G2, G3, H2, H3, I2, I3 J2 and J3*). By this phase the opencast quarrying of earlier periods had ceased and the site was used predominantly used for waste disposal. It is likely that the beginning of this phase also witnessed the beginnings of urban development at the site. The presence of F2028, a probable cellar cut, suggests that there was a structure on the site prior to the building of Braintree House. There is a structure evident onsite on the 1847 Tithe Map, and the 1877 OS Map (see Figs. 9 & 10; Brown, Weston & Grassam 2007), though neither of these show a structure in the area of the cellar pit.

Pit F2028 was initially described as a quarry pit; however its rectangular shape and straight sides (Figs. 9 & 10 - Grid Ref. G2, G3, H2, H3, I2, I3 J2 and J3) allude to it having more of a structural function. The feature may have been indicative of a cellar. Although retaining walls associated with this feature were absent, it is possible that these were robbed out when the associated building was demolished, or that the structure was never completed; either way, once defunct, the feature appears to have been employed for the disposal of waste. It contained eighteen fills, with finds distributed throughout them. These finds included early modern pottery (697g), CBM (15764g), plaster (147g), slate (31g), glass (202g), clay pipe (51g), slag (6g), animal bone (363g) burnt bone (5g), oyster shell (232g) and a quern stone fragment. A section of F2028 was excavated during the evaluation (Ginns & Ilson 2006) (F1017 & 1018), and dated to Phase 2, however, following full excavations, it seems likely that the two features were in fact identical.

F2019 was a possible cinder trap, located in the western area of the site. It was of brick construction, trapezoidal in plan and had vertical sides. The base of the feature was not reached, but it extended past 0.50m, at which point the excavation was curtailed. The feature had a single fill, L2020, which produced early modern pottery (807g), glass (153g) and clay pipe (54g). Cinder traps were a common feature of backyards during the nineteenth and early twentieth centuries, when they acted as a receptacle for the disposal of ash and cinders produced by fires and ranges. It is therefore possible that terraced houses existed close to, or nearby the site. It is also possible that the cinder trap was associated with an early phase of activity at Braintree House. Based on the limited evidence, both theories remain speculative.

Pit F2013 (Fig 9, Grid Ref. C5) cut both Phase 2 Pit F2120 and Phase 3 Pit F2116. It contained early modern pottery (153g), post-medieval CBM (1551g), animal bone (79g) and oyster shell (15g). Its steep sides, concave base and relatively shallow depth (0.44m) suggest it was a rubbish pit.

2.6 Unphased post-medieval (AD 1400 – 1800)

Fig. 11 - 12

A number of features were of an ambiguous Phase 1 or Phase 2 date. A lack of diagnostic finds prevented their specific phasing. F2017 was a linear feature truncated by Phase 3 feature F2015. F2017 and F2015 could have been part of the same linear feature, but the nature of the cutting of F2017 indicates that F2015 was later, possibly constructed to replace F2017. Both linear features certainly continue beyond the excavated area (Fig. 5 Grid Ref C4).

F2051, F2053, F2132, F2137 and F2141 were all previously unphased pits. They were all sealed by Phase 4 made ground. They contained no finds, and are classified as unphased post-medieval quarry pits based on their stratigraphic relationships to phased quarry pits from Phases 2 and 3. Three features (F2132, F2137 and F2141) were very closely clustered, indicating that they were phases of the same quarry pit (*Fig. 5*). F2096, a small posthole sized feature, cut F2137 through its centre. No finds were recovered from this feature.

2.6 Unphased features

Fig. 13

F2126 was a small linear feature which cut Phase 2 quarry pit F2129. It was truncated by, and sat perpendicular to, a modern concrete wall. It is impossible to say whether this feature dated to Phase 2 or Phase 3. Similarly, there is no way of dating 6 pits (F2065, F2011, F2023, F2038, F2042 and F2078) or linear feature F2044, in the eastern area of the site. A cluster of irregular features (F2093, F2094, F2106 and F2108) in the western area of the site are cut by the foundations of Braintree House. The cluster of features cut Pit F2116.

3 SPECIALISTS' FINDS AND ENVIRONMENTAL REPORTS

3.1 Flint

By Phil Weston

Introduction

The assemblage comprised five pieces weighing 34g, however, if unworked flint and burnt flint is excluded, the worked flint assemblage totals three pieces weighing 22g. The three worked flints and the unworked piece came from Ditch 2015 whilst the burnt piece came from Pit F2023.

Raw materials

Three pieces still have some dorsal cortex of an appearance that suggests the raw material

was derived from secondary deposits such as river gravels, or a clay-with-flints drift geology.

Struck flint

Context: L2016

Broken flake. Prepared butt. Light honey-brown, translucent. Tertiary. Not patinated. Fairly sharp. Three negative scars on dorsal face. Possible use-wear on left lateral side. 3g.

Flake. Unprepared butt. Mid to dark grey, opaque. Primary. Not patinated. Not sharp. 3g.

Probable thermal flake retouched as rudimentary scraper. No identifiable butt. Mid greybrown, translucent around the edge. Primary. Not patinated. Not sharp. Dorsal cortex is cracked and pitted suggesting the piece has been exposed to fire. 16g.

Burnt flint

Context: L2024

Heavily burnt chip. 11g.

Discussion

None of the flint is indicative of a particular period in prehistory although the broken flake is short and squat with a large bulb indicating a hard hammer was used. These characteristics suggest a later prehistoric date. However, given the contexts from which the flint originated, the assemblage must be considered residual.

3.2 Medieval and post-medieval pottery

By Peter Thompson

The combined evaluation (23/0.458 kg) and excavation (525/9.698 kg) produced a total of 548 sherds weighing 10.156 kg. The assemblage ranges from medieval to early modern in date. It is in mixed condition with most of the pottery displaying from slight to heavy abrasion. The sherd size is variable, with the majority of fragments being small, with occasional large sherds. There are several partially re-constructable profiles; most notably a jug from F2049 (L2056).

The Pottery

Table 1 (see below) shows the wares/fabric groups present. These have been broken down further with their London fabric codes and recorded on Excel database which has been deposited with the archive.

Ware/fabric groups	Date range	Sherd	Percentage of
		number	total assemblage
South Essex Shelly Ware	1100-1300/1350	70	12.8
London-type Ware	1080-1500	79	14.4
Miscellaneous medieval coarse wares	1200-1500	38	6.9

Miscellaneous medieval glazed	1200-1500	8	1.5
wares			
Mill Green-type Ware	1270-1350	25	4.6
Coarse Border Ware	1270-1500	17	3.1
East Anglian Red Ware	1180-1500/1550	118	21.6
Colchester-type Ware	1200-1550	9	1.6
Late medieval transitional ware/early	1400-1600	91	16.6
post-medieval red earthenware			
Cistercian Ware	1480-1600	3	0.5
Raeren Stoneware	1480-1610	3	0.5
Border Ware	1550-1700	19	3.5
Tin Glazed Earthenware	1570-1800	4	0.7
Post-medieval red earthenware	1580-1900	41	7.5
Westerwald stoneware	1590-1900	1	0.2
English stoneware	1700-1900	1	0.2
Porcelain	1745-1900	12	2.2
Factory made white earthenwares	1750-1900	9	1.6

Table 2: Quantification of wares/fabrics

South Essex Shelly Wares comprise nearly 13% of the total pottery assemblage, although the majority of these are residual, appearing in late medieval and post-medieval contexts. Included here is a bowl rim from F1041 (L1011) (*Fig. 14.1*), the only pottery from this context with incised wavy line decoration suggesting a 13th century date (Berni Sudds pers. com.). The miscellaneous group of coarsewares (6.9%) includes sandy grey wares of Fabric 20 type, a flint tempered flanged bowl rim from Pit 2015 (L2016) and two sherds of Essex iron-rich ware (Berni Sudds pers. com) from Pit F2069 (L2071). Again much of this is residual

Mill Green Ware comprises 4.6% of the assemblage and includes 10 white slipped sherds with sgraffito decoration from layer 1046, although this also appears to have been residual, appearing with late medieval transitional pottery and a sherd of Raeren stoneware. Pit 2049 (L2056) contained a partly re-constructible squat rounded jug with white slip and clear glaze and Rouen style decoration (*Fig. 14.2*). The decoration and form including its strap handle, which had a similar example from Pit F2055 (L2081), are in Mill Green style (Pearce et al 1982, 272, 280). However, the fabric is too coarse, unless these are unusual examples of Mill Green coarseware being decorated (Berni Sudds pers. com). All such unsourced wares have been classed as East Anglian redware, which come under the miscellaneous group of sandy orange wares Fabric 2. Fabric 21 comprises 21.6% of the assemblage. Another residual Mill Green-type handle attachment with white slip and green glaze came from pit 2013 (L2014); although the fabric containing coarse white quartz is possibly Colchester-type ware. A flat topped jar rim from pit 2069 (L2070) is probably also a Colchester-type ware product (*Fig. 14.3*).

London-type ware accounts for 14.4% of the total; a highly decorated sherd from Pit F2047 (L2048) is probably London-type ware but could be a North French import (Berni Sudds pers. com). Coarse Border ware is also present in the assemblage, including highly decorated sherds (1270-1350) from the fills of Pit F2069 (L2070 (2) and L2071 (1)). These are abraded and residual. An unusual example of Coarse Border ware with rill decoration also came from Pit F2069 (L2071) (*Fig. 14.4*).

Late medieval transitional wares and early post-medieval red earthenwares comprise 15.7% of the total. Layer 1009 (between F1005 and F1006) contained two wide flanged rim sherds of late 15th to 16th century date in transitional redware and Pit 2007 (L2008) contained a handled cooking pot with external sooting (possibly from a cauldron) (*Fig. 14.5*) in a similar fabric with patchy internal glaze similar to Late London-type ware. A red earthenware jug rim with sgraffito decoration from L2117 (*Fig. 14.6*) is probably residual in pit 2116, which contained glazed post-medieval red earthenware, including the top of a costrel (*Fig. 14.7*). Other transitional/ early post-medieval wares comprise one or two sherds of Cistercian ware and Raeren stoneware from L2046 and Pit F2015 (L2016) the latter also containing a sherd of tin glazed earthenware.

Discussion

Five features contained only Early to High medieval pottery (L1911, F1014, F2021, F2047 and F2055, F2005 contained similar dated pottery but it is residual). The majority of features date to the late medieval or possibly early post-medieval period, c.1400-1550. These comprise F2007, F2009, F2040, F2049, F2057, F2069, F2074, F2076, L2080, F2114 and possibly L1009 and F2160. Three features (F2015, F2069 and L2046) contained 310 sherds between them, accounting for nearly 57% of the entire assemblage. Potentially the most closely datable feature is Pit F2015 (L2016), with 151 sherds. At least one third of this is residual, comprising South Essex shelly ware, Mill Green ware, London-type ware and other medieval coarsewares, though the figure could be higher. The latest pottery is Border ware (c.1550-1700) and a single sherd of tin glazed earthenware (1570-1800). Two sherds of Cistercian ware and a sherd of Raeren stoneware suggest a latest date of c.1600/1610 and whilst these could be residual, a lack of any clay pipe in such a large assemblage, which was used widely in Britain by the end of the 16th century (Oswald 1975, 5-6), indicates a likely date of *circa* 1570-1610. L2046 contained 72 sherds and could be of similar date; also containing Cistercian ware and Raeren stoneware indicating a date of 1480-1600 but again lacking clay pipe so possibly not being much later than c.1590. Pit 2069 contained 87 sherds, including Late London ware, indicting a date between c.1400-1500 but could possibly be a little later. The overall assemblage, including South Essex shelly ware, Mill Green ware (whose main area of distribution is South Essex and London) and East Anglian redware is fairly typical of the region. At South Woodham Ferrers, South Essex, sandy redwares with white slip decoration (and some with debased Rouen-style decoration) was dated late 14th to early 15th century (Cotter 2000, 109). At least some of the transitional redwares were probably produced at a site between Essex and London, possibly Loughton or Waltham Abbey (Berni Sudds pers. com). London-type ware has at least six variants, indicating more than one source (McCarthy and Brooks 1988, 309), whilst the Coarse Border ware was brought in from the other side of London on the Surrey/Hampshire region.

3.3 Ceramic Building Materials

By Andrew Peachey

Introduction

A total of 497 fragments (69213g) of well-preserved post-medieval CBM were recovered from stratified post-medieval features, with a further 155 fragments (32298g) of CBM from modern and unstratified features. The modern features (Pits F2028 and F2038)

contained 63 fragments (7075g) of post-medieval peg tile and 49 fragments (20223g) of modern brick rubble which are not discussed here.

Fabric description

The post-medieval CBM is present in a single fabric and the assemblage is dominated by peg tile, with only small quantities of brick and a single possible floor tile. The CBM fabric has pale red surfaces (10R-5YR 6/6, possibly dulled by weathering) with a thick core that may be oxidised or reduced. Inclusions are of abundant well sorted fine quartz (0.1-0.2mm), sparse quartz and white/pale oxidised clay pellets/grog (0.2-1mm) with sparse very fine mica. The fabric is very hard and slightly abrasive, with a slightly irregular fracture.

Peg tile

The peg tile has dimensions of ? x 153 x 12mm, with only minor inconsistencies caused by warping during firing. The peg tile exhibits two holes at one end of the tile, either circular or square, but always located 10mm in from the end of the tile, and 30-40mm in from each side. The bulk of the tile assemblage exhibits a sanded base and sparse lengthwise striations are often visible. Splashes of lead glaze also appear on fragments from Pits F2015 and F2076 but do not appear to be for a decorative or functional purpose and therefore remain an anomaly.

Peg tile was present in every context that contains CBM and is well-preserved throughout. Particularly high concentrations of peg tile (>10kg) were present in Pits F2009 and F2116, with smaller but still notable concentrations in Pits F2015, F2076, F2120, Linear F2093 and Layer 2046.

Brick

The post-medieval brick has dimensions of ? x 115 x 52mm and is in a fabric comparable to that of the peg tile, although some examples appear slightly coarser. The brick has slightly irregular, rounded arrises and smooth faces with no frog. Occasional straw/grass marks are visible on the base. The only concentration of post-medieval brick in the assemblage originated from Pit F2015, although isolated fragments were present in other features.

Floor tile

The final form present within the assemblage is a probable floor tile, represented by a single fragment in Pit F2055. The only extant dimension of this tile is a thickness of 23mm, while the upper surfaces have an off-white/cream under-slip covered with (traces) of a lead glaze.

3.4 Metal and Stone Objects

By Nina Crummy

Summary

The assemblage is small and dates to the post-medieval period.

Condition

The ironwork is only lightly corroded; its surface appearance is typical of post-medieval or modern artefacts. The brackets are large and must derive from a wooden structure. The presence of a long machine-made screw from feature F1014 dates that feature to the late post-medieval or modern period. The majority of the metalwork consists of nails that cannot be closely dated or 19th-20th century scrap. Exceptions are an iron pintle from F2007, which is from a medieval window or gate hinge, and a copper-alloy chape from F2009 that may also be medieval. An iron knife from F2069 is of a type with composite handle found in late medieval and early post-medieval contexts, and a whetstone from F2015 is probably early post-medieval in date. The copper-alloy pin (F1019, L2046) is also machine-made and of late post-medieval or modern date.

Recommendations

Beyond providing limited dating evidence, the assemblage can provide little information regarding the economy or land use of the site. It is recommended that no further action is taken.

Feature	Context	Feature	Date	Finds
F2076	L2113	Description Pit fill	Roman/post- medieval coin / medieval jetton	Severely corroded copper-alloy Roman or post-medieval coin, or medieval to post-medieval jetton. Diameter 23.5 mm. SF 1.
F2007	L2008	Pit fill.	Modern	Copper-alloy wire fragment made from seven fine twisted strands. Length (bent) 103 mm.
			-	Iron pintle with round-section pivot and rectangular-/square-section spike for attachment. Length of pivot 48 mm, length of spike 76 mm.
F2009	L2010	Pit fill.	-	Crushed copper-alloy tapered ferrule or chape made from folded sheet. Length 42 mm, maximum width 17 mm.
F2116	L2124	Pit fill.	-	Two copper-alloy strips. 1) With a rivet hole at each end. Length 104 mm, width 15 mm. 2) In two pieces; with plano-convex section. Length (bent and twisted) 167 mm, width 7.5 mm.
	L2122		-	Two lead came fragments. Lengths (bent) 157 and 59 mm. Two iron nails. Lengths 41 and 31 mm.

F2038	L2039	Pit fill.	Modern	Copper-alloy fitting consisting of sheet and
1 2030	12037	1 10 1111.	Wiodein	wire fragments. 30 by 39 mm.
			_	Three fragments of coarse pebbly mortar
				with a layer of iron across the top; probably
				part of a hearth base. 94 by 59 mm; 68 by
				44 mm; 40 by 51 mm.
F2028	L2035	Quarry pit	_	Lead came fragment. Length 53 mm.
		fill.	Post-medieval	1) Twelve fragments of thin iron/steel sheet;
			- modern	probably from a boiler or machine body.
				Maximum dimensions of largest piece 148
				by 74 mm. 2-3). Two iron nail shank
				fragments. Lengths 42 and 60 mm.
			-	Unworked fragment split from a coarse-
				grained sandstone pebble; probably used as
				a cobble. 105 by 63 mm.
	L2083		-	1) Nineteen fragments of thin sheet iron or
				steel, most very small. Some are convex,
				some concave, some flat. The largest is part
				of a flat-based cylinder with a seam down
				the side; probably a food can. 119 mm high,
				77 mm in diameter. 2) Iron nail with small
	X 2007	_		rectangular head. Length 105 mm.
	L2085		-	Iron nail. Length (bent) 86 mm
F2021	L2022	Quarry pit	-	Iron circular-section punch. Length 100
F2015	1.0016	fill		mm.
F2015	L2016	Pit fill.	-	Two iron nails and two shank fragments. Lengths 82, 49, 57 and 35 mm.
			-	Fine-grained micaceous sandstone hone of
				square section tapered at one end. Length 87
				mm, section 33 by 31 mm tapering to 21 by
				19 mm.
F2069	L2070	Pit fill	-	Iron nail and nail shank fragment. Lengths
				33 mm and 80 mm
	L2071		Post-medieval	1) Iron horseshoe branch. Length 107 mm.
				2) Iron strap with hooked end; probably part
				of a hinge. Length 90 mm, width 26 mm. 3)
				Post-medieval iron knife blade fragment,
				with straight back and edge. Part of the
				scale tang remains, covered on one side of
				the tang by a copper-alloy plate with a hollow rivet through it, which would have
				lain underneath one of the bone or wooden
				handle plates. Length 80 mm, width 15 mm.
				4) Iron strip fragment. Length 41 mm, width
				14 mm. 5-10) Three iron nails and four
				shank fragments. Lengths 56, 44, 24, 46, 33,
				23, and 24 mm.
	L2071	1	-	Iron nail shank fragment. Length 25 mm.
F2098	L2105	Pit fill	-	1) Iron knife blade fragment, with straight
				parallel back and edge. Length 82 mm,

				width 17 mm. 2) Iron nail. Length 51 mm.
F2114	L2115	Curvilinear	-	Iron nail. Length 24 mm.
	L2158	fill.	_	1 Iron nail head and three shank fragments.
				Diameter of head 12 mm; lengths 31 and 30
				(x 2) mm.
F2129	L2130	Pit fill.	-	Iron hooked strip, probably a furniture or
				vehicle fitting. Length 55 mm, width 25
				mm.
-	L2046	Layer	-	1) Iron knife blade fragment with part of a
				whittle tang. The back and edge are straight
				and parallel. Length 48 mm. 2-5) Iron nail
				and three shank fragments. Lengths 31, 62,
				28 and 30 mm.
			-	Tapering iron bar fragment. Length 62 mm,
				width 11 mm.
F1014	L1015	?pit fill	Post-	Iron screw
			medieval/mod	
			ern	
F1019	L1020	Pit fill	Post-	Iron: 2 brackets, 16 shank and strip
			medieval/mod	fragments, some from nails and some from
			ern	the brackets
-	L2046	-	Post-medieval	Iron: 3 incomplete nails, 4 nail shank
				fragments, 1 sheet fragment
-	L2046	-	Post-medieval	Copper alloy dress or sewing pin

Table 3: Quantification of metal and stone objects

3.5 Glass

By H.E.M Cool

The trial trench evaluation revealed fragments of three bottles. No. 1 may date to the late 18th or 19th century, as it is free blown. No. 2 comes from a small blue/green bottle, very possibly an apothecary's bottle of the 17th or 18th centuries. The final fragment no. 3 is of modern colourless glass.

The glass recovered during excavation was predominantly nineteenth or twentieth century in date with only a few fragments from L2035 (F2028) and L2090 (F2028) that could be slightly earlier. As all the material comes from contexts that are clearly contemporary it is recommended that no further work be carried out on the material.

Feature	Context	Description
F1016	L1017	Cylindrical bottle; body fragment. Colourless.
	L1018	Cylindrical bottle; shoulder fragment. Blue/green.
F1032	L1033	Cylindrical bottle; 2 body and 4 base fragments. Dark olive
		green. Concave base with traces of pontil scar. Base diameter
		85mm.
F2019	L2020	Complete octagonal-bodied bottle in very bubbly green glass
		with chipped rim; probably an ink bottle, mid 19 th to early 20 th
		century.
		Rim fragment of pedestal dish, colourless with mould pressed
		'cut-glass' decoration. Mid 19 th to mid 20 th century.

		Window or furniture glass – 19 th century (4 fragments).
F2028	L2035	Base and 2 body fragments cylindrical corroded green glass.
		Later 18 th to early 19 th century.
		Colourless cylindrical bottle, 4 body fragments - 19 th or 20 th
		century.
		colourless window glass, 13 fragments – probably 19 th century
		rather than 20 th century.
		Flat brown glass – probably from a prismatic 19 th century bottle.
	L2083	Dark yellow/green bottle fragment - 19 th or 20 th century.
	L2084	Dark green bottle fragment (3 fragments) – 19 th or 20 th century
		colourless bottle fragment - 19 th or 20 th century.
	L2085	Modern window glass (2 fragments).
	L2090	Mid green convex-curved body fragment, probably early 19 th
		century, very possibly late 18 th century.
F2038	L2039	Emerald green bottle fragment – 19 th or 20 th century.

Table 4: Quantification of glass

3.6 Clay pipe

By Nina Crummy

The bowls in the assemblage from the excavation are all of 19th century date. An early to mid 19th century group from F2019 include four of the same form all marked JB, and found with them was a slightly later type marked Balme, London, E within a shield. JB was probably John Balme of Romford, who is known to have worked between 1823 and 1828, and the later bowl may be a product of either Paul or William Balme, both of Mile End, who worked over the periods 1832-66 and 1856-61 respectively (Oswald 1975, 130-3). The E in the base of the shield probably refers to East London.

The recurrence of B as a surname initial on a pipe with a slightly later date-range from F2028 suggests that it too may also be a product of the Balme family, although the first name initial, T, is not matched among its known members.

Three pipe stems were recovered during trial trenching, however they cannot be closely dated; they are, though, post-medieval.

Feature	Context	Description	Finds
F2019	L2020	Cinder trap	Plain bowl with the rim cut at a slight angle to the stem. The
			small foot has the initials JB in relief on the sides. Height 38
			mm, rim diameter 26 mm, stem bore diameter 1.5 mm. Date
			range <i>c</i> 1810-40.
			Fragment of a similar bowl, also with the initials JB on the sides
			of the foot. Height 38 mm, stem bore diameter 1.5 mm.
			Fragment of a similar bowl, also with the initials JB. Height 38
			mm, stem bore diameter 1.5 mm.
			Stem fragment with a foot marked JB in relief on the sides.
			Length 86 mm, stem bore diameter 2 mm.
			Bowl fragment with an incuse mark of 'Balme, London, E'
			within a shield on the back; mid 19th century in date. There is a
			small unmarked spur. Height 36 mm, stem bore diameter 1.5
			mm.

	I	1	
			Stem fragment. Length 101 mm bore diameter 2 mm.
			Stem fragment. Length 73 mm bore diameter 2 mm.
			Stem fragment. Length 46 mm bore diameter 1.5 mm.
			Stem fragment. Length 52 mm bore diameter 2 mm.
			Stem fragment. Length 48 mm bore diameter 1.5 mm.
F2028	L2035	Quarry pit	Fragment of a bowl with narrow flutes and oak leaves rising
		fill	from both sides of the seams. The small oval foot has the
			initials TB in relief on the sides. Surviving height 36 mm. Date
			range <i>c</i> 1820-60.
			Small fragment (24 by 14 mm) of a bowl with a relief moulded
			line across one corner.
			Stem fragment. Length 77 mm bore diameter 2 mm.
	L2085	-	Nineteenth century bowl in a black fabric. The rim is rouletted
	L2003		and is cut at an angle to the stem. In relief one the front is an
			upright equal-armed cross within a circle. There is a round
			foot. Height: 47 mm, rim diameter 25 mm. The black clay
			fabric is rare but not unique. In the early 20th century a pipe
			maker called William Luckett, of Plumstead, made a Derry
	1.2002	_	Castle pipe using black clay (Greenwich Museum).
	L2083	-	Stem fragment. Length 45 mm bore diameter 2.5 mm.
	L2090		Six stem fragments:
			Length 83 mm bore diameter 2.5 mm.
			Length 63 mm bore diameter 2.5 mm.
			Length 59 mm, bore diameter 3 mm.
			Length 55 mm, bore diameter 2.5 mm,
			Length 42 mm bore diameter 1.5 mm.
			Length 24 mm bore diameter 3 mm.
F2038	L2039	Pit fill	Stem fragment, elliptical in section. Length 27 mm bore
			diameter 2 mm.
F2116	L2117	Pit fill	Stem fragment, elliptical in section. Length 46 mm bore
			diameter 2.5 mm.
F1016	L1017	Ditch fill	Pipeclay. 2 tobacco pipe stems, plain. Post-medieval
-	L1023	Layer	Pipeclay. Tobacco pipe stem, plain. Post-medieval.
•	1 5 0		

Table 5: Quantification of clay pipe

3.7 Animal bone

Carina Phillips

Introduction

611 fragments of animal bone were hand recovered from 18 features during excavation. The bone is of varied preservation, the majority of the assemblage is moderately well preserved exhibiting only slight surface erosion. A small proportion of the assemblage is highly eroded. Fragmentation is frequent, modern fragmentation is common, particularly on the complete or substantially complete bones recovered from Ditch F2015. 77% of the assemblage dates to Phase 3 (AD 1800-1900+). Seven fragments came from undated features; these have been excluded from further discussion.

A predominance of sheep/goat metapodials were observed during analysis of the

assemblages from Occupation Layer L2046 in Phase 2 and the probable rubbish Pit F2069 in Phase 3, these are discussed below with regard to possibly representing waste from a tannery.

Method

Bones were identified and recorded to species and element when possible. The category sheep/goat has been used unless it was possible to clearly identify the species sheep (Ovis sp.) or goat (Capra sp.). Tooth wear for cattle, sheep and pig were recorded using the method of Grant (1982), and ages assigned following the method of Bourdillion & Coy (1980 cited by Crabtree 1989) and Hambleton (1999). Measurements were taken when viable following the methods of Jones et al (1976) and von den Driesch (1976), and are contained in the site archive. Withers heights for sheep were calculated following Teichert (1975). When available the fusion state of identifiable bones was also recorded and ages were assessed following Silver (1969). Fragments unidentifiable to a particular species were recorded under the categories of 'large sized', consisting of cattle (Bos sp.), large deer and horse (Equus sp.) sized fragments and 'small sized' consisting of sheep/goat, small deer, pig (Sus sp.) and dog (Canis familiaris) sized bone fragments. All other unidentifiable bone fragments were recorded as such. Evidence of burning, sawing, chopping, knife-cutting and gnawing was also recorded, as was smashed bone. The minimum number of individuals (MNI) of a species was calculated from most frequent left or right skeletal element (minimum number of elements).

Results

Phase 1: AD 1200 – 1350 (early – high medieval)

Only two bone fragments, both identified as cattle, came from Phase 1 features.

Phase 2: AD 1400 – 1600 (late medieval – early post-medieval)

Phase 2 features yielded 106 fragments of animal bone, accounting for 17% of the entire assemblage (table 6). 57 fragments (53%) were identifiable to species, 33 of these were identified to sheep/goat. 81% of the Phase 2 assemblage was recovered from Occupation Layer (L2046). 31 of the 33 sheep/goat bones from Phase 2 were recovered from this Layer (L2046), 23 of these consisted of metapodials, which produced a minimum number of nine sheep/goat. Six metapodials exhibited butchery marks. Three exhibited cut marks indicative of skinning; three were smashed suggestive of marrow extraction. Only three metapodials were complete enabling withers height estimations these were calculated as 58.4 cm, 54.7 cm and 64.6 cm. No other bones from any species in this phase were complete to allow withers height estimations. One sheep/goat mandible provided an age estimate of 4-6 years.

Domestic species, cattle, pig, cat (*Felis Cattus*), horse and domestic fowl (*Gallus* sp.) were also identified. A metatarsal from a red deer (*Cervus elaphus*) was the only bone to be identified to a wild species. The distal epiphysis of the metatarsal was unfused indicating it came from an animal aged less than 36 months at death (Bosold 1968). It was not possible to produce an age profile for any species in this phase due to the small number of bones and absence of mandibles with sufficient tooth wear evidence. 19% of the Phase 2 assemblage exhibited butchery marks, smashed and cut marks were most

common.

Phase 2	NISP	MNI	Chopped	Cut	Smashed	Gnawed
Sheep/goat	33	10	1	5	4	2
Cattle	13	2	2	0	2	0
Pig	5	0	1	1	0	0
Horse	1	1	0	0	0	1
Cat	2	1	0	0	0	0
Red Deer	1	1	0	0	0	0
Domestic						
Fowl	2	1	0	0	0	0
Large sized	17	-	0	1	2	0
Small sized	17	-	0	0	0	0
Unidentifiable	15	-	1	0	0	0
Total	106	-	5	7	8	3

Table 6: Phase 2 Number of Identified Specimens/fragments (NISP), Minimum Number of Individuals (MNI), and counts of butchered and gnawed bone

Phase 3: AD 1600 – 1800 (post-medieval - early modern)

Phase 3 features produced 77% of the entire assemblage, consisting of 470 fragments of bone. 264 fragments (56%) were identifiable to species (table 7). 56% of the Phase 3 animal bone assemblage was recovered from F2069, a probable rubbish pit; Boundary Ditch F2015 contained 37% of the assemblage. The remaining 7% came from F2114, F2116 and F2129.

Phase 3	NISP	MNI	Chopped	Cut	Smashed	Gnawed
Sheep/goat	171	38	4	39	16	14
Sheep	1	1	0	0	0	0
Cattle	56	7	16	7	7	3
Horse	19	3	2	0	0	1
Pig	8	3	0	0	0	0
Red Deer	5	2	1	0	1	0
Domestic						
Fowl	3	1	0	0	0	0
Crow	1	1	0	0	0	0
Large sized	45	-	1	1	5	1
Small sized	58	-	0	1	15	1
Unidentifiable	103	-	0	0	0	0
Total	470	_	24	48	44	20

Table 7: Phase 3 Number of Identified Specimens/fragments (NISP), Minimum Number of Individuals (MNI), and counts of butchered and gnawed bone

Sheep/goat bones were most frequently identified, accounting for 65% of the identifiable assemblage. 172 sheep/goat bones were identified in total, 142 (56%) came from Pit F2069. 35% of bone from Pit F2069 was unidentifiable to species. The remaining 9% comprises of small numbers of cattle, pig, horse, red deer, domestic fowl and crow bones. Of these cattle bones were most frequently identified; the cattle bones include a mixture

of meaty and non-meaty elements.

Metapodials were the most frequently identified bone in the sheep/goat assemblage accounting for 126 bones. Phalanges were the second most frequent element identified in the assemblage, but in much lower quantities than metapodials (see table 8). It is notable that 119 of the sheep/goat metapodials and all the phalanges were recovered from Pit F2069. Butchery was observed on a total of 59 bone fragments in Phase 3, (25% of the Phase 3 assemblage). 45 of these butchered bones are metapodials from F2069. Cut marks indicative of skinning accounted for 73% of the butchered metapodials, chopped and smashed metapodials were also recorded.

27 sheep/goat bones in Phase 3 provided withers height estimates ranging 51.2-65.2 cm giving a mean of 57.1cm (table 9).

The ageing evidence for sheep/goat is limited, however it tentatively suggests that sheep/goat died more frequently in maturity, one sheep/goat mandible came from an individual aged 2-4 years at death and three others came from individuals aged 4-6 years. The fusion data also suggests death over the age of 2-3 ½ years (table 10); however a majority of this is based on the metapodials from F2069.

Cl l l l	
Skeletal	
Element	Count
Metacarpal	69
Metatarsal	56
First Phalanx	11
Tibia	7
Radius	6
Mandible	5
Humerus	4
Tooth	3 2
Femur	2
Pelvis	2
Scapula	2
Axis	1
Horn core	1
Maxilla	1
Premaxilla	1
Ulna	1
Total	172

Table 8: Phase 3 Sheep/goat skeletal elements

		GL	Withers Height
Bone	Side	(mm)	(cm)
Metacarpal	Right	104.7	51.2
Metatarsal	Right	112.6	51.2
Radius	Right	127.5	51.3
Metatarsal	Right	113.4	51.5
Metacarpal	Right	109.2	53.4

Metacarpal	Right	111.4	54.5
Metatarsal	Right	120.1	54.5
Metatarsal	Right	120.3	54.6
Metatarsal	Left	121.7	55.3
Metatarsal	Left	122.1	55.4
Metacarpal	Right	114.2	55.8
Metacarpal	Right	114.5	56
Metatarsal	Left	123.5	56.1
Metacarpal	Left	114.9	56.2
Metacarpal	Right	115.4	56.4
Metatarsal	Right	126.7	57.5
Radius	Left	145.8	58.6
Metacarpal	Left	121.6	59.5
Metatarsal	Left	132.2	60
Metacarpal	Right	123	60.1
Metacarpal	Left	123.1	60.2
Metatarsal	Left	132.6	60.2
Metatarsal	Right	134.5	61.1
Metatarsal	Left	135.2	61.4
Metatarsal	Right	137.3	62
Metatarsal	Right	136.7	62.1
Metacarpal	Left	133.3	65.2

Table 9: Phase 3 sheep/goat withers heights

Sheep/goat Fusion	UF	FG	FUS	%UF
Glenoid	0	0	1	
Actetabulum	0	0	1	
P.Radius	0	0	3	
D.Humerus	0	1	1	
Early Fusing (6-10 mths)				
Subtotal	0	1	6	0%
Phalanx 1	0	0	11	
D.Tibia	0	0	1	
D.Metapodial	7	3	42	
Mid Fusing (1-2 yrs) Subtotal	7	3	54	16%
Calcaneum	0	0	0	
P.Femur	0	0	0	
P.Ulna	0	0	0	
P.Humerus	0	0	0	
P.Tibia	0	0	1	
D.Radius	1	0	1	
D.Femur	0	0	0	
Late Fusing (at 21/2-3 yrs)				
Subtotal	1	0	2	33%

Table 10: Phase 3 sheep/goat bone fusion ages

Cattle bones formed 21% of the identifiable Phase 3 assemblage (table 7). The 56 bones

come from a minimum of 7 individuals. In contrast to sheep/goat bones, chop marks were most frequently identified. One cattle mandible provided an age estimate based on tooth wear of >4 years at time of death; fusion data was to provide ageing evidence.

19 horse bones were identified in Phase 3 assemblage. A vertebra and an ilium were chopped suggesting dismemberment of the carcass.

Pig was the only other domestic mammal species to be identified in the assemblage. Only eight bones were identified to pig, none exhibited any butchery evidence.

Red deer (*Cervus elaphus*) was represented in the assemblage by five bones, giving a minimum number of two individuals. The two antler fragments identified to red deer exhibit evidence of butchery; one has been worked into an awl (F2069 (L2070)), the other has been chopped (F2116 (L2122)). A humerus from a crow was recovered from Pit F2069 (L2070).

Phase 4 (AD 1800-1900+)

Only 26 bones were recovered from Phase 4 features (table 11). Sheep/goat, cattle and pig were identified in the assemblage. Four bones exhibited butchery. It was not possible to estimate age for any bone in this phase.

Phase 4	NISP	MNI	Chopped	Cut	Smashed	Gnawed	Burnt
Sheep/goat	6	3	0	0	0	0	0
Sheep	1	1	0	0	0	0	0
Cattle	3	1	1	1	0	0	1
Pig	1	1	0	0	0	0	0
Large sized	7	-	0	0	0	0	0
Small sized	3	-	0	0	1	0	0
Unidentifiable	5	-	0	0	0	0	0
Total	26	-	1	2	1	0	1

Table 11: Phase 4 Number of Identified Specimens/fragments (NISP), Minimum Number of Individuals (MNI), and counts of butchered and gnawed bone

Discussion

Further discussion of the Phase 1 assemblage is not possible due to the small numbers of fragments dating to this phase.

The Phase 2 assemblage is notably smaller than that recovered from Phase 3; however analysis indicates both are of a similar composition. Domestic species accounted for a majority of the identified bones in both phases. Only two wild species were represented, red deer in both phases and crow in Phase 3 only.

In both Phases 2 and 3 sheep/goat bones dominate the identifiable assemblage, although, due to its overall larger size, Phase 3 produced the largest number of sheep/goat bones. Occupation Layer (L2046) in Phase 2 and the probable rubbish Pit F2069 in Phase 3 both contained a large proportion of the sheep/goat assemblage for their assigned phases, both also exhibited a disproportionate number of metapodials (rubbish Pit F2069 notably produced 119 metapodials). The Phase 3 assemblage produced more evidence for

butchery, probably related to its larger size, with evidence for skinning occurring most frequently. The large numbers of sheep/goat metapodials in these features is suggestive of waste from some type of industrial processing of sheep/goat carcass produces, rather than general domestic waste.

Disproportionately high numbers of foot bones are quite often found on urban sites (Serjeantson 1989, 137). There is historical and archaeological evidence to suggest that this is associated with the waste of tanneries. During the skinning of a carcass, the feet and sometimes metapodials of the animal were removed with the skins (Serjeantson 1989, 137). It has been suggested that the metapodials are likely to have aided the tanners in moving and stretching the hides (Yeomans 2004, 73). Large numbers of foot bones have been found at various sites which are likely to represent the waste of tanneries; these include 18th century Walmgate, York (O'Connor 1984), St Peters Street, Northampton (Williams 1979) and Bewell House, Hereford (Noddle 1985).

In the Phase 3 sheep/goat assemblage first phalanges were the second most frequently identified bone, but are present in notably smaller numbers than metapodials. Sheep/goat phalanges are absent from Phase 2. It is possible that recovery biases may result in a lower number of phalanges than were originally present. However, the complete absence of second and third phalanges from the assemblage suggests they were not being removed and/or discarded in the same manner. Although this may be due in part to recovery biases, it would suggest that metapodials were being more frequently deposited than phalanges. In the York tannery assemblage more phalanges were present than metapodials (O'Connor 1984), this was interpreted as some skins having both elements attached and others just the phalanges. It is possible that the absence of the second and third phalanges, and lower number of first phalanges indicates the waste from an industrial butcher, where the bones with very little meat were discarded. However the absence of other non-meat bones commonly associated with butchery waste, suggests this may not be the case. The low number of phalanges suggests these were being utilised for a purpose that warranted them being separated and not discarded as waste at the same stage as the metapodials. Serjeanston (1989, 141) highlights the use of phalanges in the production of neatsfoot oil. Neatsfoot oil is described as the finest and thinnest animal oil obtainable, with the exception of oils from some marine mammals (Encyclopaedia Britannica 1903, 744, 747; Serjeanston 1989, 141). It is obtained in its purest form from cattle phalanges, although horse, sheep and goat feet are also sometimes sold used. The main use of Neatsfoot oil in early times would have been for leather dressing, and it is therefore suggested that the tanner wanted the feet to ensure a supply of the oil for himself or the currier.

The large number of sheep/goat metapodials in rubbish Pit F2069 in Phase 3 is indicative of waste from a tannery in the area. The metapodials and feet are likely to have been left on the skins to aid the tanner in processing. The bones would then have been removed, the phalanges retained or traded for further processing (possibly for neatsfoot oil) and the metapodials discarded. The similar but smaller assemblage recovered from the Phase 2 Occupation Layer (L2046) is indicative of similar activities, suggesting a tannery was situated in the area throughout Phase 2 and Phase 3.

The ageing information gleaned from the sheep/goat bones in Phase 3 is limited, however it does suggest that a majority of the sheep/goat skins utilised by the tanner were from animals aged over 6-10 months old. The sheep/goat bones from Phase 3 suggest the

presence of animals standing approximately 51.2-65.2cm at the withers (mean 57.1 cm). The Phase 2 sheep/goat bone provides heights that also fall within this range suggesting similar sized animals over the two phases.

The composition of the rest of the Phase 2 and Phase 3 assemblages is more suggestive of domestic waste. The bones of cattle, pig, domestic fowl, in addition to sheep/goat suggest these were utilised for food and other produces in the area. The presence of red deer bones in both phases implies that this species too was being utilised for various produces, such as antler, meat, skin and bone. Red deer prefer a forested, wooded environment which could imply this was situated within the local area; however it is equally possible that the carcasses of this species were being traded locally. The small size of these assemblages has restricted further discussion.

Discussion of Phase 4 is also limited by the small size of the assemblage, however it is noted that sheep/goat were most frequently identified in this phase.

Conclusions

The 119 sheep/goat metapodials from Pit F2069 in Phase 3 (1600-1800) is the most notable feature of the animal bone assemblage. The bones suggest a deposit of tannery waste in possible rubbish Pit F2069, indicative of a tannery on or near to the site. The deposit also suggests the possible utilisation of sheep/goat phalanges for further use in the tanning industry, perhaps for neatsfoot oil. The presence of a smaller but similar assemblage from the Occupation Layer L2049 in Phase 2 (1400-1600) suggests a tannery was situated in the area during these two phases of site occupation.

3.8 The shell

Carina Phillips

Introduction

102 seashells were recovered during excavations of North Street, Barking. The shells were of moderate preservation, although as to be expected due to their fragile structure, a number of fragments of oyster shell were also recovered, these were excluded from overall counts. Oyster shell dominated the assemblage.

Method

The shell was identified to species. Gastropods, such as whelks were counted. For the bivalve mussel it was not possible to distinguish between upper and lower valves. For the bivalve oyster, the upper and lower valves identified and recorded. Small fragments of oyster shell were recorded as quantities, but excluded from shell counts during analysis to avoid biases caused by the high fragmentation of one shell resulting in a large count. Evidence of opening was also recorded if present, as was concretion to the shell. A record was also made if there was evidence of a parasite having been present on the shell. A height measurement was taken of complete shells. Minimum numbers of oysters were calculated from the most frequent upper of lower valve total.

Results

	Oy	ster	
	Upper	Lower	Cockle
Phase 1: AD 1200 -			
1350	1	0	0
Phase 2: AD 1400 -			
1600	12	11	0
Phase 3: AD 1600 -			
1800	31	26	6
Phase 4: AD 1800 -			
1900+	9	3	0
Unphased	1	2	0
Total	54	42	6

Table 12: Shells by phase

A total of 102 shells form the assemblage. 96 oyster shells were recovered forming 94% of the assemblage. These came from a minimum of 54 oysters. Six cockle shells were also present.

A single oyster bi-valve was recovered from this phase. This shell has evidence of worm parasites on the exterior of the surface.

The Phase 2 assemblage consists of 23 oyster shells coming from a minimum of 12 oysters. Five of the oyster shells in this phase display evidence of worm parasites in life on the exterior shell surface. One oyster shell exhibits a hole from a parasitic borer.

62% of the shell assemblage was hand recovered from Phase 3 features. 57 of the 63 shells in this phase are oysters, coming from a minimum of 31 individuals. Evidence of worm parasites is exhibited on the exterior surface of ten oyster shells. Phase 3 is the only phase to have any other shell species present; this consists of six cockle shells.

11 oyster bivalves coming from a minimum of 9 oysters were recovered from Phase 4 features. Four of the shells exhibit evidence of worm parasites having been present in life on their exterior surfaces.

Discussion

Shellfish were a popular food in Medieval, Post-Medieval and Early Modern Britain. Various species were trapped at coastal sites or in brackish rivers; the use of water tanks allowed them to stay alive until they reached their destination for trade (Wilson 1991, 49). It is common in archaeological assemblages for oyster to dominate the shell

assemblage, suggesting this was the most popular and therefore most exploited species.

3.9 Charred plant macrofossils and other remains

By Val Fryer

Introduction and method statement

Excavations revealed pits and layers of 14th to 17th century date. Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area, and five were submitted for assessment.

The samples were bulk floated by Archaeological Solutions and the flots were collected in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Table 16. Nomenclature within the table follows Stace (1997). All plant remains were charred.

Results

Cereal grains and seeds of common weeds were present at varying densities within all five assemblages. Preservation was generally poor, with a high density of the grains being severely puffed and distorted, probably as a result of combustion at very high temperatures.

Oat (*Avena* sp.), barley (*Hordeum* sp.), rye (*Secale cereale*) and wheat (*Triticum* sp.) grains were recorded, with wheat occurring most frequently. A single rounded pulse seed, possibly a pea (*Pisum sativum*) was noted within sample 3 and a cotyledon fragment of an indeterminate large pulse (Fabaceae) was recorded from sample 1.

Weed seeds were comparatively rare, although specimens were noted within all five assemblages. All were of common weeds/grassland herbs including indeterminate small pulses, goosegrass (*Galium aparine*), small grasses (Poaceae), small-flowered buttercup (*Ranunculus parviflorus*), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.). Charcoal/charred wood fragments were present throughout, but other plant macrofossils occurred as single specimens within an assemblage.

The fragments of black porous and tarry material, which occurred within all five assemblages, were probable residues of the combustion of organic remains (including cereal grains) at very high temperatures. Possible dietary refuse included the fragments of bone, fish bone, eggshell and marine mollusc shell.

Conclusions

In summary, although the assemblages were from features with a wide range of dates, the assemblages are noticeably very uniform in composition, possibly indicating that they all have a common source. The predominance of cereals, charcoal and other dietary remains may suggest that the assemblages are derived from domestic hearth waste. However, it is unclear whether the various assemblages are indicative of separate episodes of deposition, or whether they are primarily composed of later material, which has become incorporated within all the features across the excavated area as a result of subsequent

ground disturbance.

Most of the assemblages studied do contain sufficient macrofossils for quantification (i.e.100+ specimens). However, the precise origin and taphonomy of the material is very unclear and, as a result, further analysis is not recommended at this stage.

Sample No.	1	2	3	4	7
Context No.	L2046	L2006	L2070	L2105	L2130
Feature No.		F2005	F2069	F2098	F2129
Feature type	Layer	Pit	Pit	Pit	Pit
	15-	15-	14-	15-	16-
Date	17th	17th	15th	17th	18th
Cereals and other food plants					
Avena sp. (grains)	X	X	X		X
Large Fabaceae indet.	xcotyfg				
Hordeum sp. (grains)	xcf	xcf			X
Pisum sativum L.			xcf		
Secale cereale L. (grains)	xcf			xcf	xcf
Triticum sp. (grains)	X	X	X	xcf	X
Cereal indet. (grains)	XX	XXX	XX	X	XX
Herbs					
Fabaceae indet.	X	X			
Galium aparine L.					X
Medicago/Trifolium/Lotus sp.				xcf	
Small Poaceae indet.			X		
Ranunculus parviflorus L.				X	
Rumex sp.					X
Vicia/Lathyrus sp.	X				
Other plant macrofossils					
Charcoal <2mm	XXXX	XXXX	XXXX	XX	XXXX
Charcoal >2mm	XXX	XX	XX	X	
Charred root/stem	X	X	X		
Indet. seeds	X	X			X
Indet. thorn (Prunus type)	X				
Other materials					
Black porous 'cokey' material	XXX	XX	XX	XXX	XX
Black tarry material	XX		X	XXX	XX
Bone	X	X	X		xb
Burnt/fired clay	X			X	
Eggshell			X		
Fish bone	XX		X		
Marine mollusc shell frags.	X				
Mortar/plaster frags.	X				
Siliceous globule					X
Small coal frags.	X				
Small mammal/amphibian bone	X		X		
Vitrified material			X		
Sample volume (litres)					

Volume of flot (litres)	0.1	0.1	0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%

Table 13: Environmental Quantification

PART II OTHER RECORDS

4. FEATURE AND CONTEXT DESCRIPTIONS

4.1 Site Deposit Model

The archaeological features, with the exception of phase 3 features lay beneath several patchy, made-ground deposits consisting of L2000, L2001, L2002, L2003 and L2004. These deposits were modern and likely associated with the construction of Braintree House. The majority of the archaeology dated to phases 1 and 2, was sealed by the made-ground deposits and cut into the underlying sand and gravel river terrace deposits.

4.2 Phase 1: 1200 – 1400, Medieval.

Feature	Context	Dimensions (m)	Plan/profile	Fill
F1012	L1013	1.5 x 0.6 x 0.3	Bowl shaped.	Brown sandy deposit with a lens of dark humic sand at its interface.
F1014	L1015	4.5 x 1 x 0.4	Irregular shape. Moderately gently sloping eastern edge.	Light brown silty sand with occasional charcoal flecks and small flint pebbles.
F2021	L2061	2.50 x 1.60 x 1.25	Oval/steep flat sides,	Mid orange-brown loose sand slump deposit.
	L2062=		narrow concave base.	Dark greenish brown.
F2047	L2048	0.30 x 0.30 x 0.12	Circular in plan, moderately steep sides. Concave base.	Mid grey-brown, soft, silty sand.
F2049	L2050=L2056	4.50 x 2.40 x 0.52	Sub- rectangular/moderately steep concave sides. Concave base.	Dark grey-brown friable sandy silt.
F2055	L2081	9.00 x 4.50 x 0.40	Irregular/shallow	Mid grey-brown friable sandy silt.
	L2092		concave sides	Mid grey-brown, friable, sandy silt.
F2072	L2073	1.20 x 0.55 x 0.20	Unknown plan/moderately sloping concave sides,	Mid orange-grey, soft silty.

			flat base.	
F2074	L2075	0.90 x 0.55 x 0.15	Sub oval with moderately steep sides. Slightly concave base.	Mid grey-brown soft silty sand.
	L2080	2.50+ x 1.90 x 0.15		Mid orange-grey, moderately soft, silty sand with occasional lens clay.
F2093	L2099	1.40 x 0.80 x 0.86	Sub-oval/steep, stepped irregular sides,	Light brown-grey, friable sandy silt.
	L2100			Creamy-white, loose crushed chalk.
	L2101 tapering concave b	tapering concave base.	Mid-light grey-brown, friable sandy silt with crushed chalk.	
F2114	L2158	2.00+ x 1.30 x 0.52	Linear	Mid grey-brown friable sandy silt.
	L2115		ditch/moderately sloping concave sides, concave base.	Mid orange brown sift silty sand.

4.3 Phase 2: 1400 – 1800, Post-Medieval

Feature	Context	Dimensions (m)	Plan/profile	Fill
F2015	L2016	4.00+ x 2.10 x 0.50	Linear ditch/steep	Dark grey brown friable sandy silt.
			concave sides, slightly	
			concave base.	
F2017	L2018	4.00 x 0.75 x 0.44	Linear/moderately	Dark grey-brown friable sandy silt.
			steep, stepped sides,	
			flat base.	

F2040	L2041	2.20+ x 1.20 x 0.28	Oval/shallow concave sides, flat base.	Dark brown soft silty sand.
F2044	L2045	3.80 x 1.60 x 1.05	Sub- rectangular/vertical, flat sides, flat base.	Mid grey –brown friable sandy silt.
F2051	L2052	2.50 x 2.30 x 0.23	Sub-circular/shallow to moderate sides, flat base.	Dark grey-brown friable sandy silt.
F2053	L2054	2.20 x 2.10 x 0.16	Sub-circular/shallow, concave sides, slightly concave base.	Dark grey-brown friable sandy silt.
F2069	L2070	2.50+ x 2.00 x 0.54	Oval/steep flat sides, uneven base.	Mid orange brown soft silty sand with occasional lens of yellow sand.
	L2071			Dark brown soft silty sand.
F2076	L2077=L2133	1.10 x 0.90 x 0.33	Oval/moderately sloping concave sides, concave base.	Mid orange grey soft silty sand.
F2093	L2099	1.40 x 0.80 x 0.86	Sub-oval/steep, stepped irregular sides, tapering concave base.	Light brown-grey, friable sandy silt.
	L2100			Creamy-white, loose crushed chalk.

	L2101			Mid-light grey-brown, friable sandy silt with crushed chalk.
F2094	L2095	0.35 x 0.34 x 0.17	Roughly circular/steep, slightly concave sides, flat base.	Mid grey, friable sandy silt with occasional lens of orange sand.
F2098	L2136	1.25 x 1.20 x 0.50	Circular/moderate to steep irregular sides, concave base.	Dark brown, firm sandy silt.
	L2135			Greenish-brown, soft clayey sand.
	L2105			Mid orange-red, firm silty clay
F2106	L2107	0.64 x 0.55 x 0.47	Sub-rectangular/near vertical, flat sides, flat base.	Light brown grey, friable sandy silt.
F2108	L2109	1.75 x 0.30 x 0.21	Linear/steep, flat sides, tapered base.	Mid grey, friable sandy silt.
F2116	L2117	5.00 x 4.00 x 1.25+	Sub-circular/steep	Light orange-brown, friable sandy silt.
	L2122		concave sides. Base not reached.	Light brownish-grey, friable sandy silt.
	L2123			CBM rubble in light greyish-brown, sandy silt matrix.
	L2124			Mid grey, friable sandy silt.

F2120	L2145 L2146 L2147 L2148 L2149 L2150 L2151 L2152 L2153	8.00+ x 4.60 x 1.50	Unknown/west side steep uneven, undulating base.	Light yellowish-brown loose sandy gravel. Mid grey, friable sand Mid to dark grey, friable sand Mid yellowish-brown, loose sandy gravel. Mid brownish grey friable sand Mid brown, friable silty sand Mid brownish friable silty sand Orange sand. Lens of redeposited natural Orangey-grey, friable sand
	L2154 L2155			Orange sand. Lens of redeposited natural Dark grey friable silty sand
	L2121			Mid brownish-grey, friable silty sand
F2129	L2130	1.85 x 1.60 x 0.43	Sub-circular/shallow irregular sides, concave base.	Mid to dark grey brown friable sandy silt.

F2132	L2133 L2134	1.40 x 0.90+ x 0.36	Heavily truncated, probably subcircular/moderate sides, slightly concave base.	Mid grey, friable silty sand. Orangey-green, firm clayed sand.
F2137	L2138	2.30 x 1.50 x 0.48	Oval/moderate to	Dark brown, firm silty sand.
	L2139	-	shallow sides, concave base.	Mid greenish-brown, firm clayed sand.
	L2140			Mid grey silty sand with orangey red clay.
F2141	L2142	0.35+ x 0.25+ x 0.12	Heavily truncated, probably sub-circular/shallow sides, slightly concave base.	Dark grey, friable silty sand, occasional orange sand lens.
F2160	L2161	0.50 x 1.20 x 0.28	? Circular/moderately steep concave sides, concave base.	Mid grey-brown friable sandy silt.
F2162	L2163	1.00+ x 0.90+ x 0.38	Probably sub-circular, steep flat sides, flat base.	Mid brown grey friable sandy silt.
	L2164			Dark brown grey friable sandy silt

4.4 Phase 3: 1800 – Modern

Feature	Context	Dimensions (m)	Plan/profile	Fill
F2013	L2014	1.60 x 0.85 x 0.44	Unknown/steep sides, concave base.	Mid greyish brown, friable sandy sit.
F2019	L2020	1.70 x 0.78 x 0.50+	Trapezoidal, vertical sides.	Dark grey, loose silty sand.
F2028	L2029(A)	13.50 x 7.40 x 2.25	Sub-rectangular/steep flat sides. Flattish	Mid greyish brown, friable sandy silt.
	L2063 (A)		base.	Mid-dark brown, friable silty sand.
	L2030 (A)			Mid grey-brown, friable silty sand.
	L2031 (A)			Light grey-brown, friable silty sand.
	L2032 (A)			Light orange-brown, friable silty sand
	L2033 (A)			Mid-dark brown, friable silty sand.
	L2034 (A)			Mid grey-brown, friable silty sand.
	L2035 (A)			Mid orange-brown, friable sand
	L2082 (B)			Mid-light brown, friable silty sand
		_		Mid orangey-grey, friable silty sand

L2084 (B)		Mid-dark grey, friable silty sand
L2085 (B)	-	Mid brown-grey, friable sandy silt
L2086 (B)	-	Light-mid grey-brown friable sandy silt
L2087 (B)	-	Mid brown-grey, friable sandy silt
L2088 (B)	-	Mid grey-brown, friable sandy silt
L2089 (B)	-	Dark grey-black, friable sandy silt with charcoal
L2090 (B)	-	Mid grey friable sandy silt.
L2091 (B)		Mid brown-grey, friable sandy silt.

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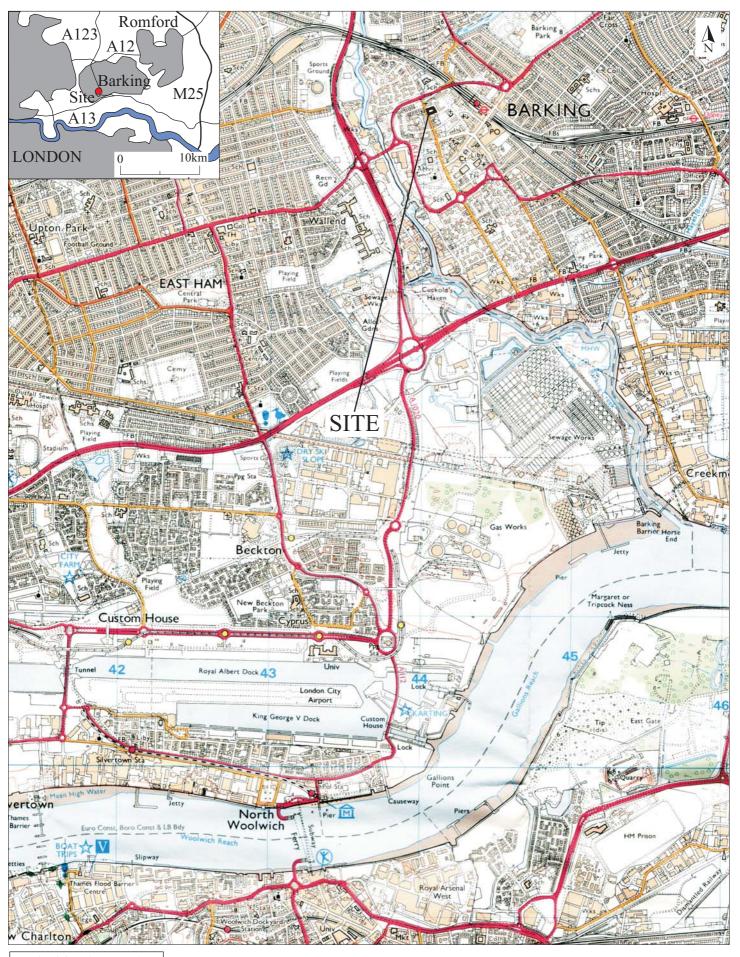
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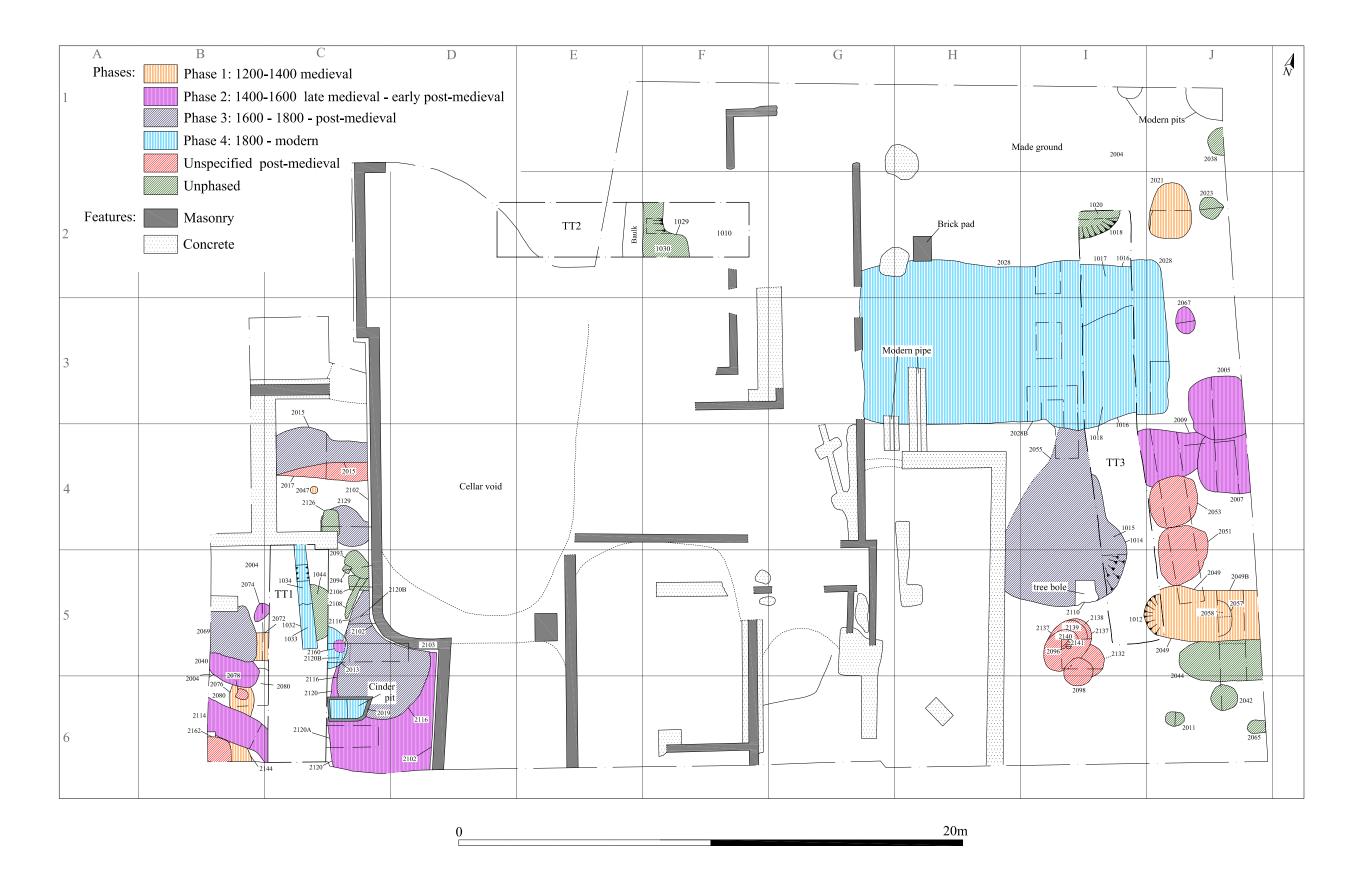
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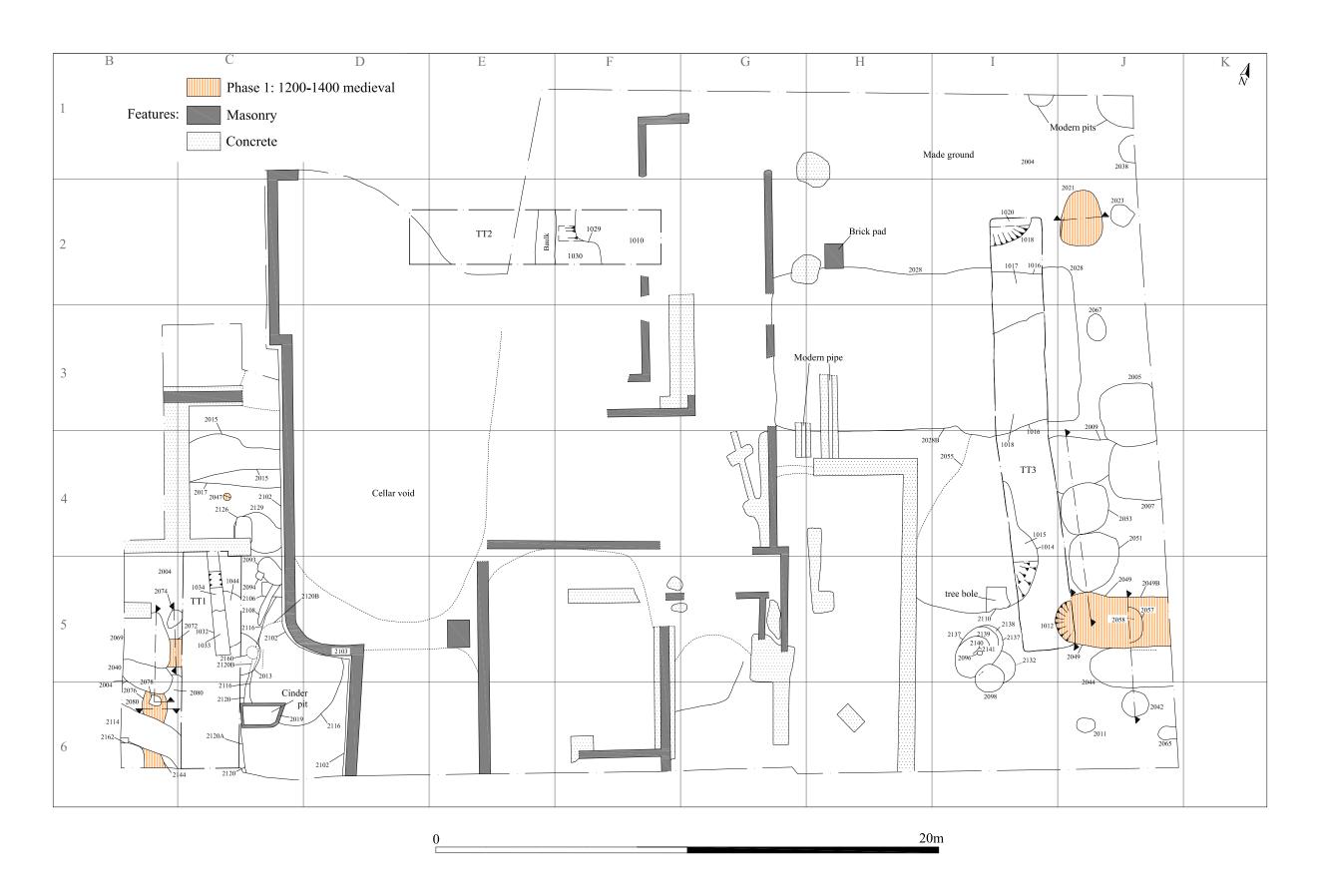
Fig. 1 Site location plan
Scale 1:25,000 at A4



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Fig. 2 Phase plan

Scale: 1:150 at A3



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Fig. 3 Phase 1 plan

Scale: 1:150 at A3

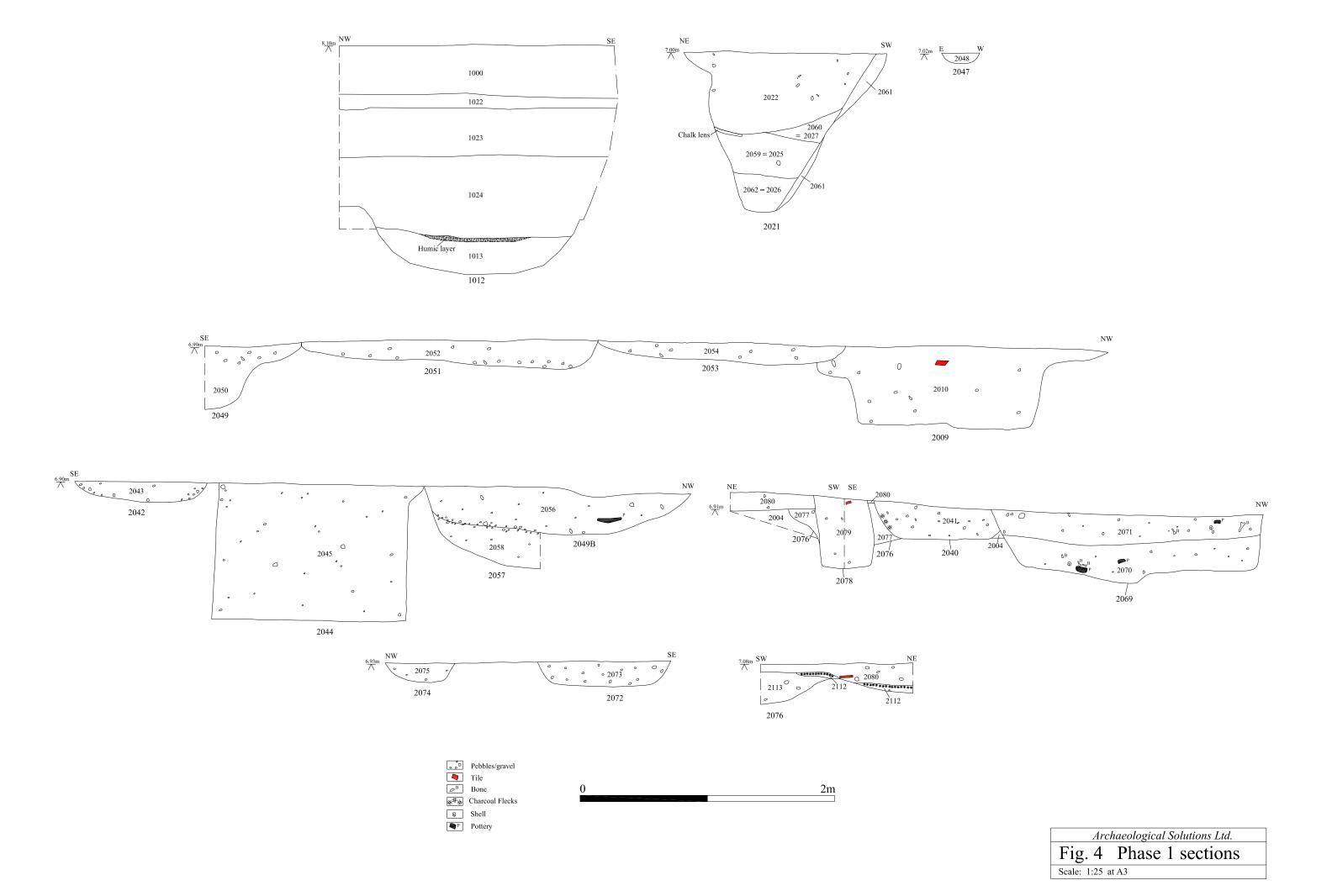




Fig. 5 Phase 2 plan
Scale: 1:150 at A3

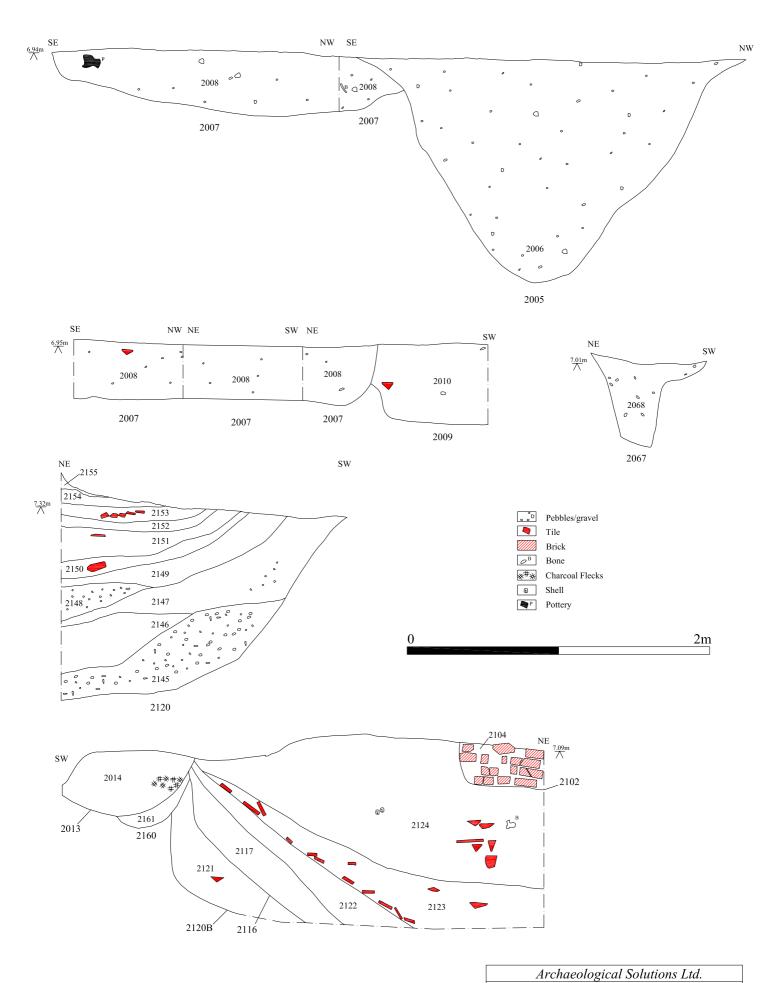
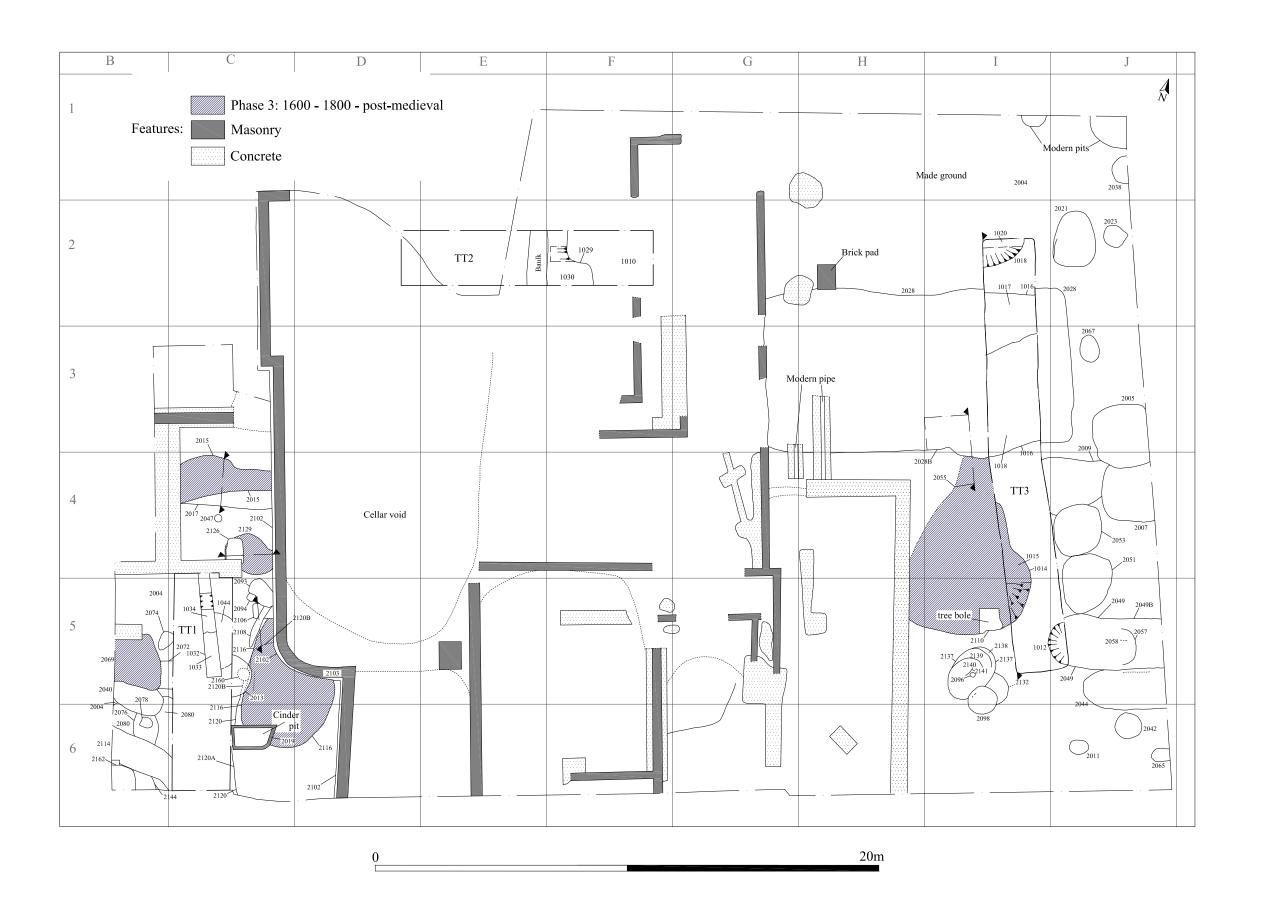


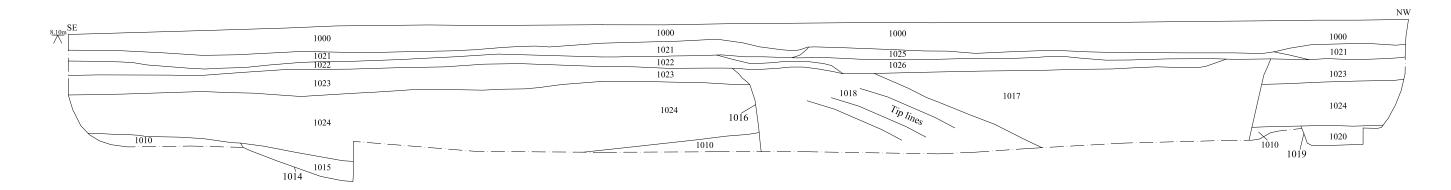
Fig. 6 Phase 2 sections
Scale: 1:25 at A4

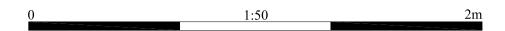


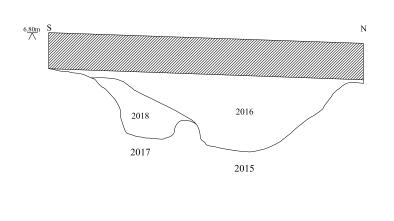
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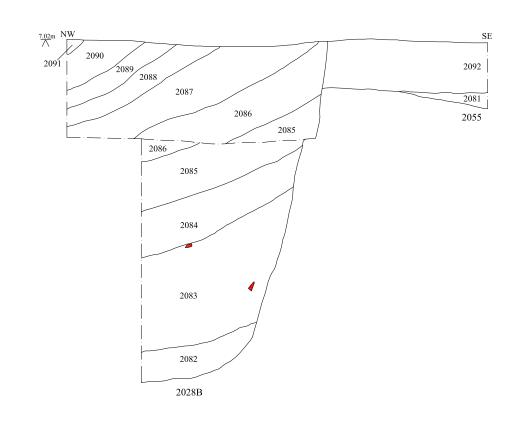
Fig. 7 Phase 3 plan

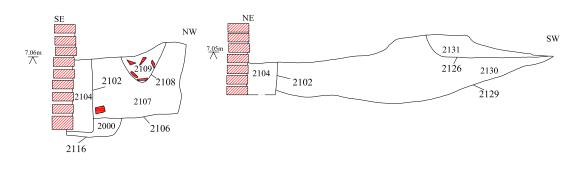
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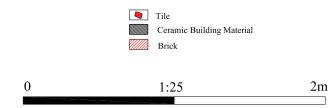






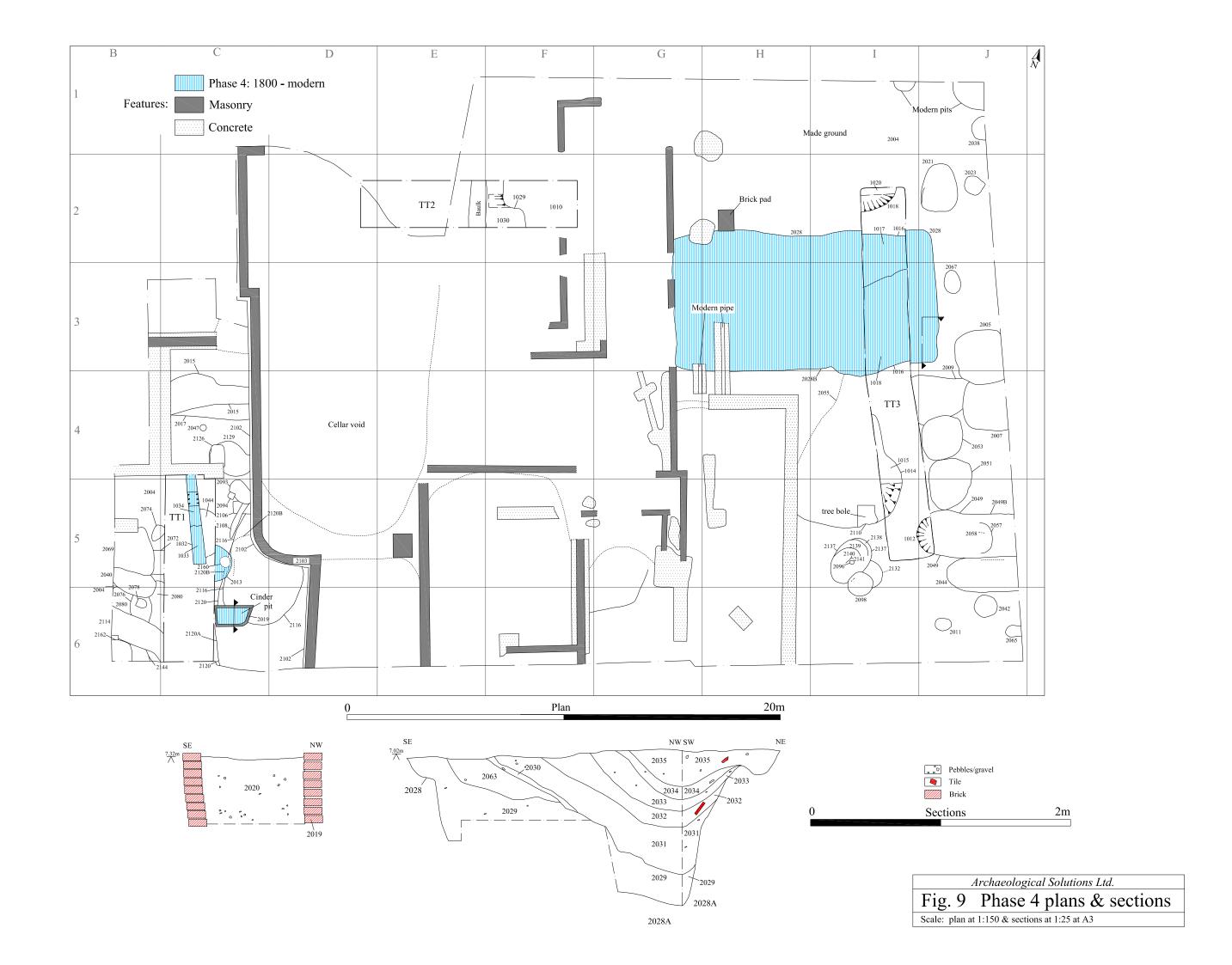






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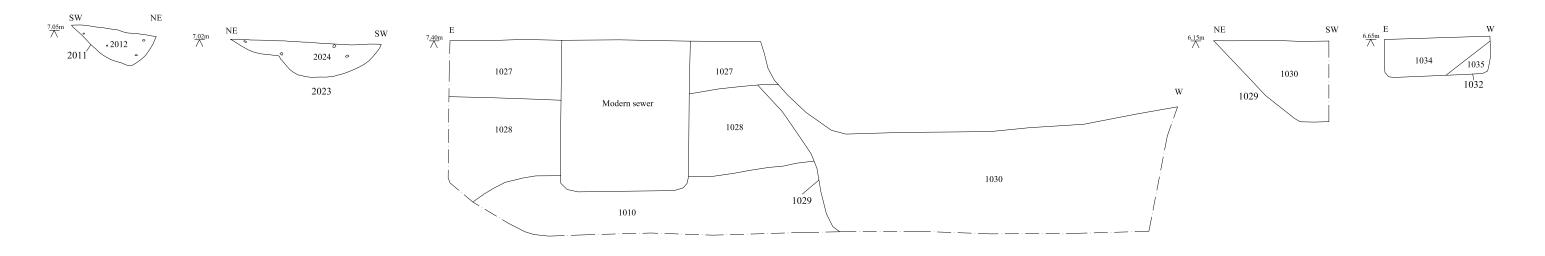
Fig. 8 Phase 3 sections
Scale: 1:25 & 1:50 at A3

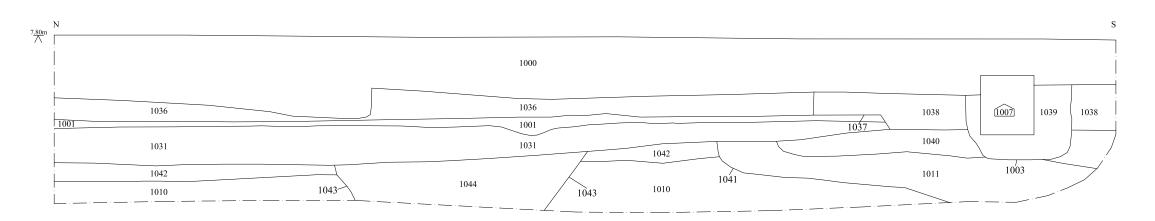


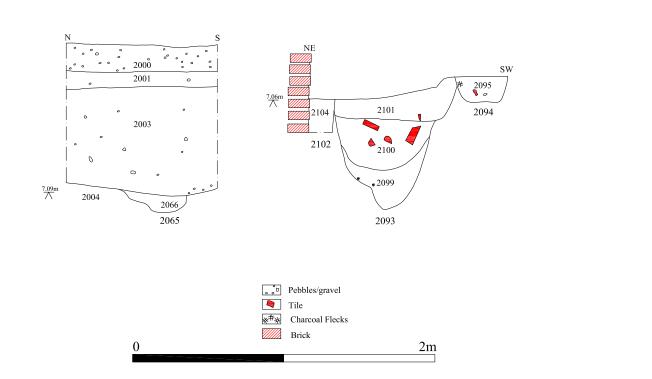




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Scale: 1:150 at A3

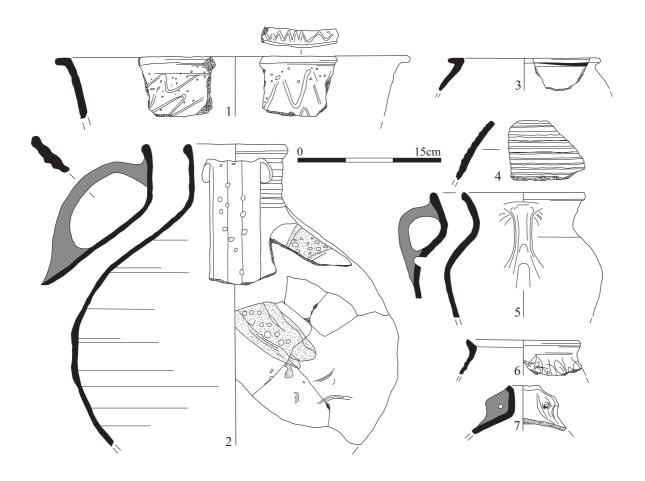






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Fig. 12 Unphased sections
Scale: 1:25 at A3



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Fig. 13
Scale 1:4 at A4 Pottery drawings