Excavation Report

Archaeological Excavation at The Bowd Engineering Works Site, East Street, St Ives, Cambridgeshire

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Client: Campbell Buchanan

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Archaeological Excavation at The Bowd Engineering Works Site, East Street, St Ives, Cambridgeshire

Archaeological Excavation

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Report Date: May 2018

Report Number:	1099
Site Name:	Bowd Engineering Work Site, East Street, St Ives, Cambridgeshire
HER Event No:	CHER 2319
Date of Works:	August – November 2007
Client Name:	Campbell Buchanan
Client Ref:	Land at East Street, St Ives
Planning Ref:	H/06/03477/FUL
Grid Ref:	TL3132 7140
Site Code:	STIEST07
Finance Code:	STIEST07
Receiving Body:	CCC Stores, Landbeach
Accession No:	

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Date:	October 2012
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Date:	May 2018
Signed:	

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Summary

An archaeological evaluation at the Bowd Engineering Works site, East Street, St Ives in August 2007 revealed extensive archaeological deposits from the medieval and post-medieval period. As a result of time constraints, a full archaeological excavation was conducted soon after, beginning in September, that continued until early November 2007. This report addresses the findings of both investigations.

The site was located within the medieval core of St Ives, at TL 3132 7140 and at c.6.5m OD. The investigations revealed a well preserved site with up to a metre of stratigraphy spanning over 700 years of activity.

Three main phases of activity were identified by the evaluation and excavation and these are characterised by quarrying and the digging of rubbish pits. The location of the site in close proximity of the Medieval street fair may be of fundamental importance in understanding why such activity was occurring in this location.

A sequence of rubbish pits dating from the 12th-14th centuries represent the earliest activity on the site, these contained deposits of horn cores and a medieval annular brooch. There follows a cessation in activity on the site, perhaps relating to the decline in population and abandonment of the fair in 1511 influenced by the Black Death and Hundred Years War. Activity resumes again during the 16th -17th centuries in the form of pit-digging, this time larger pits, perhaps for quarrying. A number of postholes dating from this period may represent the first evidence of a structure on the site.

The absence of evidence of any activity after 17th century coincides with the devastation of the town following a massive fire in 1689.

1 Introduction

1.1 Location and scope of work

1.1.1 An archaeological excavation was conducted at the old Bowd Engineering Works site, East Street, St Ives . The site is centred at TL3132 7140 (Figure 1).

1.1.2 This archaeological evaluation was undertaken in accordance with a Brief issued by Kasia Gdaniec (Gdaniec, 2006) of Cambridgeshire County Council (CCC; Planning Application H/06/03477/FUL), supplemented by a Specification prepared by OA East (formerly Cambridgeshire County Council's CAM ARC) (Drummond-Murray 2007a). The site went to immediate excavation following the issuing of a new brief (Gdaniec 2007) and approval of subsequent specification (Drummond-Murray 2007b).

1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *Planning and Policy Guidance 16 - Archaeology and Planning* (Department of the Environment 1990). The results will enable decisions to be made by CCC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.

1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

1.2.1 The site is located in the medieval core of the historic town of St. Ives (Figure 1) and lies on 1st terrace river gravels of the Great Ouse Valley (British Geological Survey, Sheet 187, 1978). The site is centred around TL 3132 7140 and lies at a height of approximately 6.5m OD.

1.3 Acknowledgements

1.3.1 The evaluation and excavation were supervised by Glenn Bailey and assisted by Ross Lilley, Ben Brogan, Katie Green, Caiomhin Ó Coileáin and Chris Faine. The project was managed by James Dummond-Murray. The site was surveyed by the author who carried out all post-excavation work.

2 Archaeological and Historical Background

2.1 CHER Summary

2.1.1 A search was carried out at Cambridgeshire HER for all entries within a 500m radius of the site (Figure 1). The results are summarised in the table below and locations represented on Figure 1.

HER No.	Grid Ref.	Keywords	Period	Form	Designation
01882	TL 3130 7121	Animal bone	Undated	Stray find	
01698	TL 313 715	Palaeolithic flints	Palaeolithic	Stray find	
02114a	TL31 71	Lithic implement	Prehistoric	Stray find	
02114	TL31 71	Arrowhead	Prehistoric	Stray find	
02030	TL 312 712	Spear	Prehistoric	Stray find	
03554	TL 31 71	Coin	Iron Age	Stray find	
03600	TL 316 713	Unidentified object	Prehistoric	Stray find	
03649	TL 3080 7160	pottery	Roman	Stray find	
03594b	TL 315 711	Pottery	Roman	Stray find	
03531	TL 308 717	Pottery	Roman	Stray find	
03555	TL 3110 7166	Pottery	Roman	Stray find	
03553	TL 31 71	Quernstone	Roman	Stray find	
03550	TL31 71	Coins	Roman	Stray find	
03516	TL 31 71	Coin	Roman	Stray find	
01883	TL 313 712	Coin	Roman	Stray find	
00459	TL 309 717	Coin	Roman	Stray find	
00770	TL 31 71	Pewter plate	Roman	Stray find	
03601	TL 316 716	Unidentified object	Roman	Stray find	
03557	TL 31 71	Brooch	Early Medieval	Stray find	
03594a	TL 3146 7101	Figurine	Medieval	Stray find	
03531	TL 310 716	Church	Medieval	Building	
01565	TL 3157 7129	Slepe hall (site of)	Medieval	Monument	
MCB 16646	TL 313 710	Steam Mill	Post Medieval	building	
CB15208	TL 3180 7113	Pillbox	Modern	monument	
CB15209	TL 3084 7159	Pillbox	Modern	monument	
CB 14957	TL 3140 7121	Church		building	
03698	TL 372 841	Railway	Post Medieval	monument	
03593a	TL313 712	St Lawrences Chapel	Medieval	monument	SAM 129
03593	TL 313 712	St Ives bridge	Medieval	monument	SAM 129
03545	TL 3127 7118	Manor House	Post Medieval	building	
01762	TL 313 713	C15 building	Medieval/Post Medieval	building	
01510	TL 315 713	Burials in vault	Post Medieval	monument	
MCB 16499	TL 31 24	Medieval features	Medieval	evaluation	
MCB16300	TL 3129 7138	Cess pit?	Medieval/Post Medieval	evaluation	
MCB15820	TL 3148 7112	Multi-period remains	multi-period	excavation	
MCB15816	TL 3149 7125	Medieval /post-medieval features	Medieval/Post Medieval	evaluation	
MCB15641	TL 3109 7153	Medieval /post-medieval features	Medieval/Post Medieval	excavation	
13043/ MCB14564	TL 3163 7103	Post-medieval ditch	Post Medieval	evaluation	

2.1.2 The information provided by the CHER is affected by the following:

- the distribution of entries has a bias towards periods that are well represented by material culture, i.e. medieval and post medieval remains, and towards classes of monuments which can be related to historical sources, i.e. religious buildings and manorial sites. This bias has its roots in the kind of information provided by the

Ordnance Survey records, i.e. the precursor of the SMR, that placed emphasis on extant remains, including earthworks, and important finds' spots

- most pre-medieval finds are the result of chance discovery and are not always accurately provenienced
- the distribution of entries is conditioned by the limited amount of archaeological work undertaken within and immediately outside the historic nucleus of the town.

2.1.3 The CHER collection represents a variable source of information that has been influenced by fieldwork strategies, collection of finds, antiquarian observations, local and professional interests. The degree of accuracy of the entry is therefore variable.

Summary of Archaeological Investigations

2.1.4 There have been a number of archaeological investigations carried out within St Ives, these are summarised below and their locations can be seen on Figure 1:

East Street (ECB2498/MCB17623)

2.1.5 An evaluation in 2007 identified the remains of later post-medieval/modern brick buildings on the site and a single fragment of medieval tile. The artefact assemblage from the site dates primarily from the late 17th to 19th century (Mellor, 2007).

Cow and Hare Passage (ECB1832/MCB16300)

2.1.6 An evaluation in 2004 revealed a possible cess pit and post-medieval occupation or levelling layers (Cooper 2004a).

Nos 6-8 East Street (ECB1506)

2.1.7 An evaluation in 1995 produced evidence for predominantly post-medieval agriculture and horticulture as well rubbish dumping in pits (Oakey 1995).

No 5 West Street/Rear of 28 Broadway (ECB1952/MCB16499)

2.1.8 An evaluation in 2004 revealed three medieval pits, three ditches and a possible hearth. Pottery indicated a 12th to 15th Century date for this activity (Grassam & Eddisford 2004).

No 1 The Waits (ECB1518)

2.1.9 Evaluation in 2004 revealed undated and modern postholes, as well as modern and post-medieval layers associated with the garden of Burleigh House (Cooper 2004b).

*The Former Permanex Site (ECB1851/*CB15641*)*

2.1.10 Excavations in 2003 revealed evidence for activity in the medieval, post-medieval and modern periods including 13th to 14th Century boundary ditches, a 17th-Century cockfighting ring and an 18th-Century well (Nicholson 2004 and 2005).

Oliver Road (ECB 264/MCB15816)

2.1.11 An evaluation in 2001 revealed a complex pattern of pitting dating from the medieval period (Prentice 2001).

30-32 West Street (ECB 2124/MCB17351)

2.1.12 An evaluation comprising three trenches in 2006 revealed a mass of quarry pits that were encountered in all three trenches at a depth of *c*.0.7m below ground level. This evidence indicates fairly intensive and extensive gravel extraction on this plot of land over a seemingly defined time span during the medieval period (12th-14th century) (Clarke, 2006).

2.2 Historical Background by Period

The following section is drawn from the Extensive Urban Survey (EUS) compiled by Cambridgeshire County Councils Archaeology Service (Cambridgeshire County Council Archaeology 2006).

Prehistoric

2.2.1 The nature and extent of prehistoric activity within the core of the town is not fully understood but its position on gravel terraces overlooking a major river would make it a favourable location and a number of prehistoric find spots are recorded within 500m of the site. These include palaeolithic hand axes (MCB2176 (01698)), neolithic flint implements (MCB2686 (02114a)), a Bronze Age arrowhead and spear (MCB2685 and 2594 respectively (02114 and 02030)), and an Iron Age coin (MCB4367 (03554)). A number of Neolithic and Bronze Age flint tools have also been found at the junction of the Old River and the current course. These may have been deposited via water action from upstream.

2.2.2 Although there is no direct evidence for prehistoric settlement, it is likely that the subsequent development of the town has led to the truncation and destruction of any remains.

Roman

2.2.3 During the Roman period the area around St Ives appears to have been a component of the Ouse Valley settlement system, which included the town of Godmanchester, the road network and the surrounding agricultural landscape.

2.2.4 There have been frequent finds of Roman pottery and coins (eg MCB4478, 4413 and 4362 (03649,03594b and 03550)) in the locality but excavations at the Priory (ECB 1532) provided the first evidence for Roman settlement within the historic core of the current town, fairly close to the river. The relatively high quantity of imported or luxury items recovered here suggest the presence of a villa or large farmhouse. A deposit of Roman tiles and other building material dredged from the river may have been ballast from a boat, but a large pewter dish was also discovered is unlikely to have been part of the same cargo.

2.2.5 Further afield, a pattern of scattered rural hamlets and farms has been identified. The Roman pottery found in this hinterland is dominated by local wares (primarily from Godmanchester) with few imports; this is typical of a low status population dependent on a local market town. This landscape is exemplified by sites such as Meadow Lane. Located on a spur of gravel jutting into the flood plain and abutted by the River Ouse, this would have proved an attractive location for settlement. It is however likely that occupation of the site was opportunistic rather than formal and that rising water levels would have caused its abandonment in favour of the current town.

Saxon

2.2.6 Although the Early and Middle Saxon development of St Ives is not fully understood, the Anglo-Saxon settlement of Slepe (later St Ives) probably lay close to All Saints church, at the west end of The Broadway The discovery of a *grubenhaus* during excavations at the Priory site does however suggest that occupation was not limited to the west of the town.

2.2.7 By the time of the Norman Conquest it appears that St Ives was a fairly large village with a church, a priory and associated settlement that mainly belonged to Ramsey Abbey (Cambridgeshire County Council Archaeology 2006).

Medieval

2.2.8 The site is located within the medieval core of the historic town of St Ives, a holding of Ramsey Abbey since the late 10th century which developed into an important medieval market with international renown in the cloth trade.

2.2.9 It appears that the original town arose around two foci; to the west, the Parish Church of All Saints (recorded in the Domesday Book) and The Priory, which lay to the east. During the early medieval period settlement focus shifted to the area in between, the part of the town known as the 'Street'. This runs parallel to the river, east-west from the parish church. It is likely that what is now Market Hill/Broadway and The Waits formed the 'high street' and that West Street/East Street was the 'back lane', with the space between the two roads being gradually developed throughout the period.

2.2.10 This shift has been attributed to the establishment of a fair in St Ives during the early 12th century. Its success is thought to have been based on the popularity of the cult of St Ivo, particularly around the time of the Easter festival, a particularly important date in the medieval Christian calendar. In 1110 Henry I granted permission for a week long fair to be held after Easter.

2.2.11 It is assumed that the majority of goods for the fair arrived by river. As such, the space along the river bank would have been kept open, forcing development and expansion alongside the market to have taken place inland in the first instance. As it became more established and sizeable, booths and properties were built or laid out for the merchants.

2.2.12 Excavations at Oliver Road (ECB 264), close to East Street, would appear to corroborate this. Here, pits dating from the 11th and 12th century, were recorded that contained a wide range of pottery from Thetford ware onwards. The pottery confirms the Saxo-Norman date of the town, and the pits (there were no buildings on this site until the 18th century) intimate that the area comprised back plots of properties facing the market.

2.2.13 A third settlement focus was created by the Abbot of Ramsey in 1107 with the establishment of a bridgehead on the south side of the crossing, comprising houses, yards and a chapel. By the time the fair began to decline the spine of the town (along Broadway and Market Hill) was probably fairly well established and infill down to the river began as the open commercial areas became less well used. A 'back lane' probably existed in the form of East Street and West Street. Excavations to the north of this spine confirms that development in this direction was limited, with back plots leading onto open fields. The rigid control exercised by the major 14 lords over the fair and thus the town also gave rise to settlement outside the urban area in the form of scattered farms and settlement.

2.2.14 Work at the Permanex site (ECB 1851) has shown settlement activity and industry from the 11th to 14th centuries, with property boundaries suggesting that The Waits and Ramsey Road were established routes. This is consistent with development of the town, as it supports the focus of the church as an area for Late Saxon settlement, and also the access route from Ramsey Abbey to its holdings and daughter house.

2.2.15 By the end of the medieval period, St Ives was in a decline with the end of the fair, and the dissolution of the priory and the removal of the authority of the abbot of Ramsey saw a change in the town and its development.

Post-Medieval

2.2.16 Post-medieval remains have been found at various locations within the town; perhaps the most notable are those revealed at the former Permanex site *c*.60m to the west of

the proposed development site, close to the parish church and riverside. Property boundaries, pits, a well and a 17th century cock-fighting ring were recorded here; a hiatus of activity spanning the 15th-16th centuries was also noted (Nicholson 2005).

2.2.17 A fire in 1689 devastated St Ives, destroying many of the earlier medieval houses, although several survive within the historic core (Redstone 1932). in 1680 fire broke out on White Hart Lane and effectively destroyed everything down to the river. A second fire nine years later added to the destruction. Hence, the historic fabric of the town today is predominantly 18th century or later, although property boundaries do appear to follow the pattern of medieval style tenements.

2.2.18 The town experienced an economic revival in the 18th and 19th century as a result of its market and this is represented by more grandiose architecture replacing that of the earlier period. There has also been some 20th century development in the town centre, particularly at the eastern end of the main core, that was undertaken prior to the inclusion of archaeological concerns in such schemes.

2.2.19 The town maintained its linear form along the river bank – with minimal expansion northwards – until the mid 20th century. Some 19th century urbanisation can be seen to the north of East and West Street (Component 17, 19 & 20), and also around the former railway station (Component 23), although this is not as extensive as in other towns in Huntingdonshire.

2.2.20 During the post-medieval period modern communications routes and development have resulted in the creation of a new focus and spine along Houghton Road and St Audrey Lane. St Ives has had no significant industry involving construction and development within the town. Its primary function has always been trade and commerce, from the medieval fair through to the livestock markets of the post-medieval period. The town has seen much in the way of post-medieval development aimed at increasing the potential of the cattle and sheep markets, with the intention of removing the trade from the main streets. This resulted in the construction of the cattle market in 1886, and subsequently an adjacent sheep market. The railways in the town were fully utilised for this trade, and even a siding was built into the new market areas.

2.2.21 As with other places along the Ouse Valley, gravel extraction is a major industry, with the pits at Meadow Lane in particular being extensive. It is likely that smaller scale extraction took place along the river bank closer to the core, but this has now been masked by medieval and post-medieval build-up.

2.3 Site History

2.3.1 The site lies on a plot of land to the south of East Street. This would have been to the rear of one of the medieval burgage plots fronting onto Crown Street/Broadway to the south. The development site lies north and east of the market and priory site, away from the earliest settlement but on historic routeways through the town and down to the river bridge.

2.3.2 There are no known designations within the proposed development site. Two Scheduled Ancient Monuments, relating to St Ives bridge (SAM 129) and the Priory Barn (SM 24433), lie nearby but neither are affected by the development.

2.3.3 Pettis' Map of 1728 (Figure 2) shows the site largely undeveloped, apart from the western frontage, and it appears to remain so until the late nineteenth century.

2.3.4 The 1808 Enclosure map (Figure 3) reveals very little detail or information about the development area. It was not the purpose of Enclosure maps to show detail of buildings

as they were primarily concerned with representing land division and apportionment. However, it appears that the site is largely undeveloped, although there do appear to be buildings bordering the site. There is no evidence of any buildings facing onto East Street at this time. The map demonstrates how the location of the site is lying on the edge of the urban development bordered by East Street to the north with enclosed fields on the other side.

2.3.5 The 1887 Second Edition Ordnance Survey map (Figure 4) shows buildings on the East Street frontage, labeled as Almshouses; these were not present on the preceding First Edition map of 1885. The subsequent second and third edition maps (Figure 4) show the area behind the frontage being gradually in-filled. A “P” denotes the presence of a pump on the site on the late 19th century Ordnance Survey plans, this is no longer depicted on the 1901 Edition and there is no further indication of the use of the site at this time.

3 Aims and Methodology

3.1 Aims

3.1.1 The objective of this evaluation and subsequent excavation was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

3.1.2 The main aim of the mitigation works was to preserved any remains by record prior to their destruction by redevelopment. A number of site-specific research priorities were laid out in the excavation brief on the basis of the initial results of the evaluation. These are as follows:

- following the discovery of bone working evidence, to investigate the raw materials used for the manufacturing of fine bone objects at a key period in the towns history
- evidence of the great 17th century fires should be sought and recorded
- to display any significant finds in the Norris Museum

3.2 Methodology

3.2.1 The Brief required that an area of 194m² within the footprint of the proposed development area be subject to a full archaeological excavation. During both evaluation and excavation phases, four separate areas were opened (Trenches 1, 2, 2A & 3).

3.2.2 Machine excavation was carried out under constant archaeological supervision with a tracked 360-type excavator using a toothless ditching bucket (Plate 1).

3.2.3 Spoil, exposed surfaces and features were scanned with a metal detector, although this process was hampered by the presence of intrusive modern features/disturbance and associated modern metal objects. All hand-collected finds were retained for inspection, other than those which were obviously modern.

3.2.4 All archaeological features and deposits were hand excavated to allow interpretation of their form and function and recorded using OA East's *pro-forma* sheets.

3.2.5 The excavation area and trenches were tied into the Ordnance Survey using a Leica TCR 705 Total Station Theodolite (by the author); levels were based on heights obtained from a topographical survey supplied by the client. Trenches, plans and sections were recorded at appropriate scales (1:50, 1:20 and 1:10). Colour and monochrome photographs were taken of all relevant features and deposits, supplemented by digital photographs taken using a Canon Pro-90 digital camera.

3.2.6 A total of 73 soil samples were taken for analysis during both stages of the investigation.

3.2.7 Weather conditions were good, with almost constant sunshine and little rain.

4 Results

4.1 Introduction

4.1.1 Four main phases of activity, spanning the 12th to 19th Century, were identified. Evidence for Prehistoric activity was also recorded in the form of a single pottery sherd. This is thought to be residual and not representative of a significant presence on the site.

4.1.2 The archaeological sequence is described below by phase, in chronological order. The phasing presented in this work is largely based on stratigraphic relationships, spatial associations and, to a certain extent, similarity in alignment of linear features. Where possible this has been combined with dating evidence provided by stratified artefacts, primarily pottery. Deposit numbers are shown in plain text and cut numbers are in **bold** text.

4.2 Phase 1: 12th- 14th century (Figure 6)

4.2.1 The earliest *in situ* activity on the site dates to the 12th-14th century. A single ditch was identified within the main excavation area that continued into an additional small trench lying in the western part of the development site. This ditch was aligned north-west to south-east and, along with two narrow ditches/gullies in Trench 1, represented the only evidence for boundary or drainage features on the site (Figure 5). Following this ditch, a number of small-medium sized pits (Figure 6) were excavated across the area. Some of these features were inter-cutting although the dating evidence and subtle differences in their fills would suggest this occurred within a relatively short period.

Ditches

4.2.2 A single ditch (**324**) was recorded in this phase on a north-west to south-east alignment, parallel with East Street and Crown Street (Figure 1, Trench 2 & 2A). This may represent a boundary to a plot fronting onto one of these earlier roads.

Ditch **324** was located in the additional excavation area to the west and continued into Trench 2 where it was recorded as **10007**. This ditch measured at least 8m in length, 1.5m wide and 0.76m deep with steep sloping edges and a concave base. It continued eastwards and westwards beyond the excavation areas.

Ditch **324** was filled by 319, 320 and 321, 322 and 323.

Fill (primary fill) 323 was a moderately compact light yellowish brown sandy silt with frequent gravel stone inclusions and a maximum thickness of 0.28m.

Fill 322 was a moderately compact dark greyish brown silty clay with occasional gravel stone inclusions and a maximum thickness of 0.26m.

Fill 321 was a moderately compact dark greyish brown silty clay with occasional gravel stone inclusions and a maximum thickness of 0.34m. Three sherds of 13th to mid 14th century pottery and an incomplete nail (SF 43) were also found.

Fill 320 was a moderately compact mid reddish brown silty clay with frequent gravel stone inclusions and a maximum depth of 0.38m.

Fill 319 was a moderately compact mid reddish brown silty clay with frequent gravel stone inclusions and a maximum depth of 0.24m.

Ditch **10007** was filled by 10074 and 10076.

Pits

4.2.3 A sequence of inter-cutting pits with homogenous fills were recorded. These were difficult to interpret in plan and frequently relationships were resolved in section. By

extrapolating the continued line of the pits, most appear to have been irregular or sub-circular in plan. Pit **184** *et al.* May represent a rubbish pit for the disposal of bone-working waste.

Pit **184**/**210**/**239** (same as **10015**, Trench 3), was located at the southern limit of the site and continued beyond the edge of excavation. It was sub-circular in plan with steep sloping edges and a rounded base (Figure 8, Section 13). It measured approximately 3.20m in length and at least 1.50m wide.

184 was filled by 194; a very dark, blackish brown silty sand with occasional gravel stone inclusions. Three sherds of 13th to mid 14th century pottery were retrieved. The soil sample taken for environmental analysis (sample 32) contained a small amount of slag.

210 was filled by 211; as above. This context contained eleven sherds of mid to late 15th century pottery, a large piece of slag and several shards of post-medieval window glass. Soil sample 36 contained a small amount of slag.

239 was filled by 240; as 194 and 211. Three sherds of 13th to late 15th century pottery were recovered along with a number of sheep and goat bones and loose teeth that most likely represents horn workers or tawyers waste (Appendix C.1)). An incomplete iron hobnail (SF 49) and an incomplete nail (SF 48) were retrieved from 240. Small quantities of slag were recovered from soil sample 40.

10015 was filled by 10052 and 10053. Two sherds of 13th to mid 14th century pottery were retrieved.

Pit **74** was located at the northern end of the excavation area and was not fully revealed in plan. It was approximately 1.94m in length, 0.90m wide and 0.32m deep with irregular, steep sloping edges and a concave base. It was filled by 75.

Fill 75 was a dark blackish grey, clayey silt with frequent small stones inclusions. Two sherds of mid 12th-13th century pottery were retrieved.

Pit **302** (equal to **304**) was located in the additional excavation area to the west and continued beyond the trench edge. It was approximately 1.80m in length, 0.90m wide and 0.81m deep with gradual sloping edges. This pit truncated pit 304. It was filled by 299, 300 and 301.

Fill 299 was a light greenish brown, silty clay containing animal bone, oyster shell and several sherds of 13th-14th century pottery.

Fill 300 was a dark greyish brown silty clay. Three sherds of mid 12th-14th century pottery, two incomplete iron hobnails and a narrow shank fragment (SF 23), probably from a tack rather than a hobnail were retrieved. Small quantities of slag were recovered from environmental sample 71.

Fill 301 was a moderately compact mid greenish brown silty clay with gravel inclusions. An incomplete nail (SF 18) was retrieved.

Pit **304** was truncated by pit 302. It was located in the additional excavation area to the west and continued beyond the trench edge. It measured approximately 1.80m in length, 1.22m wide and 0.76m deep with steep sloping edges and a “U” shaped profile (Figure 8, Section 39). It was filled by 303 and contained the highest density of pottery of all the pits.

Fill 303 was a moderately compact, mid-reddish brown, moderately compact silty clay. This fill contained frequent sherds of pottery including 60 sherds of unglazed Blackborough End ware (UGBB) which may represent an entire vessel that dated from the mid 13th-14th century.

Pit **250** (Plate 3)was located in the additional excavation area to the west and continued beyond the trench edge. It was 1.3m in length, 0.84m wide and 0.84m deep with steep sloping edges and a concave base . This pit was truncated by pit **306**. It was filled by 251 and 271

Fill 251 was a moderately compact, mid greyish brown, silty clay. Three sherds of 13th-mid 14th century pottery were retrieved along with a fragment of an iron bolt (SF4), an iron strap with attachment nail *in situ* (SF62) and a silver long-cross penny (SF3), probably of late 14th century date.

Fill 271 was a moderately compact brownish grey clayey silt. Finds retrieved included a single sherd of mid 12th-mid 14th century pottery. A small amount of slag was recovered from soil sample 63.

Pit **317** was located in the additional excavation area to the west and continued beyond the trench edge. It measured 0.7m in length, 0.84m wide and 0.74m deep with steep sloping edges and a flat base. This pit truncated pit **250** and was filled by 270.

Fill 270 was a dark greyish brown silty clay and contained several sherds of 13th-mid 14th century pottery. 15 horn cores were also recovered along with a small amount of slag from sample.

Pit **229** was located within the main excavation area, its shape and dimensions were not fully revealed in plan. It had moderately steep sloping edges and a concave base (Figure 8, Section 50/51). This pit was filled by 225, 226, 227 and 228.

(Upper) fill 225 was a very dark brown, moderately sandy silt with occasional stone inclusions. Three sherds of 14th century pottery were retrieved from this deposit. Soil sample 41 contained slag.

Fill 226 was a very dark brown, moderately sandy silt with occasional stone inclusions.

Fill 227 was a loose, dark brown grey silty sand with occasional small stone inclusions.

(Primary) Fill 228 was a dark brownish orange silty sand with occasional small stone inclusions.

Pit **231** was undated, however it was truncated by **229** and so has tentatively been placed within this phase. It was not visible in plan and therefore mostly recorded from section. It measured approximately 0.74m wide and 0.49m deep with steep sloping edges and a concave base (Figure 8, Section 51). It was filled by 230.

Fill 230 was a moderately loose, dark reddish brown with occasional small stone inclusions and a maximum thickness of 0.49m.

Pit 09 was a located in the middle of the main excavation area and was also investigated in evaluation Trench 2 (Figure 5). It was 1.50m in length, 1.12m wide and 0.50m deep and was sub-circular in plan with moderate sloping edges and a flat base (Figure 8, Section 12). It was filled by 08.

Fill 08 was a dark brown silty gravel with occasional pebble inclusions. Four sherds of 13th to mid 14th century pottery were recovered.

Pit **18** (equal to **10014** in Trench 2) was investigated in the main excavation area, continuing beneath the western edge. It was sub-circular in plan with very steep, almost vertical sloping edges. The base of the pit lay below the water table. It was 0.85m in length, 0.70m wide and had a minimum depth of 0.60m. It was filled by 19 and 60. This pit truncated posthole **55**.

Primary fill 60 was a loose, orangey brown clayey silt with no obvious inclusions and a maximum thickness of 0.60m.

Fill 19 was a moderately firm dark browny grey clayey silt with occasional pea grit inclusions. A single sherd of mid 12th-mid 14th century pottery, a broken iron ring staple (SF 1) and a shard of amber-coloured bottle glass were recovered.

Pit **10068** was located in evaluation Trench 2 (Figure 5). It appeared to be sub-circular in plan, continuing beyond the edges of the trench. It was at least 1.13m in diameter and filled by 10069. Several sherds of 13th to mid 14th century pottery were retrieved.

Fill 10054 was a moderately compact, pale greyish brown, silty clay with occasional small stone inclusions and a maximum thickness of 0.12m.

Pit **10014** (equal to Pit **18**) appeared to be sub-circular in plan, continuing beyond the edges of the trench. It was at least 1.50m in diameter and 1.28m deep and filled by 10054, 10055, 10056 and 10057.

Fill 10054 was a moderately compact, pale greyish brown, silty clay with occasional small stone inclusions and a maximum thickness of 0.12m.

Fill 10055 was a compact, dark brownish grey sandy silt with occasional small stone inclusions and a maximum thickness of 0.73m. A single sherd of mid 12th to mid 14th century pottery was retrieved.

Fill 10056 was a moderately compact, mid greyish brown, silty clay with occasional small stone inclusions. The thickness of this deposit was not recorded.

Fill 10057 was a compact, mid brownish grey, silty clay.

Pit (or possible ditch) **84** was located within the main excavation area. It was not fully revealed in plan but had steep sloping edges and a concave base with a maximum depth of 0.80m. It was filled by 84, 85, 86 and 87.

(Primary) fill 87 was a mid-dark grey silty clay with frequent gravel stone inclusions and a maximum thickness of 0.13m.

Fill 86 was a loose, dark greyish black sandy silt with occasional gravel stone inclusions.

Fill 85 was a loose blackish grey silty sand with occasional gravel stone inclusions. Eight sherds of 13th to mid 14th century pottery were recovered from this fill.

Pit **163** (equal to **128** and **167**) was located in the main excavation area although it continued beyond the eastern edge and was truncated by **233** to the west. This feature was mostly recorded from section where its profile revealed stepped edges and a flat bottomed base. It was filled by 166, 164 and 165.

Fill 166 (primary fill) was a moderately loose, dark brownish grey silty sand with occasional pebble stone inclusion. Five sherds of mid 12th to mid 14th century pottery were retrieved from this context.

Fill 164 was a moderately compact, light greyish brown silty clay with occasional small stone inclusions.

Fill 165 was a moderately loose, orangey brown silty gravel with frequent pebble and occasional pea grit inclusions.

Pit **167** (equal to **163**) was 2.10m wide and 0.85m deep with steep sloping edges and a flat base. It was filled by 172, 171, 170, 169 and 168.

(Primary) fill 171 (equal to 172) was a moderately loose orangey brown sandy silt with frequent pebble and grit inclusions. It had a maximum depth of 0.47m.

Fill 170 was a moderately loose, orangey brown silty sand with occasional small pebble stone inclusions and a maximum thickness of 0.38m.

Fill 169 was a moderately loose, dark brownish grey sandy silt with occasional small gravel stone inclusions and up to 0.80m thick. Nine sherds of 13th to mid 14th century pottery date were recovered.

Fill 168 was moderately loose, light greyish brown sandy silt, up to 0.61m thick with occasional pebble stone inclusions. Ten sherds of mid 12th to mid 14th century pottery and a piece of lead drip (SF 12) were recoverered.

Pit **186** was located close to the southern limit of the excavation. it was mostly recorded from section. The section revealed it was at least 5m in length, 3.97m wide and 1.18m deep. It was filled by 264, 256, 193, 257, 258, 259, 260, 261, 262, 263, 265, 266, 267, 268, 190, 191, 192 and.273.

Fill (primary fill) 264 was a well compacted blackish silty sand with occasional charcoal inclusions with a maximum thickness of 0.06m. Five sherds of mid 14th to late 15th century pottery were recovered.

Fill 256 was a moderately compact, dark orangish grey silty gravel up to 0.29m thick.

Fill 193 was a well compacted blackish silty sand with occasional charcoal inclusions with a maximum thickness of 0.06m.

Fill 257 was a well compacted dark orangish brown silty sand with occasional pea grit inclusions with a maximum thickness of 0.23m.

Fill 258 was a well compacted mid brownish grey silty sand with occasional charcoal inclusions with a maximum thickness of 0.15m.

Fill 259 was a well compacted light grey silty sand with occasional charcoal inclusions with a maximum thickness of 0.29m.

Fill 260 was a well compacted dark greyish brown silty sand with occasional stone inclusions with a maximum thickness of 0.58m.

Fill 261 was a well compacted light greyish brown silty sand with occasional small stone inclusions with a maximum thickness of 0.24m.

Fill 262 was a mid greyish brown clayey sand with occasional stone inclusions and a maximum depth of 0.03m.

Fill 263 was a mid greyish silty sand with occasional stone inclusions and a maximum depth of 0.04m.

Fill 265 was a mid yellowish brown gravelly sand with no obvious inclusions and a maximum depth of 0.12m.

Fill 266 was a mid greyish brown silty sand with occasional stone inclusions and a maximum depth of 0.25m.

Fill 267 was a dark greyish brown silty sand with occasional stone inclusions and a maximum depth of 0.51m. Two sherds of mid 12th to mid 14th century pottery were recovered.

Fill 268 was a light greyish brown silty sand with no obvious inclusions and a maximum depth of 0.52m.

Fill 259 was a dark greyish brown silty sand with occasional stone inclusions and a maximum depth of 0.51m.

Fill 273 was a mid dark greyish brown silty sand with occasional stone inclusions and a maximum depth of 0.31m.

Fill 190 was a moderately compact, mid grey silty sand with occasional stone inclusions and a maximum thickness of 0.52m. Three sherds of 13th to late 14the century pottery were recovered.

Fill 192 was a very compact, mid yellowish brown sandy gravel with occasional stone inclusions and a maximum thickness of 0.11m.

Fill 191 was a moderately compact dark greyish brown silty sand with occasional stone inclusions and a maximum thickness of 1.04m.

Pit **185** was located at the southern end of the excavation area. It was sub-circular in plan and approximately 2m in length, 1.10m wide and 0.38m deep with gradual sloping edges and a concave base. It was filled by 188 and 189. pit **185** truncated pit **187**.

Primary fill 189 was a well compact, mid grey silty clay with occasional gravel stone inclusions and a maximum thickness of 0.21m. 13th -14th century pottery and an incomplete nail (SF 16) were found. Soil sample 28 contained a small amount of slag.

Fill 188 was a very compact dark greyish brown gravely, sandy silt with no obvious inclusions and a maximum thickness of 0.29m.

Pit **187** was located at the southern end of the main excavation area. It was undated, however it has been tentatively placed in this phase as it was truncated on its northern side by **185**. It was sub-circular in plan, with steep sloping edges and a concave base measuring approximately 0.40m wide and 0.40m deep. It was filled by 272.

Fill 272 was a loose, dark greyish black silty sand with occasional gravel stone inclusions and a maximum thickness of 0.30m.

Pit **10001** was located in the north-west corner of evaluation Trench 1 (Figure 5). It was sub-circular in plan with moderately steep sloping edges and a flat base (Figure 8, Section 1). This pit measured at least 0.50m wide and 0.34m deep. It was filled by 10018 and 10019.

Fill 10018 was a moderately compact, orangey brown with occasional pebble stone inclusions and a maximum thickness of 0.34m.

Fill 10019 was a moderately compact, dark brown silty sand upto 0.10m thick that contained animal bone and two sherds of 13th to mid 14th century pottery.

Postholes

4.2.4 A single posthole (**55**) was tentatively attributed to this phase.

Posthole **55** was circular in plan, truncated on the western side by pit **18**. It had steep sloping edges and a concave base measuring approximately 0.46m in diameter and 0.26m deep. It was filled by 56. Although undated, this pit has been tentatively placed in this phase owing to its relationship with **18**.

Fill 56 was a firm, dark orangey brown silty sand upto 0.26m thick with frequent gravel stone inclusions.

Layers

4.2.5 The following layers represent accumulations as a result of disuse, overlying the pits within this phase and truncated by phase 2 activity (not illustrated).

Layer 28 was a very compacted mottled blackish grey silty sand with frequent stone inclusions and a maximum thickness of 0.14m. It contained a single sherd of 14th century, East Anglian Redware pottery.

Layer 41 was a moderately compact, orangey grey stoney sand upto 0.08m thick with occasional stone inclusions. A single sherd of 12th to mid 14th century, Hunts Fen Sandyware was recovered.

Layer 198 was a loose, mid to dark greyish brown silty sand with frequent gravel inclusions and a maximum thickness of 0.70m. Two sherds of mid 13th to mid 14th century pottery were recovered.

4.3 Phase 2: late 14th-15th century (Figure 6)

4.3.1 There was an apparent decline in activity during this phase, represented by a number of pits sparsely distributed across the excavation area.

Pits

Pit **146** (equal to **80**) was located at the northern end of the main excavation area. It was sub-circular in plan with steep, almost vertical sloping edges and a concave base. This pit measured 0.70m long, 0.60m wide and was 0.46m deep. Pit **146** was filled by 147.

Fill 147 (equal to fill 81) was a moderately loose, mid brownish grey silty clay up to 0.46m thick with frequent pebble and pea grit inclusions. Three sherds of a 14th to late 15th century, Late East Anglian redware jug and a nail head (SF 11) were recovered. Slag was recovered from sample 20.

Pit **306** was located in the additional trench to the west of the excavation area and continued beyond the western limit. It measured approximately 1.4m long, 0.80m wide and 0.74m deep with steep sloping edges (Figure 8, Section 39). It was filled by 305.

Fill 305 was a moderately compact, silty clay. A single sherd of 14th to 15th century pottery was retrieved.

Pit **288** was located at the very southwest corner of the main excavation area. It was sub-circular in plan with steep sloping edges and a flat base (Figure 8, Section 40). It measured approximately 1.4m long, 1.0m wide and 0.86m deep and filled by 298, 297, 296, 295, 294, 293, 292, 291, 290 and 298.

Primary fill 298 was a loose, dark brownish grey sandy silt upto 0.1m thick, with occasional gravel stone inclusions.

Fill 297 was a loose dark brown sandy silt with frequent gravel stone inclusions up to 0.10m thick.

Fill 296 was a loose dark brown sandy silt with frequent gravel stone inclusions up to 0.06m thick.

Fill 295 was a loose mid brown sandy silt with frequent gravel stone inclusions up to 0.20m thick.

Fill 294 was a loose mid brown sandy silt.

Fill 293 was a loose dark brown sandy silt up to 0.20m thick with frequent gravel stone inclusions

Fill 292 was a loose mid brown sandy silt up to 0.30m thick with frequent gravel stone inclusions.

Fill 291 was a loose light brownish grey sandy silt up to 0.30m thick with frequent gravel stone inclusions. A single sherd of 15th Century Lyvenden-Stanion ware pottery was retrieved.

Fill 290 was a loose dark brown sandy silt up to 0.20m thick, with frequent gravel stones.

Fill 289 was a loose mid-dark brown sandy silt up to 0.15m thick with gravel stone inclusions.

Layers

4.3.2 A layer was recorded within Trench 3, sealing the phase 2 pitting and truncated by phase 3 quarry pitting.

Layer 10059 was recorded in Trench 3 (not illustrated). Two sherds of mid 15th century pottery were recovered.

4.4 Phase 3: 16th-17th century (Figure 7)

4.4.1 An increase in activity was noted during this phase that was represented mostly by pitting, either for the disposal of rubbish or the extraction of gravels. The pits were characterised by their relatively large size. They were often inter-cutting, which suggests rapid backfilling and subsequent digging of the next pit over the course of the period.

Inter-Cutting Quarry Pits

4.4.2 The southern half of the excavation area was mostly taken up by a group of inter-cutting pits. The stratigraphic relationships between these pits were difficult to establish in plan and they were elucidated through a number of slots and drawn sections. As a result, many do not appear on the phase plan for this period (Figure 7).

Pit **233** (equal to **307** and **128**) (Plate 4) was investigated in a number of slots, each was assigned a different set of deposit numbers. It was a large pit, sub-circular in plan with moderately steep sloping edges. The base was not reached during excavation. This pit measured approximately 3.35m in length and at least 1.57m wide. **233** was filled by 252, 253 (same as 275), 236 and 244 (S.41) and by 234, 235 , 237, 243 and 274 (S.42). Also by 309 which contained a sherd of pottery dating from the 16th to 18th century.

Fill 252 equal to 234 was a loose, greyish black ashy deposit up to 0.12m thick, with frequent charcoal inclusions. Four sherds of 17th century pottery were retrieved from 252 and seven sherds dating to 16th to 18th century were recovered from 234. A copper-alloy pin shank fragment (SF 34), an iron sheet fragment (SF 37) and several incomplete nail fragments and shanks (SF 45, 51 and 61) were also found. Soil samples 51 and 54 contained a small amount of slag and a clay pipe bowl dating to the 17th century.

Fill 253 equal to 235 was a compact, mid greyish brown deposit up to 0.08m thick, with frequent mortar, oyster shell and charcoal inclusions. Five sherds of 16th to late 17th century pottery were retrieved. A number of complete and incomplete nail and tack fragments (SF 14, 15 and 50) were also found. The soil sample taken from 253 for environmental analysis (sample 52) contained a small amount of slag.

Fill 236 was a loose, dark brownish grey silty sand with occasional rounded stone inclusions, charcoal, oyster shell and animal bone and a maximum thickness of 0.24m. A single sherd of 17th century, Staffordshire-type slipware, An iron knife blade fragment (SF 59) and several incomplete nails (SF 53 and SF 57) were also found.

Fill 237 was a loose, dark brownish grey clayey silt with frequent bone fragments, oyster shell, mortar flecks and gravel stones. Four sherds of 17th century pottery and a clay pipe bulb were recovered. A copper-alloy pin (SF33) and a number of incomplete nails (SF 32, 52 and 56) were also found.

Fill 244 equal to 274 was a moderately compact greyish black clayey fill up to 0.80m thick with occasional oyster shell inclusions. Seven sherds of 17th century pottery, a copper-alloy pin shank fragment (SF36) and a number of incomplete nail shanks (SF 44, 54 and 58) were also found.

Fill 309 An edge fragment from a window-pane of translucent self-coloured greenish glass (SF 6) was retrieved from the fill.

307 was filled by 275.

Fill 275 was a a mid brownish, blueish silty clay with no obvious inclusions containing a single sherd of 16th-18th century redware and an incomplete nail (SF 24). Environmental sample 57 contained a small amount of slag and a clay pipe bulb dating to the 17th century.

128 was filled by 129, 130, 131, 132 and 133.

Primary fill 133 was a loose, mid brown sandy silt upto 0.05m thick with frequent gravel stone inclusions.

Fill 132 was a loose, mid brown sandy silt upto 0.05m thick, with frequent gravel stone inclusion.

Fill 131 was loose, blackish brown sandy silt, upto 0.11m thick, with frequent gravel stone inclusions. A single sherd of 17th century black glazed ware (PMBL) and two crossed shank fragments (SF 39) were recovered.

Fill 130 was a loose, dark grey sandy silt up to 0.05m thick with frequent gravel stone inclusions.

Fill 129 was a loose, dark grey/blackish brown sandy silt up to 0.08m thick, with frequent gravel stone inclusions.

Pit **139** was not revealed in plan and recorded from section only. It was located within the area of inter cutting pits and the profile revealed suggests it had steep sloping edges and a flat base measuring 0.60m wide and 0.60m deep. It was filled by 140.

Fill 140 was a moderately compact clay with no obvious inclusions and a maximum thickness of 0.60m. A single sherd of mid 14th to late 15th century pottery was recovered from this fill.

Pit **207** was circular in plan with moderate sloping edges. The base was not reached during excavation. It measured 3.0m in length, 0.95m wide and 0.40m+ deep. This pit was truncated by pit **205** and was filled by 208.

Fill 208 was a moderately compact dark greenish brown silty gravel with occasional pebble stone inclusions and a thickness of at least 0.40m.

Pit **205** was circular in plan with moderate sloping edges. The base was not reached during excavation. It measured approximately 3.0m in length, at least 0.55m wide and 0.47m+ deep. This pit truncated pit **207** and was filled by 206.

Fill 206 was a moderately compact brownish grey silty gravel with occasional pebble stone and gravel inclusions and a thickness of at least 0.47m. Environmental sample 35 contained a small amount of slag.

Pit **155** was not fully revealed in plan and recorded entirely from section. It had gradual sloping edges and a concave base. It measured approximately 1.4m in length, 0.70m wide and 0.68m deep. It was filled by 158, 157 and 156.

Fill 158 was a loose, mid greyish brown sandy fill upto 0.50m thick with frequent gravel stone inclusions.

Fill 157 was a loose, dark greenish brown silty sand up to 0.25m thick with occasional gravel stone inclusions.

Fill 156 was a loose dark greyish brown silty sand with occasional gravel stone inclusions and a maximum thickness of 0.30m. Two sherds of 16th to 18th century redware pottery were retrieved.

Discrete Pits

Pit **286** was located in the additional excavation area to the west and continued beyond the trench edge. This pit measured approximately 1.00m in length, 0.84m wide and 0.76m deep wide with gradual sloping edges (Figure 8, Section 39). This pit truncated ditch **324**. It was filled by 281, 282, 283, 284 and 285.

Primary fill 285 was a moderately compacted, mid greyish brown silty clay with frequent gravel stone inclusions and a maximum thickness of 0.12m

Fill 284 was a moderately compacted, mid greenish brown silty clay with frequent gravel stone and occasional charcoal inclusions and a maximum thickness of 0.20m

Fill 283 was a moderately compacted, dark brownish grey silty clay with occasional gravel stone inclusions and a maximum thickness of 0.16m

Fill 282 was a moderately compacted, mid greyish brown silty clayey sand up to 0.30m thick, with frequent gravel stone inclusions. Finds included four sherds of 14th century pottery, animal bone and occasional oyster and mussel shell. A copper-alloy pin with globular wound-wire head (SF 35), a complete nail (SF 7) and a shank fragment (SF 42) were also found.

Fill 281 was a moderately compacted, dark brownish grey silty clay up to 0.20m thick.. Three sherds of 16th to 18th century pottery and a small quantity of animal bone were retrieved.

Pit **280** was located in the additional excavation area to the west and continued beyond the northern and western edges. It appeared to be sub-circular in plan with steep sloping edges and a concave base (Figure 8, Section 39). It measured approximately 0.90m long, 0.76m wide and 0.60m deep and was filled by 278 and 279.

Fill 279 was a mid greyish brown silty clay with frequent pot and oyster shell and occasional animal bone and a maximum thickness of 0.36m.

Fill 278 was a moderately compact, dark greyish brown silty clay with occasional gravel stone inclusions and a maximum thickness of 0.34m. A single sherd of a 16th to 18th century redware jar was retrieved.

Pit **42** (equal to **159**) was located in the middle of the main excavation area and was not fully revealed in plan, but appeared to be sub-circular. The section of this pit revealed it had moderate sloping edges. The base was not reached during excavation. It measured approximately 1.05m wide and 0.48m deep and was filled by 44 and 43.

Fill 44, equal to fill 160 and 104) was a moderately loose, dark brown gravelly silt up to 0.78m thick, with occasional animal bone, pottery and pebble stones. Six sherds of 17th century pottery, and a complete nail (SF 10) were retrieved. Soil sample 7 contained a small amount of slag.

Fill 43 was a moderately loose, dark greyish brown silty gravel up to 0.50m thick, with occasional pebble stones. A single sherd of 17th century pottery, an iron sheet fragment (SF 19) and an incomplete nail (SF 13) were retrieved.

Pit **20**/**152**/**178** (Plates 5 & 6) was located at the northern end of the excavation area and investigated in three separate slots. This large pit was at least 5.26m long, 3.10m wide and 0.70m deep and continued beyond the western edge of the excavation area.

Pit **20** was not fully exposed in plan, however, seemed to be sub-circular with steep, almost vertical edges and an almost flat base (Figure 8, Section 5 and plate x). It measured approximately 0.34m wide and 0.67m deep. This pit was filled by 22, 15 and 27.

Fill 22 was a moderately compact, blackish brown silty clay up to 0.50m thick, with occasional small stones and charcoal inclusions. Soil sample 1 contained a small amount of slag.

Fill 15 was a moderately soft, brownish grey, silty clay with occasional small stone inclusions and a maximum depth of 0.36m. Two complete nails (SF 25) were recovered from this fill.

Fill 27 was a moderately soft, dark blackish grey silty clay with occasional small stone inclusions and charcoal flecks and a maximum depth of 0.14m.

Pit **178** (Plate 6) was not fully exposed in plan, however, it appeared to be sub-circular with moderate sloping edges. It measured at least 0.95m in length, 0.50m wide and 0.60m deep. This pit was filled by 179, 180, 69, 68, 67, and 66.

Fill 179 was a compact mid grey brown clayey silt up to 0.55m thick, with frequent stone inclusions.

Fill 180 was a compact mid-blue grey silty clay up to 0.05m thick with frequent stone inclusions.

Fill 69 was a compact, light grey brown silty clay with occasional stone inclusions and a maximum thickness of 0.30m. Two complete modern wire iron nails (SF 3) were recovered from this deposit.

Fill 68 was a compact light grey brown silty clay up to 0.20m thick, with occasional stone inclusions.

Fill 67 was a compact mid grey brown clayey silt up to 0.27m thick, with occasional stone inclusions.

Fill 66 was a compact mid grey brown clayey siltup to 0.23m thick, with occasional stone inclusions.

Pit **152** was not fully exposed in plan, however, seemed to be sub-circular with moderate sloping edges (Figure 8, Section 25). It measured at least 0.85m in length, 0.80m wide and 0.40m deep. This pit was filled by 151 and 150.

Fill 151 was a compact, mid grey brown clayey silt up to 0.40m thick, with frequent small stone inclusions. Three sherds of 17th century pottery were retrieved.

Fill 150 was a compact, mid grey brown clayey silt up to 0.25m thick, with occasional small stone inclusions. Soil sample 29 contained a small amount of slag.

Pit **222** was truncated by **222** *et al* and investigated in a sondage. It appeared to be sub-circular in plan with steep sloping edges and a flat base (Figure 8, Section 36/50). It measured approximately 0.95m in length, 0.90m wide and 0.98m deep. It was filled by 218, 219, 220 and 221.

Fill 221 was a firm, compact, dark greyish brown silty sand up to 0.31m thick, with occasional stone inclusions. A single sherd of 17th century pottery was recovered. Soil sample 43 contained a small amount of slag.

Fill 220 was a moderately compact, mid greyish brown silty sand up to 0.24m thick, with occasional rounded stone inclusions.

Fill 219 was a moderately compact, mid-dark brown sandy silt with occasional large stone inclusions and a maximum thickness of 0.40m.

Fill 218 was a moderately compact, mid brown sandy silt with occasional small rounded stone inclusions and a maximum thickness of 0.17m.

Pit **181** was located at the northern end of the main excavation area and was not fully revealed in plan, as it was truncated by **178** *et al,* although it appeared to be sub-circular. The section of this pit revealed it had steep sloping edges and a U shaped base. It measured approximately 0.80m wide and 0.35m deep and was filled by 182 and 183.

Fill 182 was a compacted mid grey brown clayey silt up to 0.27m thick, with frequent small stones.

Fill 183 was a compacted, dark blueish brown silty clay with frequent small stones and a maximum thickness of 0.35m. This fill had an organic, cessy smell.

Tanning Pits

4.4.3 Three of the pits attributed to this phase were interpreted as tanning pits (**14**, **245** and **105**) (Plate 7). The size of the excavation and density of the features meant that none were fully revealed in plan and that they were recorded in section. Two of the pits were lined, one with a wooden barrel (**14**), the other with clay (**105**). The linings may indicate an industrial function, such as tanning where harmful and unpleasant processes took place.

Pit **14** (equal to **24**) was located in the main excavation area. It was circular in plan with steep, almost vertical edges and a concave base. This pit measured approximately 0.92m in length, 0.92m wide and 0.85m deep. The pit appeared to be lined with timber or have the remains of a wooden barrel which had degraded to a dark brown striation along the feature's edge.

Pit **14** was filled by 26, 13 and 12.

(Primary) fill 26 was a mid-brown grey, clayey silt with occasional small stone inclusions.

Fill 13 was a compact mid brown grey clayey silt with occasional small stone inclusions. Four sherds of pottery dating to the mid 12th to mid 14th century were retrieved.

Upper fill 12, equal to fill 25, was a compact mid brown grey clayey silt with occasional small stone inclusions. Two sherds of pottery dating to the mid 12th to mid 14th century were retrieved which are thought to be residual. A modern shank fragment from a wire nail (SF 22) was also found.

Pit **245** (equal to pit **11**) (Plate 7) was located in the main excavation area. This feature was not fully revealed in plan and was recorded from sections only (Figure 8, Section 39 and plate 8). This pit measured at least 0.90m wide and 1.17m deep with steep sloping edges and a concave base (Figure 8, Section 38). Pit **245** was filled by 246, 247, 248 and 249.

Primary fill 249 was a moderately compact, very dark brown sandy silt up to 0.81m thick, with occasional small stone inclusions. Three sherds of residual mid 13th to the late 15th century pottery and an incomplete nail with lozenge-shaped head (SF 9) were found.

Fill 248 was a moderately loose, mid brownish orange, sandy silt up to 0.68m thick, with occasional stone inclusions. A sherd of 16th to 18th century red-ware pottery and an incomplete nail (SF 60) were found.

Fill 247 was a moderately compacted, dark brown sandy silt up to 0.68m thick, with occasional small stone inclusions. A single sherd of 19th century flowerpot was recovered. Soil samples 46 and 59 contained a small amount of slag.

Fill 246 was a moderately compact, mid-dark brown sandy silt with occasional small stones and a maximum thickness of 0.38m. Three sherds of mid 16th to late 17th century pottery date and a 14th – 15th century AD copper-alloy annular brooch (SF 5, Plate 9) were retrieved from this fill. There was a grooved projection on one side of the hoop, opposite a boss that originally held an inset of coloured glass or stone (Appendix B). A shank fragment (SF 38) was also found. Soil sample 58 contained a small amount of slag.

Pit **11** (equal to pit **245**) (Plate 7)was filled by 10; a moderately compacted dark grey brown clayey silt up to 0.60m thick with occasional small stone inclusions. Nine sherds of residual 13th century pottery and a shank fragment (SF 21) were retrieved.

Tanning Pit **105** was recorded in section only, but its stratigraphic position suggests it is post-medieval in date. It steep sloping edges and a flat base. It measured at least 1.50m wide and 0.47m deep and was not visible in plan at the time of excavation. It was filled by 112, 111 and 110.

Fill 112 was a compact clay lining with a maximum thickness of 0.18m and occasional chalk/rubble flecks.

Fill 111 was a moderately compact brownish grey, silty sand up to 0.20m thick with frequent animal bone.

Fill 110 was a compact orangey brown clayey sand up to 0.12m thick with occasional rubble flecks.

Postholes

4.4.4 A single posthole was attributed to this phase.

Posthole **148** was located at the northern end of the excavation area. It has tentatively been placed within this phase as it truncates pit **80**/**146** from Phase 2. It was circular in plan with vertical edges and a concave base, measuring 0.29m in diameter and 0.60m deep. It was filled by 149.

Fill 149 was a moderately loose, mid brownish black silty clay up to 0.60m thick, with occasional stone inclusions.

Layers

4.4.5 Layer 32 was dated to this phase by pottery and stratigraphy; forming a tertiary deposit within the quarry pits. It was a compacted sterile deposit, which may indicate silting occurring from disuse of the area, that was subsequently compacted following trampling.

Layer 32 was a very compacted mid grey brown sandy silt up to 0.17m thick, with small stone inclusions . A single sherd of 17th century redware was recovered from this layer.

4.5 Phase 4: Post 17th Century (Figure 7)

4.5.1 There was little evidence for activity on the site from the 17th century onward. A single pit and two 19th Century layers were recorded as well as a layer which contained hearth debris that may be late 17th Century in date.

Pit

Pit **53** was located at the northern end of the main excavation area. It was not fully exposed in plan, however, seemed to be sub-circular. The section revealed steep, nearly vertical edges and an almost flat base (Figure 8, Section 8). It measured approximately 0.50m wide and 0.56m deep. This pit was filled by 54 and 173.

Fill 54 was a moderately loose, mid grey brown sandy, silty clay with occasional small stones inclusions and a maximum thickness of 0.56m. Finds retrieved from this fill included three sherds of middle-late 19th century pottery. Also recovered were a fragment of glass, a complete nail and shank fragment (SF 30), all of which were 19th century/modern in date.

Fill 173 was a moderately loose mid brownish yellow rubble/mortar deposit with small stone inclusions and a maximum thickness of 0.14m. This fill may represent disposal of building demolition material.

Layers

Layer 109 (equal to 119, 333, 120) was located in the centre of the excavation area and had slumped into the top of pit **09**. It covered an area approximately 2.20m wide and upto 0.12m thick. This layer was very compact and contained two large pieces of slag (SF 2) which had fragments of brick within them.

Layer 38 was a moderately compact, dark blackish grey, stoney, sandy clay up to 0.17m thick, with occasional charcoal flecks. It contained a single sherd of refined late 19th to early 20th century, white earthenware pottery.

Layer 61 was a moderately compact, mid greyish brown clayey silt with occasional small stone inclusions and a maximum thickness of 0.05m. Ten sherds of 19th century pottery were recovered.

4.6 Undated

4.6.1 There were a number of undated features recorded across the site. These are summarised below by trench and excavation area.

Trench 1 (Figure 5)

4.6.2 This trench contained a number of small pits, a single ditch and, at the eastern end of the trench, several postholes which may represent evidence of a building.

Pit **10002** was sub-circular in plan with moderate sloping edges and a flat base measuring approximately 1.03m long, 0.70m wide and 0.16m deep. It was filled by 10041.

Fill 10041 was a moderately compact, orangey brown silty clay up to 0.16m thick, with occasional pebble stone inclusions.

Ditch **10003** was orientated north-east to south-west and continued beyond the northern and southern limits of Trench 1. It had gradual sloping edges and a rounded base measuring approximately 0.60m wide and 0.05m deep. It was filled by 10030.

Fill 10030 was a moderately compact, dark brown silty clay with occasional small stone inclusions and a maximum thickness of 0.05m.

Posthole **10004** was circular in plan with gradual sloping edges and a rounded base. It measured approximately 0.20m in diameter and 0.11m deep. It was filled by 10042.

Fill 10042 was a moderately compact, dark brownish grey silty clay up to 0.11m thick with occasional small stone inclusions.

Pit/posthole **10005** was sub-circular in plan with moderate sloping edges and a rounded base. It measured 0.53m long, 0.23m wide and 0.20m deep. It was filled by 10023.

Fill 10023 was a moderately compact, dark brown silty sand up to 0.20m thick with occasional stones.

Posthole **10006** was circular in plan with steep sloping edges and a flat base. It measured 0.35m in diameter and 0.27m deep. It was filled by 10043.

Fill 10043 was a moderately compact, dark brownish grey, silty clay up to 0.27m thick with occasional small stone inclusions.

Posthole **10026** was circular in plan with steep sloping edges and a flat base. It measured 0.30m in diameter and 0.20m deep. It was filled by 10027.

Fill 10027 was a moderately loose, dark orangey brown, silty sand with occasional small stone inclusions and a maximum thickness of 0.27m.

Posthole **10031** was circular in plan with steep sloping edges and a flat base. It measured 0.36m in diameter and 0.22m deep. It was filled by 10032.

Fill 10032 was a moderately compact, dark brownish grey, silty clay with occasional small stone inclusions and a maximum thickness of 0.22m.

Trench 2A (Figure 5)

Trench 2 was situated along the western edge of the main excavation area.

Ditch **10008** was filled by 10073.

Pit **10010** was filled by 10080 and 10081.

Posthole **10011** was circular in plan, measuring approximately 0.41m in diameter (Figure 8, Section 5). It was filled by 10034.

Posthole **10012** was circular in plan measuring approximately 0.37m in diameter and was filled by 10077.

Posthole **10013** was circular in plan, measuring approximately 0.65m in diameter and was filled by 10033.

Posthole **10062** was circular in plan, measuring approximately 0.40m in diameter.

Trench 3 (Figure 5)

Trench 3 was located at the southern end of the excavation area and its central section was investigated further during the excavation. Evidence of some very large features was recorded within this trench.

10016 was a large unexcavated feature of unidentified function or date, being found during evaluation phase and not uncovered again during excavation. No finds were recovered from its surface, although it was cut by pit **10017**.

Pit **10017** was circular in plan, located in Trench 3 and continuing beyond the southern edge. It measured approximately 1.60m wide (Figure 8, Section 13). It was filled by 10044, 10045, 10046, 10047, 10048, 10049, 10050 and 10051. Five sherds of 14th century pottery were retrieved from fill 10047.

Trench 2 (Main Excavation Area)

Pits

Pit **71** was recorded in section only. It had moderate sloping edges and a concave base. It was 0.69m wide and had a maximum depth of 0.16m. It was filled by 40: a moderately compact orange-brown clayey sand with occasional small stone inclusions.

Pit **98** was located in the middle part of the site and continued beyond the eastern edge of the area. It was sub-circular in plan with steep sloping edges and a concave base measuring approximately 0.70m wide and 0.30m deep. It was filled by 99: a moderately loose, dark blackish grey silty clay with occasional pea-grit inclusions.

Pit **153** was recorded in section only. It had moderate sloping edges and a concave base measuring approximately 0.40m wide and 0.20m deep. It was filled by 154: a moderately loose, dark brown silty sand with frequent gravel inclusions.

Pit **216** was recorded in section only, located towards the northern end of the excavation area. It had moderate sloping edges and a concave base (Figure 8, Section 36). the measurements were unclear as it was heavily truncated by another two undated pits, however it was 0.57m deep. It was filled by 215, 217 and 218: all slight variations of a moderately loose, dark brown silty sand with frequent gravel inclusions.

Pit **136** was recorded in section only and was heavily truncated. It measured approximately 0.30m wide and 0.30m deep. It was filled by 137 and 138. Both fills were mid-dark brown sandy silts with no obvious inclusions.

Pit **51** was located in the middle of the excavation area and not fully revealed in plan. It measured approximately 0.43m wide and 0.40m deep with steep sloping edges and a flat base. It was filled by 52: a moderately compact, reddish orange silty gravel mix with no obvious inclusions.

Postholes

Posthole **07** was circular in plan with moderate sloping edges and a rounded base, measuring approximately 0.32m in diameter and 0.20m deep. It was filled by 06: a moderately loose, brownish grey silty gravel with frequent gravel stone inclusions.

Posthole **45** was sub-circular in plan with gradual sloping edges and a rounded base, measuring approximately 0.42m in diameter and 0.17m deep. It was filled by 46: a moderately loose, reddish orange gravelly silt with frequent pebble stone inclusions.

Posthole **21** was circular in plan with steep sloping edges and a concave base, measuring approximately 0.39m in diameter and 0.42m deep (Figure 8, Section 5). It was filled by 23: a moderately compact, blackish brown silty clay with occasional charcoal flecks.

Posthole 4**7** was sub-circular in plan, located in the centre of the excavation area with steep sloping edges and a flat base, measuring approximately 0.55m in diameter and 0.60m deep. It was filled by 48: a moderately loose, reddish orange gravelly silt with frequent pebble stone inclusions.

Posthole 4**9** was sub-circular in plan, located in the centre of the excavation area with steep sloping edges and a flat base, measuring approximately 0.55m in diameter and 0.60m deep. It was filled by 50: a moderately loose, reddish orange gravelly silt with frequent pebble stone inclusions.

Posthole **141** was circular in plan, with vertical sloping edges and a flat base. Its full diameter was not established, as a result of truncation. It was filled by 144: a moderately compact, mid yellowish grey gravelly silt with frequent stone inclusions.

Posthole **330** was circular in plan, with vertical sloping edges and a flat base. It measured 0.10m in diameter and 0.15m deep. It was filled by 329: a moderately compact, mid yellowish grey gravelly silt with frequent stone inclusions.

Posthole **332** was circular in plan, with vertical sloping edges and a flat base. It measured 0.20m in diameter and 0.20m deep. It was filled by 331: a moderately compact, mid yellowish grey gravelly silt with frequent stone inclusions.

4.7 Finds Summary

Small Finds (Appendices B.1, B.4 & B.5))

4.7.1 A small assemblage of metal objects, including iron nails, were recovered few of which were closely dateable. The assemblage was notable for the absence of household and copper alloy items, which suggest an industrial function for the immediate environs. A silver long-cross penny of late 14th century date, an annular brooch of late 13th to mid 14th century and two small copper-alloy pins are notable exceptions.

4.7.2 Of particular interest was the clay pipe assemblage, which consisted of eight objects (six stems and two bowls) from five contexts, and the glass (eight fragments of window glass, and four fragments of bottle glass) from four contexts (see Appendix B.4 & B.5).

Metalworking waste (Appendix B.2)

4.7.3 Three large pieces of non-metalurgical slag with a total weight of 0.13kg were recorded by the evaluation. The excavation phase yielded a total of 1.3kg of slag associated with

metalworking activities from twenty-nine contexts. Two large pieces of non-metalurgical slag were also recovered.

Pottery Assemblage Appendix B.3)

4.7.4 A small medieval and post medieval assemblage totalling of 382 sherds and weighing 7.069kg was recovered by the evaluation and excavation. Much of the pottery was redeposited within post medieval features. It was domestic in character and divided into distinct phases. A small, residual early medieval component within the assemblage indicated domestic activity close to the site, possibly from the mid 11th century onward. A small number of 19th century sherds represent the third phase of activity on the site.

4.8 Environmental Summary

Faunal Assemblage (Appendix C.1)

4.8.1 A moderate assemblage of animal bone totalling 120 “countable” bones was recovered. A further 180 fragments (60% of the total sample) were not identifiable to species.

Environmental Assemblage (Appendix C.2)

4.8.2 A total of 73 samples were taken during both phases of the archaeological works. The charred plant remains were dominated by cereals. Germinated grains were also recovered, which does suggest brewing activities were taking place on the site. Evidence for burning was recorded in the form of Saw Sedge, which was a common source of fuel, and charcoal fragments that occurred in most of the samples. Several samples contain fishbone and/or fishscale suggesting that fish was a dietary constituent.

5 Discussion and Conclusions

5.1 Phase 1: 12th-14th Century (Figure 6)

5.1.1 The first activity recorded within the development area is represented by the digging of small to medium sized pits. Many of these features were inter-cutting and the relatively narrow date range of the pottery recovered from them indicates that they were dug, backfilled then another dug within quick succession.

5.1.2 A similar pattern has been identified at nearby sites such as West Street (Clarke, 2006) and the Permanex site (ECB1851), where numerous pits and quarries of predominantly medieval date extended across the development areas.

5.1.3 Although it is often quite difficult to ascertain the exact function of pits, their finds and environmental assemblages can provide some indication of any activities occurring nearby as the pits were filling up. The environmental samples recovered from at least five pits (**302**/**304**, **250**, **229**, **317** and **185**) contained small quantities of slag, which may indicate blacksmithing on or near the site (App. B.2).

5.1.4 There is also evidence for the butchery of animals for their hides and for bone working in the vicinity. Pit **317** contained 15 cattle horn cores within fill 270. The nature of the butchery, which left more of the parietal attached, is typical of waste deposits associated with crafts such as tanning or horn working (App. C.1). Further evidence for the processing of animals for secondary craft production came from Pit **239** (equal to **210**, **10015** and **184**). Located at the southern end of the site, this pit contained the only evidence of sheep and goat bones from the medieval period, most of which was

concentrated in pit fill 240. The animals were raised to maturity before slaughter in order to maximise wool and hide yield and most likely represent horn workers or tawyers waste (App. C.1).

5.1.5 Whilst the finds and environmental assemblages were relatively small and no predominant activity could be attributed to the site during this phase, it would appear that a craft industrial function is most likely within the locale. It is suggested that, like the nearby excavations at West Street and The Permanex site, this was an area of gravel extraction and that subsequently the open pits were utilised for the disposal of waste resulting from nearby activities. The intermittent silty fills identified in many of the pits may represent episodic lulls in activity. No pottery predating the 12th century was recovered from these features, which might be expected if earlier occupation had been present on the site.

5.1.6 No evidence of street-frontage buildings was found; if earlier medieval properties had been present here, any remains would have been removed by the quarrying. However Ditch **324**/**10007** may represent surviving evidence of a boundary relating to a burgage. This ditch runs parallel to East Street and is located approximately 15m to the south of the current road.

5.2 Phase 2: 14th-15th Century (Figure 6)

5.2.1 There is some evidence for a decline in activity at the site in the 14th to 15th century. Only three small pits, located at the northern and southern ends of the site, were attributed to this phase (Figure 6). The reason for this may be found within the history of St Ives. The once flourishing medieval market and fair declined during the 14th century and was abandoned in 1511; by this point the weekly markets had become more important to the town's economy than the annual fairs and as a result the town remained a market centre of local importance.

5.2.2 This would almost certainly have had an impact on the prosperity and development of the town and may have resulted in a reduced demand for raw materials for construction, such as the gravel extracted from this site in the preceding phase. If the waste in the pits was associated at all with the trading activity of the fair, although unlikely, this would also have been impacted upon following the fairs decline.

5.2.3 A residual sherd of 14th to 15th century pottery was retrieved from a large pit attributed to the next phase which may indicate more features from this period which were truncated away by later quarrying.

5.3 Phase 3: 16th-17th Century (Figure 7)

5.3.1 During this phase there is a marked increase in activity on the site, exemplified by the digging a series of large pits, averaging just over 2m in width. These may have been quarry pits but there is also evidence of industrial activity in the form of three tanning pits (**14**, **245** and **105**) in the northern part of the main excavation area (Plate 7). Two of these were lined, one with a wooden barrel (**14**), the other with clay (**105**). Finds retrieved from contemporary pits **181** and **233** (Plate 4) may also be associated with the tanning process including a knife blade (SF 59) and a number of small tacks which could have been used to secure the hides (App. B.1). The faunal assemblage from this period is also indicative of small scale tanning occurring close to the site. No evidence of butchery or skinning marks were identified on the bones, suggesting that the primary processing of the carcasses was being carried out elsewhere (App. C.1).

5.3.2 A group of postholes recorded within the central part of the excavation may be evidence of a post-medieval structure. Very little dating evidence was recovered from these features however, which precludes any further interpretations as to the function of such a structure. No evidence for charred remains was within the features, suggesting they do not relate to a structure destroyed during the 17th century fired in the town.

5.4 Phase 4: Post-17th Century (Figure 7)

5.4.1 Other than a single 19th century pit and a layer, there is a noticeable absence of any archaeological features after the 17th century. This may be attributed to the fires which swept though the town in the late 17th century. A great part of the town was destroyed by two fires, the first in 1680 and a second nine years later which decimated the town, resulting in the loss of many earlier houses.

5.4.2 Possible evidence of this conflagration was recovered from the site in the form of two large fragments of slag containing non-metallurgical materials recovered from context 109 (SF 2). One of the pieces even contains fragments of two hand-made, un-frogged bricks. When a building is burnt down any lead in roof flashings, plumbing or window frames react with silicate materials such as bricks and tiles to fuse them into a mass of vitrified debris (Appendix B.2).

5.4.3 The early edition Ordnance Survey maps (Figure 4) clearly show the construction of buildings immediately adjacent to the site in this period.

5.5 Significance

5.5.1 Investigations at East Street have revealed a good example of a small-scale urban industrial site surviving in the centre of this historic town. This site has provided an opportunity to identify certain trades and industries which were operating in the town over a period of 600 years and also the chance to link it to events and periods of growth and decline in the town.

5.5.2 The site fits in well with other investigations nearby and adds to the understanding of St Ives from the 12th century onwards.

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Appendix A. Context Inventory

Evaluation Contexts (10001-10085)

Context	Same as	Cut	Trench	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
10001		0	Eval 1	cut	pit	use			circular	
10002		0	Eval 1	cut	pit	use			sub-rectangular	
10003		0	Eval 1	cut	ditch	use			linear	ne-sw
10004		0	Eval 1	cut	post hole	use			circular	
10005		0	Eval 1	cut	pit	use			circular	
10006		0	Eval 1	cut	pit	use			circular	
10007		0	Eval 2	cut	ditch					
10008		0	Eval 2	cut	ditch					
10010		0	Eval 2	cut	pit					
10011		0	Eval 2	cut	post hole					
10012		0	Eval 2	cut	post hole					
10013		0	Eval 2	cut	pit					
10014		0	Eval 2	cut	pit	quarry			sub-circular	
10015		0	Eval 3	cut	pit					
10016		0	Eval 3	cut	pit					
10017		0	Eval 3	cut	pit					
10018		0	Eval	fill	pit	disuse	orangey brown	rare pebbles		
10019		10001	Eval 1	fill	pit	disuse	dark brown			

Context	Same as	Cut	Trench	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
10022		0	Eval	layer	natural		dark orangey brown	silty clay		
10023		0	Eval	fill	pit	disuse	dark brown	silty sand		
10025		0	Eval	layer	buried soil	occupation layer	light brown	occ modern tile		
10026		0	Eval 1	cut	pit				circular	
10027		10026	Eval 1	fill	pit	disuse	darkish orangey brown	rare small stones		
10028		0	Eval 1	layer			light brown	rare pebbles		
10029		0	Eval 1	layer			greyish brown	occ pebble		
10030		10003	Eval 1	fill	ditch	use	dark brown	occ small stones		
10031		0	Eval 1	cut	pit	use			circular	
10032		0	Eval	fill	pit	disuse				
10033		10013	Eval 2	fill	pit	disuse				
10034		10011	Eval 2							
10039		0	Eval	layer						
10040		0	Eval	layer						
10041		10002	Eval 1	fill	pit	disuse	orangey brown	silty clay		
10042		0	Eval	fill	post hole	disuse	dark brownish grey	occ gravel		
10043		10006	Eval 1	fill	pit	disuse	dark brownish grey	rare small stones		
10044		10017	Eval 3	fill	pit					
10045		10017	Eval 3	fill	pit					
10046	10044	10017	Eval 3	fill	pit					
10047		10017	Eval 3	fill	pit					

Context	Same as	Cut	Trench	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
10048		10017	Eval 3	fill	pit					
10049		10017	Eval 3							
10050		10017	Eval 3	fill	pit					
10051		10017	Eval 3	fill	pit					
10052		10015	Eval 3	fill	pit					
10053		10015	Eval 3	fill	pit					
10054		10014	Eval 2	fill	pit		pale yellowish grey	freq gravel		
10055		10014	Eval 2	fill	pit		dark brownish grey	occ gravel		
10056		10014	Eval 2	fill	pit		mid greyish brown	freq gravel		
10057		10014	Eval 2	fill	pit					
10062		0	Eval	cut	pit					
10068			Eval 2	cut	pit					
10069		10068	Eval 2	fill						
10073		10008	Eval	fill	ditch					
10074		10007	Eval	fill						
10076		10007	Eval	fill	pit					
10077		10012	Eval	fill	post hole					
10080		10010	Eval	fill	pit					
10081		10010	Eval	fill	pit					

Excavation Contexts (6 - 337)

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
6		7	fill	post hole	Disuse	brownish grey	freq gravel		
7		7	cut	post hole	Use			circular	
8		9	fill	pit	Waste disposal	Dark Brown fill	Pottery, bone, occasional pebbles		
9		9	cut	pit	Waste disposal			circular	
10		11	fill	pit	disuse	dark grey brown with orange mottling	frequent small and fine stone inclusions		
11	245	0	cut	pit	use				
12		14	fill	pit	disuse	mid grey brown	occasional small stone inclusions		
13		14	fill	pit	disuse	mid brown grey	infrequent fine stone inclusions		
14		0	cut	pit	barrel storage/tanning			Circular	
15		20	fill	pit	alluvial silting in disused tanning pit	brownish grey	silt (7%) and sub angular stones (0.01m, 3%)		
18		0	cut	pit	use			sub-circular	
19		18	fill	pit	disuse	dark brown grey	infrequent pea grit inclusions		
20		0	cut	pit	possible tanning pit			sub-circular	possible S-E
21		0	cut	post hole	structural			circular	
22		20	fill	pit	slump/backfill in possible tanning pit	black	angular stones (0.01-0.02m, 10%) and 3% 0.01m charcoal inclusions		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
23		21	fill	post hole	disuse/slump/backfill	black	3% 0.01m charcoal inclusions		
24		0	cut	pit	use/barrel storage for tanning			circular	
25	12	0	fill	pit	disuse	mid grey brown	occasional small stone inclusions		
26		14	fill	pit	disuse	mid brown grey	infrequent small stone inclusions		
27		20	fill	pit	alluvial silting during an industrial period on site, in a possible tanning pit	dark blackish grey	5%, 0.03m sub angular stone inclusions		
28		0	layer	rubble layer	early layer of demolition	mottled blackish grey	7% charcoal inclusions		
29		0	layer	natural	natural	orangey white			
30		0	layer	natural	natural	brownish red			
31		0	layer	rubble layer	upper mixed disuse layer	mottled mid blackish grey	2% charcoal fleck inclusions		
32		0	layer	rubble layer	mixed rubble, recent disuse	mid grey			
33		0	layer	mixed backfill	mixed backfill above drainage pipes	dark orangeish red			
34		0	layer	pipe	backfill of drainage pipe stained by fire	black with greyish mottling in places	7%, 0.02m charcoal inclusions. 15% drainage pipe, possibly dating to 1930's		
35		0	layer	pipe	drainage pipe fill with evidence of fire material having been washed through the pipe	dark black	8% rounded 0.01m stone inclusions. 25% drainage pipe, possibly dating to 1930's		
37		0	layer	demolition rubble	possible demolition rubble used for structural standing	bright greyish grey	2% charcoal inclusions, 10% lime mortar, 20% brick, 10% tile		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
38		0	layer	rubble layer	layer of demolition and rubble, possibly reused for structural support	dark blackish grey	7% charcoal fleck inclusions		
40		71	fill	pit	silting/disuse	mottled brownish orange and grey yellow	2% 0.01m sub angular stone inclusions		
41		0	layer		silting backfill	orangey grey			
42		42	cut	pit	Waste disposal			circular	
43		42	fill	pit	Waste disposal	Dark Greyish brown	Frequent pebbles, occasional gravel inclusions		
44		42	fill	pit	waste disposal	Dark brown	Pot, bone and infrequent pebbles		
45		45	cut	post hole	structural			circular	
46		45	fill	post hole	structural	Reddish orange	infrequent pebbles, gravel flecks		
47		0	cut	post hole	structural			circular	
48		47	fill	post hole	structural	Reddish orange	random sized infrequent pebbles, gravel flecks		
49		49	cut	post hole	structural			circular	
50		49	fill	post hole	structural	Reddish orange	random sized infrequent pebbles and gravel flecks		
51		51	cut	pit				circular	
52		51	fill	pit	structural	Reddish orange	Random sized infrequent pebbles and gravel flecks		
53		53	cut	pit	construction			circular	
54		53	fill	pit	construction	Mid grey brown	Medium sized stones and small stone inclusions (rubble)		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
55		0	cut	post hole	structural			sub-circular	
56		55	fill	post hole	disuse	dark brownish orange	frequent pea grit gravel		
57	201	0	cut					linear	
58		57	fill			dark brownish black	some gravel inclusions		
59		0	layer	natural		mid/light orangey brown	very frequent whitish pea grit inclusions		
60		18	fill	pit	weathering	mid orangey brown	very frequent pea grit		
61		0	layer	structure	disuse	mid grey brown	infrequent fine stone inclusions		
62		0	masonry	structure	platform/ industry	Light blue grey	top course appear to have been fired, 2nd course probably just dried		
63		0	masonry	structure	structural mortar	Light yellowy white	frequent small limestone inclusions		
64		0	layer	structure	make up layer	Mid grey brown	fine gravel		
65		0	layer	structure	Make up layer	Mid browny yellow	frequent small and fine stone inclusions		
66		178	fill	pit	use	Mid grey brown	occasional small stone inclusions		
67		178	fill	pit	use	mid grey brown	infrequent small stone inclusions		
68	15	178	fill	pit	use	light grey brown with slight orange mottling	occasional small stone inclusions		
69	15	178	fill	pit	use	Light grey brown with slight orange mottling	infrequent small stone inclusions		
71		0	cut	pit	storage			sub	

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
								ovular	
72		72	cut	pit	use			Oval	NNE - SSW
73		72	fill	pit	use	Dark grey brown with slight reddish mottling	occasional small stone inclusions		
74		0	cut	pit	use			linear	broadly NNE - SSW
75		74	fill	pit	use	Dark black grey	frequent small stone inclusions		
76		0	layer	structure	mortar	mid yellow white	frequent small limestone inclusions		
77		0	masonry	structure	roughly worked structural stones	light yellowy white			
78		0	layer	natural		light yellow white			
79		0	layer	natural		dark brown red			
80		0	cut	pit	use			linear	NNE - SSW
81		80	fill	pit	use	Dark grey brown	frequent small stone inclusions		
82			cut	pit	construction			square	
83		82	fill	structure	masonry mortar	Light white yellow	gravel		
84		0	cut	pit				circular	E - W
85		84	fill	pit	disuse	Black grey	very frequent gravel		
86		84	fill	pit	disuse	dark grey black	very frequent gravel		
87		84	fill	pit	disuse	mid/dark grey	frequent gravel		
88		0							
98		0	cut	pit				linear?	
99		98	fill	pit	disuse	dark blackish grey	infrequent pea grit inclusions		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
100		0	layer			reddish brown	frequent pebble and pea grit inclusions		
101		0	layer			mid yellow	pea grit layer		
102		0	layer			mid orangey reddish brown	frequent pebble and pea grit inclusions		
103		0	layer			mid brownish grey	infrequent pea grit inclusions		
104	44	42	fill	pit	waste disposal	Brownish orange	infrequent fine size pebbles and gravel		
105		0	cut	pit	clay lined pit for tanning/animal disposal			not visible	
106		0	fill	layer	disuse	brownish grey	rubble flecks, charcoal		
107		0	fill	layer	disuse	brownish grey	very infrequent pebbles		
108		0	fill	layer	disuse	reddish brown	random sized pebbles and gravel		
109		0	fill	layer	disuse	yellowish green	bricks, slag?		
110		105	fill	clay lined capping	capping of animal pit	orangey brown	rubble flecks		
111		105	fill	pit	animal waste from tanning	brownish grey	animal bone		
112		105	fill	pit	clay lining of animal death pit	orangey brown	occasional possible chalk/rubble flecks		
114		0	fill	layer	disuse	light yellowish grey	brick, mortar		
115		0	fill	layer	disuse	greyish brown	brick, random sized pebbles/gravel		
116		0	fill	robber trench	disuse/structural	dark black grey	frequent fine stone inclusions		
117		0	cut	trench	construction			square	

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
118		117	masonry	structure	foundations				
119	333 120	0	masonry	layer of slag	waste from burning	yellowish green slag			
120	333 119	0	masonry	Brick	rubble/brick disposal	reddish brown	brick		
121	109	0	masonry	layer of brick	waste disposal of bricks	brownish yellow bricks and random mortar			
128		0	cut	pit				circular	north - south
129		128	fill	pit	disuse	dark grey black	frequent gravel		
130		128	fill	pit	disuse	dark grey	very frequent gravel		
131		128	fill	pit	disuse	black	frequent gravel		
132		128	fill	pit	disuse	mid brown	very frequent gravel		
133		128	fill	pit	disuse	mid brown black	very frequent gravel		
134		0	cut	ditch				linear	north - south
135	57	134	fill	ditch	disuse	dark grey black	infrequent gravel		
136		0	cut	pit					
137		136	fill	pit	disuse	mid/dark brown	infrequent gravel		
138		136	fill	pit	disuse	mid red brown	infrequent gravel		
139		0	cut	pit	cess pit			circular	
140		139	fill	pit	disuse	light grey blue green			
141		0	cut	post hole	silting/disuse			circular	
142		0	cut						

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
144		141	fill	post hole	disuse	mid yellowish grey	5% 0.01-0,02m charcoal inclusions		
146		0	cut	post hole	structural			sub-circular	east-west
147		146	fill	post hole	post packing	mid brownish grey	frequent pebble and pea grit inclusions		
148		0	cut	post hole	structural			circular	east-west
149		148	fill	post hole	structural	mid brownish black	infrequent pebble and pea grit inclusions		
150		152	fill	pit		mid grey brown	occasional small stone inclusions		
151		152	fill	pit	use	mid grey brown	frequent small stone inclusions		
152		0	cut	pit	use			unexcavated	
153		0	cut	pit				sub-circular	east - west
154	130	153	fill	pit	disuse	mid/dark brown	frequent gravel		
155		0	cut	ditch				linear?	east - west
156		155	fill	ditch	disuse	dark grey black	infrequent gravel		
157		155	fill	ditch	disuse	black green	infrequent gravel		
158		0	fill	ditch	disuse	mid brown grey	very frequent gravel		
159	42	0	cut	pit	rubbish			circular	east - west
160		159	fill	pit	disuse	black	frequent gravel		
161		0	layer			dark grey green	frequent gravel		
162		0	layer			mid/light blue			

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
163		0	cut	ditch	boundary			linear	east - west
164		163	fill	ditch	boundary	light greyish brown	infrequent small stones		
165		163	fill	ditch	boundary	orangey brown	frequent pebbles and occasional pea grit		
166		163	fill	ditch	boundary	dark brownish grey	pot and infrequent pebbles		
167		0	cut	pit	use			circular	
168		167	fill	pit	disuse	light greyish brown	pot and infrequent pebbles		
169		167	fill	pit	use	dark brownish grey	pot, bone and occasional small size gravel		
170		167	fill	pit	disuse	orangey brown	occasional small size pebbles		
171		167	fill	pit	disuse	orangey brown	frequent pebbles and pea grit		
172		167	fill	pit		greyish brown	pea gravel and occasional pebbles		
173		53	fill	structure	mortar	mid brown yellow	frequent small stone inclusions		
174		152	fill	pit	use	mid grey brown	occasional small stone inclusions		
175		152	fill	pit	use	mid reddish brown	gravel		
176		152	fill	pit	use	dark blue brown	occasional fine stone inclusions		
178		0	cut	pit	use			circular	
179	122	178	fill	pit	use	mid grey brown	frequent fine stone inclusions		
180		178	fill	pit	use	mid blue grey	infrequent fine stone inclusions		
181		0	cut	pit	use			circular	
182		181	fill	pit	use	mid grey brown	frequent small stone inclusions		
183		181	fill	pit	use	dark blue brown	frequent fine stone inclusions		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
184		0	cut	pit	refuse			circular	east - west
185		0	cut	pit	refuse			sub-circular	
186		0							
187		0	cut	pit	post hole			circular	north - south
188		185	fill	pit	silting disuse/ probable backfill of possible rubbish pit	darkish black grey	8% silt inclusions		
189		185	fill	pit	backfill of possible rubbish pit	mid grey	10% silt inclusions		
190	267	186	fill	ditch/pit	backfill	mid grey	8% sub-rounded 0.01-0.02m gravel		
191		0							
192		186	fill	pit	levelling/ slip silting deposit in bone pit	mid yellowish orange	gravel 0.03 - 0.01m sub angular		
193		186	fill	pit	backfill	dark orangey grey			
194		0							
197		184	fill	pit	disuse	black	infrequent gravel		
198		0	layer	pit	disuse	mid/dark grey	frequent gravel		
199		0	cut	pit	post hole			circular	east - west
200		199	fill	pit	disuse	black grey	gravel		
201		0	cut	pit	use			circular	
202	43	201	fill	pit	disuse	dark brownish grey	very frequent gravel inclusions		
203	44	201	fill	pit	disuse	dark brownish grey	frequent gravel inclusions		
204		201	fill	pit	disuse	light brownish grey	moderate pebble and pea grit inclusions		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
205		0	cut	pit	use			circular	
206		205	fill	pit	use	brownish grey	infrequent pebbles and gravel		
207		0	cut	pit	use			circular	
208		207	fill	pit	disuse	dark greyish brown	infrequent pebbles and gravel		
209	161	0	layer			greenish grey	infrequent small sized gravel flecks		
210		0	cut	pit	refuse				
211		210	fill	pit	disuse				
212	198 241	0	layer	pit	disuse	dark grey	frequent gravel		
213		0	layer	pit	disuse	dark grey	frequent gravel		
214		216	fill	pit	disuse	dark brown	large (20-40mm) sub angular and sub rounded stones (20-30%)		
215		216	fill	pit	disuse	dark red brown	sub angular and angular gravel (10-15mm, 20%)		
216		0	cut	pit				presumed circular - sub circular	
217		216	fill	pit		very dark brown	infrequent large (25-50mm) sub angular and angular stones (10%)		
218		222	fill	pit	disuse	mid brown	small rounded and sub rounded gravel (5-10mm, 10-20%)		
219		222	fill	pit	disuse	mid-dark brown	small rounded gravel (2-8mm,		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
							10-20%) and large angular/sub angular stones (20-40mm, 5-10%)		
220		222	fill	pit	disuse	mid brown grey with yellow flecking	rounded and sub rounded small/medium gravel (10-20mm, 20-35%)		
221		222	fill	pit	disuse	very dark brown grey, almost black	very infrequent rounded and sub rounded stones (10-25mm, 5%)		
222	20	0	cut	pit				sub-rectangular	SE - NW
223		224	fill	ditch		mid dark brown	large sub angular and sub rounded stones (20-40mm, 10-15%) Charcoal fragments 5-10%		
224		0	cut	ditch				Poss. linear	SE-NW
225		229	fill	pit		very dark brown	very occasional angular and sub angular stones (10-40mm, 5-10%)		
226		229	fill	pit		mid-dark brown	angular and sub angular gravel (10-20mm, 30-40%)		
227		229	fill	pit		mid/dark brown grey	occasional angular/sub angular small gravel (5-10mm, 5-10%)		
228		229	fill	pit		mid/dark brown orange	small angular gravel (5-10mm, 40%)		
229		0	cut	pit				Poss. circular	unknown

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
230		231	fill	pit		mid/dark brown red	moderate small sub angular gravel (2-10mm, 20-25%)		
231		0	cut	pit				presumed oval	oval, possibly SE-NW
232		0	fill	robber trench	structural/disuse	dark black grey	frequent fine stone inclusions		
233		0	cut	pit	tank			circular	
234		233	fill	pit	tank/disuse	mid brownish grey	frequent flecks of mortar		
235		233	fill	pit	possible tank/use	mid greyish brown	frequent mortar flecks and fragments, occasional bone		
236		233	fill	pit	tank	very dark brownish grey	frequent burnt charcoal and bone, common mortar flecks, frequent oyster shell and flecks, frequent small gravel		
237		0	fill	pit	tank	dark brownish grey	common large bone fragments, occasional oyster and mortar flecks, frequent gravel		
238		0	layer	Baulk	disuse	mid brownish grey	frequent gravel inclusions, common burnt charcoal and charcoal flecks, common oyster shell, brick and mortar		
239		0	cut	pit	refuse				
240		239	fill	pit	disuse				
241	198 212	0	layer			dark grey black	frequent gravel		
242		0	layer			mid brown black	frequent gravel		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
243		233	fill	pit	tank/use	pale grey brown	frequent gravel inclusions		
244		233	fill	pit	tank/use	greyish black	some oyster shell fragments		
245		0	cut	pit	possible tanning pit			circular	
246		245	fill	pit	disuse	mid/dark brown	moderate occurrence of sub rounded and sub angular stones (10-40mm, 10-20%)		
247		245	fill	pit	disuse	dark brown	very occasional sub angular and angular stones (20-40mm, 5-10%)		
248		245	fill	pit	disuse	mid brown orange	moderate occurrence of sub rounded and rounded stones (10-30mm, 20%)		
249		245	fill	pit	disuse	very dark brown black	very infrequent stone inclusions, sub rounded 10-15mm, 5%		
250		0	cut	pit	use			circular	
251		250	fill	pit	disuse	mid greyish brown	pot, bone, coin, Fe, knife/chisel		
252		233	fill	pit	tank/use	greyish black	frequent charcoal inclusions		
253	275	233	fill	pit	use	mid greyish brown	common mortar, oyster shell and charcoal flecks		
256		0							
257		186	fill	pit	backfill in waste pit	dark orange brown	4% pea grit inclusions		
258		186	fill	pit	backfill in waste pit	mid brownish grey	2% charcoal flecks		
259		186	fill	pit	backfill in waste pit	light grey			
260		186	fill	pit	backfill in waste pit	mid-darkish grey	4% 0.02m sub angular stones		
261	266	186	fill	pit	backfill in waste pit	light grey	2% 0,02m sub angular stones		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
262		186	fill	pit	backfill in waste pit	mid grey	4% 0.01m sub rounded stone inclusions		
263		186	fill	pit	backfill in waste pit	mid grey	3% 0.07m sub rounded stone inclusions		
264		186	fill	pit	backfill in waste pit	black	8% charcoal fleck inclusions		
265		186	fill	pit	backfill in waste pit	mid yellowish grey			
266	261	186	fill	pit	backfill in waste pit	mid grey	5% 0.02m sub rounded stone inclusions		
267	190	186	fill	pit	backfill in waste pit	dark grey	3% oyster shell inclusions, 4% pea grit		
268		186	fill	pit	backfill in waste pit	light grey			
270		317	fill	pit	animal waste disposal	dark greyish brown	animal bone, pot		
271		250	fill	pit	possible cess	dark brownish grey	pot, tile?		
272		187	fill	pit	disuse	dark grey black	infrequent gravel		
273		186	fill	pit	backfill in waste pit	mid-dark grey	4% 0.03m sub rounded stone inclusions		
274		0							
275		307	fill	pit	tank/use	mid brownish blueish grey	pale grey mortar like substance		
277		0	layer	make up layer	disuse	dark greyish brown	occasional oyster shell, occasional gravel and rare charcoal		
278		280	fill	pit	disuse	dark greyish brown	occasional gravel and bone, rare pot		
279		280	fill	pit	disuse	mid greyish brown	frequent pot, moderate oyster shell and occasional bone		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
280		0	cut	pit	use			circular	
281		286	fill	pit	disuse	dark brownish grey	occasional pot and bone		
282		286	fill	pit	disused rubbish pit	mid greyish brown	moderate pot, occasional bone, oyster shell and mussel shell		
283		286	fill	pit	disuse	dark greyish brown	occasional gravel		
284		286	fill	pit	disuse	mid greenish brown	occasional gravel and charcoal		
285		286	fill	pit	disuse	mid greyish brown	frequent gravel		
286		0	cut	pit	use			circular	
287		250	layer	rubble backfill	disuse	grey	brick, gravel and modern pipes		
288		0	cut	pit	refuse			sub-circular	east-west
289		288	fill	pit	disuse	mid black brown	gravel		
290		288	fill	pit	disuse	dark brown	frequent gravel		
291		288	fill	pit	disuse	light/mid brown grey	frequent gravel		
292		288	fill	pit	disuse	mid brown	frequent gravel		
293		288	fill	pit	disuse	dark brown	frequent gravel		
294		288	fill	pit	disuse	mid brown	frequent gravel		
295		288	fill	pit	disuse	dark brown	frequent gravel		
296		288	fill	pit	disuse	dark brown	gravel		
297		288	fill	pit	disuse	dark brown black	frequent gravel		
298		288	fill	pit	disuse	dark brown	gravel		
299		302	fill	pit	disuse	light greenish brown	moderate pot and bone, occasional oyster shell		

Context	Same as	Cut	Category	Feature Type	Function	Colour	Coarse component	Shape in Plan	Orientation
300		302	fill	pit	disuse	dark greyish brown			
301		302	fill	pit	disuse/dump	mid greenish brown	occasional gravel		
302	306	0	cut	pit	disuse			circular	
303		304	fill	pit	disuse	mid reddish brown	frequent pot, moderate oyster shell, occasional bone and gravel		
304		0	cut	pit	use			circular	
305		306	fill	pit	disuse		rare horn core and pot		
306	302	0	cut	pit	u			circular	
307					disuse			circular	
308		288	fill	pit	disuse	mid/dark brown	frequent gravel		
310		233	fill	pit	use	mid brownish grey	frequent gravel and mortar i		
317		0	cut	pit	use			circular	
319		324	fill	ditch	disuse	mid reddish brown	frequent gravel		
320		324	fill	ditch	disuse				
321		324	fill	ditch	disuse	dark greyish brown	occasional pot bone and gravel		
322		324	fill	ditch	disuse	dark greyish brown	occasional gravel		
323		324	fill	ditch	disuse	light yellowish brown	frequent gravel		
324		0	cut	ditch	use			linear	East-West
329		330	fill	post hole	structural	as 215	as 215		
330		0	cut	post hole	structural			circular	
331		332	fill	post hole	structural	as 215	as 215		
332		0	cut	post hole	structural			circular	

Nb: Gaps between consecutive numbers are the result of context numbers voided in post ex.

Appendix B. Finds Reports

B.1 The Metalwork

By Nina Crummy, BA, FSA

Introduction and methodology

B.1.1 The assemblage is small and consists in the main of iron nails or other iron objects. None of these can be closely dated, as is also true of most of the other metal items. The exceptions among the latter are a silver long-cross penny, probably of late 14th century date, from pit **250** and a copper-alloy annular brooch from tanning pit **245** that is paralleled by a precisely similar example from a late 13th to mid 14th century context in London (SF 5, Plate 9). More elaborate forms of this type had a pair of clasped hands or an animal head in place of the lipped projection (Egan & Pritchard 1991, 255, fig. 164, 1335).

B.1.2 Two small copper-alloy pins with wound-wire heads, chiefly used to fasten clothing in the medieval and post-medieval periods but latterly also used in sewing, have the head shaped to a globular form (SFs 33 and 35). This is one of the two common forms of these pins (Caple 1983, 273-4; Crummy 1988, 7-8, Type 2; Egan & Pritchard 1991, 299; Ottaway & Rogers 2002, 2915-16; Rees *et al.* 2008, 209-10). Both have short fine shanks, which is generally, although not exclusively, an indication of a post-medieval date. Two pin shank fragments are similarly fine. The four derive from pit/tank **233** (2 pins), pit/tank **237**, and pit **286**.

B.1.3 The annular brooch and the pins are the only items of copper-alloy from the site, and the basic character of the latter matches that of the only other dress accessories that were recovered, some iron hobnails (SFs 23 and 49) from pits **239** and **302**. The absence of copper-alloy items other than these few, mainly simple, dress accessories, and in particular the lack of household equipment, highlights the largely industrial nature of the site. This is reinforced by the silver penny and the brooch, which, even though the latter is not of the highest quality, stand out as anomalies within the assemblage. The fills of the various pits seem therefore to have been largely derived from the immediate area, rather than imported to the site as a result of midden disposal, house clearance or demolition activity elsewhere in the town, which would have resulted in a greater number and wider range of metal artefacts being deposited.

B.1.4 A single lead drip and one lead sheet offcut (SFs 12 and 29) are probably by-products of building work in the area, such as guttering, roofing, or fitting leaded lights, rather than from the manufacture of lead or tin-lead objects, such as buckles, badges or weights. A small fragment of an early post-medieval window pane may have a similar origin (SF 6).

B.1.5 Other than nails, the ironwork consists of scrap fragments of straps, sheet and other fittings, with a knife blade of undistinguished form from pit/tank **233** being the only item that might relate to the tanning activity on site (SF 59). The nails derive from a variety of contexts, but most are from pits, including the tanning pits, and there is a marked concentration from the various fill layers within pit/tank **233** (Table 1). Several nails are of modern wire form; they derive from pits **14**, **53** and **178** and from layer 61. Other distinctive pieces are a nail with a lozenge-shaped head from tanning pit **245**, and a number of small tacks with narrow shanks together with some shank fragments that are probably from similar tacks. The tacks and probable tack shanks derive from pit/tank

233 (3 examples), pit/tank **237** (at least one example), pit **181** (one example) and pit **318** (one example). This total of six examples is a minimum as other tack shank fragments may be present but are too short for the identification to be certain. Although the tacks are few in number, it is possible that they relate to the tanning process, perhaps deriving from a particular piece of equipment or used to tack down the hides for cleaning.

Catalogue

SF 3. (251). Fill of pit **250**. Silver long-cross penny, legend illegible, mint mark cross pattée; probably Edward III (post-treaty coinage, 1369-77) or Richard II (1377-99). Diameter 18 mm.

SF 5. (246). Fill of tanning pit **245**. Copper-alloy annular brooch with constriction for the pin. There is a grooved projection on one side of the hoop, opposite a boss that originally held an inset of coloured glass or stone. Length 30 mm, diameter 20 mm.

SF 33. (237). Fill of pit/tank **237**. Copper-alloy pin with globular wound-wire head. Length 31 mm.

SF 35. (282). Fill of pit **286**. Copper-alloy pin with globular wound-wire head. Length 27 mm.

SF 34. (252). Fill of pit/tank **233**. Copper-alloy pin shank fragment. Length 11 mm.

SF 36. (274). Fill of pit/tank **233**. Copper-alloy pin shank fragment. Length 13 mm.

SF 12. (168). Fill of pit **167**. Lead drip. Length 17 mm.

SF 29. (61). Layer. Curved triangular offcut from sheet lead. 55 by 12 mm.

SF 6. (309). Fill of pit/tank **233**. Edge fragment from a window-pane of translucent self-coloured greenish glass. 44 by 30 mm; length of edge 37 mm.

SF 49. (240). Fill of pit **239**. Incomplete iron hobnail. Length 15 mm.

SF 23. (300). Fill of pit **302**. Two incomplete iron hobnails and a narrow shank fragment, probably from a tack rather than a hobnail. Lengths 8, 6 and 10 mm.

SF 59. (236). Fill of pit/tank **233**. Iron knife blade fragment, bent. The back and edge are straight, the edge rises towards the tip. Length 53 mm, maximum width 23 mm.

SF 1. (19). Fill of pit **18**. Iron ring-staple, lacking one of the projecting arms. Diameter 31 mm, length 47 mm. Modern.

SF 4. (251). Fill of pit **250**. Iron bolt. Length 94 mm.

SF 26. (237). Fill of pit/tank **237**. Iron bar fragment. Length 97 mm, width 17 mm.

SF 62. (251). Fill of pit **250**. Iron strap with attachment nail *in situ*. Length 77 mm, width 23 mm.

SF 28. (61). Layer. Curved iron strip fragment. Length 97 mm, width 17 mm.

SF 19. (43). Fill of pit **42**. Iron sheet fragment. 15 by 9 mm.

SF 37. (252). Fill of pit/tank **233**. Iron sheet fragment. 24 by 18 mm.

SF 31. (237). Fill of pit/tank **237**. Iron sheet fragment. 32 by 19 mm.

SF 17. (183). Fill of pit **181**. Amorphous iron lump, probably slag or burnt debris. 19 by 14 by 11 mm.

SF no	Context no	Context description	Description	Length (mm)
21	10	fill of pit **11**	shank fragment	8
22	12	fill of barrel-lined pit **14** (storage/tanning)	shank fragment from wire nail; modern	13
25	15	fill of tanning pit **20**	2 complete nails	53 x 2

13	43	fill of pit **42**	incomplete nail	18
10	44	fill of pit **42**	complete nail	33
30	54	fill of pit **53**	complete wire nail; shank fragment. modern	75; 55
39	131	fill of pit **128**	2 crossed shank fragments	24, 21
11	147	fill of post hole **146**	nail head	-
3	69	fill of pit **178**	two complete wire nails with small round head; modern	58, 83
20	183	fill of pit **181**	shank fragment from a tack	10
16	189	fill of pit **185**	incomplete nail	17
40	211	fill of pit **210**	shank fragment	20
41	211	fill of pit **210**	shank fragment	21
53	236	fill of pit/tank **233**	incomplete nail; shank fragment	33; 17
57	236	fill of pit/tank **233**	3 incomplete nails; 3 shank fragments	38, 24, 23; 23, 17, 16
54	244	fill of pit/tank **233**	complete nail and incomplete nail; shank fragment	48, 18; 31
58	244	fill of pit/tank **233**	4 incomplete nails; shank fragment	43, 37, 28, 27; 35
45	252	fill of pit/tank **233**	shank fragment	12
51	252	fill of pit/tank **233**	3 complete and 1 incomplete nails; 7 shank fragments	45 x 2, 43, 35; 37 x 2, 31, 30, 29, 19 x 2
61	252	fill of pit/tank **233**	3 complete nails; 6 shank fragments	36 (twisted), 34, 20 (clenched); 34, 31 x 2, 27, 25, 24
14	253	fill of pit/tank **233**	incomplete nail	12
15	253	fill of pit/tank **233**	incomplete nail; shank fragment	17; 28
50	253	fill of pit/tank **233**	3 tacks; shank fragment	27, 26, 21 (clenched); 26
44	274	fill of pit/tank **233**	incomplete nail	20
32	237	fill of pit/tank **237**	incomplete nail	38
52	237	fill of pit/tank **237**	incomplete nail; 5 shank fragments, at least one from a tack	16; 48, 31, 30, 27, 15
56	237	fill of pit/tank **237**	shank fragment	46
48	240	fill of pit **239**	incomplete nail	37;
38	246	fill of tanning pit **245**	shank fragment	17
60	248	fill of tanning pit **245**	incomplete nail	27
9	249	fill of tanning pit **245**	incomplete nail with lozenge-shaped head	17
7	282	fill of pit **286**	complete nail	64

42	282	fill of pit **286**	shank fragment	21
18	301	fill of pit **302**	incomplete nail	22
24	275	fill of pit **307**	incomplete nail	50
46	318	fill of pit **318**	shank fragment	19
47	318	fill of pit **318**	incomplete nail; shank fragment from a tack	13; 15
43	321	fill of ditch **324**	incomplete nail	17
2	59	layer	incomplete nail	43
27	61	layer	complete wire nail with small round head; modern	108
55	198	Layer	complete nail	37

Table 1: Iron nails.

Nb: Nails have a large round or sub-rectangular head unless stated otherwise. Nails described as complete may have the very tip missing. Short nails with narrow shanks are described as tacks.

B.2 The Metalwork Residues

By Rachel Fosberry, HNC, AEA

Introduction and Methodology

B.2.1 Evaluation of this site in 2006 yielded three large piece of non-metallurgical slag and a total weight of 0.13kg of slag. The excavation phase in 2007 yielded a total of twenty-nine contexts that were found to contain a total of 1.3kg of slag associated with metalworking activities. Two large pieces of non-metallurgical slag were also recovered.

B.2.2 The assemblage from East Street, St. Ives consisted of a small amount of metalworking waste from medieval blacksmithing and includes non-metallurgical waste from later, post-medieval contexts. The metalworking waste is comprised of small fragments of vitreous waste products known as slag, plano-convex bottoms (PCBs) derived from smithing hearths and microscopic fragments of slag known as hammerscale. The majority of the slag was recovered from the bulk samples with only a few fragments recovered by hand excavation. The non-metalurgical material consists of substantial lumps of glassy material and fired clay concretions. This material resembles the vitrified waste products (slags) formed from industrial processes such as metalworking and is thus included in this report.

B.2.3 The material was examined, weighed and classified according to morphological criterial. Hammerscale was recovered from bulk samples by running a magnet through the washed residues followed by examination under a binocular microscope at x8 magnification.

Results

B.2.4 The non-metalurgical slags consisted of brick and tile fused into a cream-green glassy conglomerate.

Phase	Context Number	Total weight (Kg)
STI EST 06	65	11.3
STI EST 07	109	15

Table 2: non-metalurgical slag

B.2.5 The majority of the metalworking-slag fragments recovered were extremely small and were identified as smithing slags although their small size also makes identification tentative. Two of the larger slag fragments were identified as PCBs (Contexts 198 and 211) and a third fragment (59), recovered during the evaluation in 2006, was also tentatively identified as such.

Context Number	Weight (Kg)
59	0.13

Table 3: Weight of slag from STI EST 06

Context Number	Weight (Kg)	Sample Number
22	0.001	1
44	0.011	7
10	0.003	13
147	0.05	20

Context Number	Weight (Kg)	Sample Number
116	0.001	22
189	0.011	28
150	0.003	29
183	0.002	30
198	0.361	33
206	0.003	35
211	0.29	36
212	0.033	37
240	0.003	40
225	0.006	41
221	0.001	43
236	0.033	50
247	0.005	46
252	0.003	51
253	0.154	52
252	0.003	54
235	0.017	56
275	0.001	57
246	0.004	58
247	0.003	59
271	0.022	63
270	0.142	65
300	0.002	71
28	0.072	
194	0.034	32

Table 4: Weight of slag from STI EST 07

B.2.6 The most conclusive evidence for metalworking came from the microscopic hammerscale. Flake hammerscale and hammerslag were present in nearly all of the samples and spheroidal hammerscale occurred in most of the samples in small but significant quantities.

Sample No.	Context No.	Cut No.	Flake Hammerscale	Spheroidal hammerscale	hammerslag
1	22	20	++	0	++
3	8	9	+	1	++
5	43	42	+	6	++
6	52	51	+	0	+
7	44	42	++	1	++
8	85	84	0	0	++
9	99	98	++	1	++
10	131	128	+	1	++
11	135	134	+	2	++
12	140	139	++	2	+++
13	10	11	++	3	++
14	12	14	+	1	++
15	13	14	+	0	+
19	63	72	++	2	++
20	147	146	+	5	++
21	73	72	+	2	++
22	116	72	++	3	+++

Sample No.	Context No.	Cut No.	Flake Hammerscale	Spheroidal hammerscale	hammerslag
23	144	141	+	3	+
25	166	163	+	0	++
26	168	167	+	1	++
27	169	167	+	0	++
28	189	185	++	8	+++
29	150	152	+	2	++
30	183	181	+	1	++
31	69	178	0	0	0
32	197	184	+	2	++
33	198		0	0	0
34	209		0	0	+
35	206	205	+	2	++
36	211	210	++	8	++
37	212		++	9	++
38	237	233	++	1	++
39	237	233	++	1	+
40	240	239	++	2	++
41	225	229	++	8	++
42	226	229	++	4	++
43	221	222	++	0	++
45	236	233	+	2	++
46	247	245	+	1	++
47	249	245	+	2	++
48	244	233	+	1	++
49	244	233	+	0	++
50	236	233	++	20	++
51	252	233	+	1	++
52	253	233	+	8	++
53	252	233	+	1	++
54	252	233	+	1	+
57	275	233	+	3	++
58	246	245	+	2	++
59	247	245	++	5	++
60	248	245	+	1	+
63	271	250	+	4	+++
64	318		+	1	+
65	270	317	+++	11	+++
66	251	250	+	1	+
67	321	324	+	0	++
69	282	286	+	0	+
70	299	302	+	1	++
71	300	302	++	3	++
72	301	302	++	1	++
73	303	304	+	1	+

Table 5: Hammerscale from STI EST 07

Discussion

B.2.7 The total amount of slag recovered from this site is extremely small. The majority of slags weighed less that 3g with the only significant evidence coming from the PCBs and the hammerscale. This assemblage suggests that small-scale forging was taking place on or in the close vicinity to the site although none of the material was derived from

features that could be directly attributable to such activity. The smithing slags recovered probably derived from secondary smithing, which is the term used to describe the manufacture, recycling or repair of iron objects (Cowgill undated). This process characteristically produces slags such as plano-convex hearth bottoms (PCBs) which form in the hottest part of the hearth just below the tuyere (blowing hole). The majority of slags are randomly shaped and develop within the fuel filing the hearth. The high temperatures involved in the smithing process often cause the hearth lining to vitrify and break off, often coalescing to a piece of slag. The hammerscale recovered from the sample residues is significant as it is indicative of the smithing process and has been recovered in both its forms as flake hammerscale which is produced when iron is forged and as spheroidal hammerscale which results from the primary smithing of iron bloom and also during the welding process (Starley, D 1995). Small fragments of slag were also recovered from the residues and have been described as 'hammerslag'. The smithing process would have required the hearths to be periodically cleaned out and wasted slags would have been dumped in nearby pits and ditches. The majority of smithing slags recovered are therefore likely to be in secondary deposits. (McDonnel & Starley, 2002). The hammerscale is more likely to have remained close to the smithing site although it can be transferred to other deposits through sweepings and on shoes etc.There is no evidence of iron smelting being performed on site or the necessary charcoal burning for fuel. It is therefore assumed that the iron was imported onto the site from elsewhere.

B.2.8 The non-metalurgical materials were probably formed during the destruction of a building through fire. When a building is burnt down any lead in roof flashings, plumbing or window frames react with silicate materials such as bricks and tiles to fuse them into a mass of vitrified debris (E.H. Guidelines, 2001).

Conclusions and Recommendations

B.2.9 This small assemblage of metalworking debris recovered from this site can be described as a typical background spread of slag associated with many urban sites were a small amount of simple forging has occurred. It is not considered that full analysis would add significantly to this interpretation and further work is not recommended.

B.3 **The Post-Roman Pottery**

By Carole Fletcher HND BA AIFA

Introduction and Methodology

B.3.1 Evaluation and subsequent excavation at Bowd Engineering Work Site, East Street, St Ives, Cambridgeshire produced a small post-Roman pottery assemblage of 384 sherds, weighing 7.309kg. The evaluation assemblage suggested medieval deposits across the site, excavation revealed that much the medieval pottery recovered was redeposited within post medieval features.

B.3.2 There were medieval features on the site, although these have mostly been disturbed and truncated by later activity. Some of the features that can be securely dated to the medieval period have been identified as tanning pits for the processing of hides. No industrial vessels were identified within the assemblage, pottery is domestic in nature probably relating to occupation of the burgage plots along Broadway.

B.3.3 Ceramic fabric abbreviations used in the following text are:

BCHIN	Bone China
BICR	Bichrome
BOND	Bourne D
BOUA	Bourn
BRILL	Brill-Boarstall Ware
CASG	Cambridge Sgrafito
COLNT	Colne Type Ware
CREA	Cream Ware
DEST	Developed Stamford Ware
DNEOT	Developed St Neots
EAR	East Anglian Red Ware
FREC	Frechen
GRIM	Grimston Ware
HEDI	Sible Heddingham
HUNEMW	Huntingdonshire Early Medieval Ware
HUNFSW	Huntingdonshire Fen Sandy Ware
LEAR	Late East Anglian Red Wares
LLYST	Late Lyvenden Stanion Type Ware
LMEL	Late Medieval Ely Ware
LYST	Lyvenden-Stanion ware
MEL/MELT	Medieval Ely/Medieval Ely Type Ware
MODR	Modern Red Ware
NEOT	St Neots
NOTTS	Nottinghamshire Stoneware
PEARL	Pearlware
PMBL	Post-Medieval Black Glazed Ware
PMR	Post-Medieval Red Ware
RFREW	Refined Red Earthenware
RFWE	Refined White Earthenware
RFWE	Refined White Earthenware
SHW	Shelly Ware
STSL	Staffordshire Type Slip ware
SW	Sandy Ware
TGW	Tin Glazed Earthenware
THET	Thetford Ware
TRAN	Transitional Red Ware
UGBB	Unglazed Blackborough End

UNK	Unknown
(TP)	Transfer Printed

Methodology

B.3.4 The basic guidance in *Management of Archaeological Projects* (English Heritage 1991) has been adhered to along with the MPRG documents (MPRG 1998 and 2001). *Guidance for the processing and publication of medieval pottery from excavations* (Blake and Davey, 1983) acts as a standard.

B.3.5 The pottery and archive are curated by OA East until formal deposition.

B.3.6 Dating was carried out using OA East's in-house system based on that previously used at the Museum of London. Fabric classification has been carried out for all previously described types. All sherds have been counted, classified and weighed. All the pottery has been dated on a context-by-context basis.

B.3.7 The pottery and archive are curated by OA East until formal deposition.

Quantification

B.3.8 All the pottery has been dated and fully quantified on a context by context basis into an Access 2000 database using OA East in-house system based on that used at the Museum of London. Fabric classification has been carried out for all previously described types.

B.3.9 Unstratified pottery and that from un-phased contexts, has been excluded from the analysis that follows. For the purpose of this assessment the stratified assemblage is 380 sherds weighing 7.291kg.

The Assemblage

The Assemblage by Phase

B.3.10 A pottery assemblage can be divided into groups that together represent broad time brackets or periods. The pottery recovered from each site phase is outlined below, together with the relationship between these and their ceramic dating. The site was divided into four phases: Phase 1, 2, 3 and 4.

B.3.11 An overview and comparison of the main phases will be undertaken followed by a brief description of the assemblage of specific groups of features within these phases. In total 80 contexts produced post Roman pottery however unphased contexts including unstratified material, have been excluded from further analysis and provide only dating information for the context. Analysis will consider the 77 phased contexts which produced 380 sherds weighing 7.291kg. Pottery was recovered from small range of features including ditches, pits, and quarry pits.

	No. Sherds	Weight (kg)	Average Sherd Weight (g)	% of assemblage by weight kg
Phase 1	234	3.460	14.8	47.5
Phase 2	3	0.034	11.3	0.5
Phase 3	120	3.601	30.0	49.4
Phase 4	23	0.196	8.5	2.7

Table 6: Pottery assemblage by stratigraphic phase

B.3.12 Phase 1 (medieval): produced of 234 sherds (3.460kg) from 31 contexts, including evaluation contexts and relates to tanning pits, pits and two NW-SE ditches.

B.3.13 Phase 2: a single context assigned to this phase produced pottery three sherds weighing 0.034kg. and dating to the 14th century. This phase is too small for analysis to be undertaken.

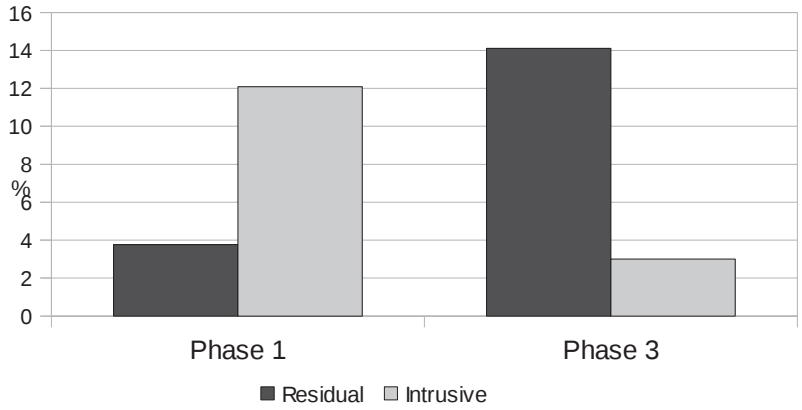
B.3.14 Phase 3 (post-medieval): produced 120 sherds (3.601kg) from 36 contexts and relates to the assemblage from large pits and possible quarry pits and although this material contains medieval pottery the dominant fabric type is PMR and the phase dates to the early to mid 16th century. This dating is supported by two sherds from a TGW drinking vessel dated 1625-1650 (Alasdair Brooks pers. comm.).The activity on the site appears to pre dates the fire of 1689 which devastated much of St Ives.

B.3.15 Phase 4 (19th century) consists of nine contexts, several of which contain only residual medieval sherds. The assemblage is too small for statistical analysis to be valid and the 18th and 19th century material has been identified by Dr Alasdair Brooks. Pottery recovered is moderately abraded and represents a small scatter of mid to late 18th and 19th century fabrics and the vessels present are mainly hollow wares.

B.3.16 Context 61 produced the largest (10 sherds 0.080kg) Phase 4 assemblage and the pottery present includes BCHIN, CREA, PEARL, a fragment of plant pot and the spout from a 19th century RFREW teapot. Pit **53** produced only three sherds of pottery a single sherd from a RFWE (TP) saucer and fragments from CREA and RFWE hollow wares. The remaining contexts produced only single sherds of 19th century pottery or residual material.

Residuality and Intrusiveness

B.3.17 There is some overlap of pottery production dates between Phases 1 and 3, for example BOND is known to be in production from the 16th century to early part of the 17th century and transitional vessels and early examples of PMR are present in the 16th century. However if we except that Phase 3 is early to mid 17th century there is little or no overlap between the stratigraphic phases.



Graph 1: Residuality and intrusiveness as percentage of phase assemblage by weight (kg)

B.3.18 Levels of residuality and intrusiveness are illustrated in Graph 1. Phase 1 has a low level of residual sherds (0.130kg) consisting of sherds of HUNEMW, NEOT and THET. The intrusive material is moderate at 12%, this is mainly single sherds of late medieval pottery within an otherwise medieval context. However several contexts contain multiple

late medieval sherds and in the case of 291 only later medieval pottery. Pits 186, 210 and 288 may be later than the date range assigned to Phase 1.

B.3.19 Phase 3 has a moderate level of residual material including a sherd of prehistoric pottery and medieval fabrics which form the majority of the residual assemblage A small number of 19th century fabrics and plant pot sherds form the small intrusive element in the assemblage

Provenance, Fabrics and Form

Provenance

B.3.20 Basic statistics relating to the source area for the assemblage are illustrated in Table 7 The information detailing the specific statistics for the supply of pottery have been simplified to provide a clear picture of the generalised supply of pottery.

B.3.21 The provenance of the assemblage does show change across the two phases, it can clearly be seen that in Phase 1 that local production from Cambridgeshire, namely Ely and to a lesser degree Huntingdon is very important, comprising approximately 47% of the assemblage. Norfolk potteries with almost 34% of the assemblage are the next largest suppliers. This relatively large part of the assemblage is almost exclusively UGBB.

B.3.22 Material indicated as Cambridgeshire-Huntingdonshire-Bedfordshire Border is a mixture of NEOT and DNEOT and the Cambridgeshire/Northamptonshire sherds are SHW which may be from the Peterborough area or Northamptonshire as the same clay outcrops in both locations (Alan Vince pers. Comm.). There are also a small numbers of medieval sherds from Northamptonshire, Buckinghamshire, Lincolnshire and Essex. Some of the East Anglian red ware fabrics are intrusive in this phase.

Provenance	Phase 1	Phase 3
Buckinghamshire	1.30	
Cambridgeshire	47.06	85.43
Cambridgeshire/Huntingdonshire-Bedfordshire Border	1.68	0.72
Cambridgeshire/Northamptonshire	2.86	
East Anglia	5.17	7.50
Essex	0.55	
Horticultural Ceramics		2.03
Import		0.72
19th Century Factory Production		0.08
Lincolnshire	2.57	
London		2.17
Midlands		0.03
Norfolk	33.67	0.56
Northamptonshire	4.28	0.28
Unknown	0.87	0.28

Table 7: Provenance by phase, showing percentage by phase by weight (kg)

B.3.23 Phase 3 shows an increase in the supply of local pottery and while this does include a number of residual MEL and HUNFSW sherds. the main fabric is now PMR and a range of vessels are being supplied to the St Ives market. It is likely that the majority of these vessels are from Ely and its hinterland.

B.3.24 Work undertaken by the Cambridge Archaeology Unit (CAU) at Broad Street Ely has identified 16th-century kilns producing Glazed Red Earthenwares, including Broad Street Glazed Red Earthenware Bichrome, previously identified as West Norfolk Bichrome (Hall 2006 56p). This identification of Ely as the production centre for BICR is important in ascertaining the supply of post-medieval pottery in the Eastern region.

B.3.25 Phase 3 also shows an increase in the East Anglian fabrics (EAR), these are produced in a number of locations around East Anglia including Essex, where much of the EAR is likely to have originated with some of the sherds being similar to Colchester ware. However as this type of pottery is produced thought the Anglain region no specific production centre has been identified.

B.3.26 Wares from other regions show small to moderate losses, by comparison the fall in wares from Norfolk is dramatic. However this fall is disproportionately large due to the large weight and number of sherds of UGBB from the single vessel referred to previously.

B.3.27 In this phase we also see the first appearance of imports with arrival of continental stoneware (FREC) and English fabrics from the beginnings of factory production with the appearance of STSL and TGW.

Fabrics

B.3.28 A broad range of fabrics is present (Graph 2) in both phases. Within Phase 1 medieval MEL/MELT is one of the major fabrics (33%) reflecting the dominance of Cambridgeshire wares within the assemblage. UGBB is the second major fabric making up almost 30% of the assemblage. Although this percentage relates almost entirely to 60 sherds (0.946kg) from a single vessel in pit 303. The remaining fabrics present are all only small components of the assemblage, with HUNFSW the largest at a little over 6%. There are a small number of medieval glazed sherds from BRILL GRIM and MEL jugs, a single sherd of DEST and glazed MEL bowl.

B.3.29 The glazed EAR sherds are similar to Colchester type wares and several unglazed sherds are similar to Harlow Ware. As previously mentioned these form part of a wider medieval Anglian tradition. Few kiln sites have been located and it is difficult to distinguish wares from different production centres visually. The EAR fabrics are hard fired and far finer than the standard medieval Ely products and likely to have been a highly desirable commodity.

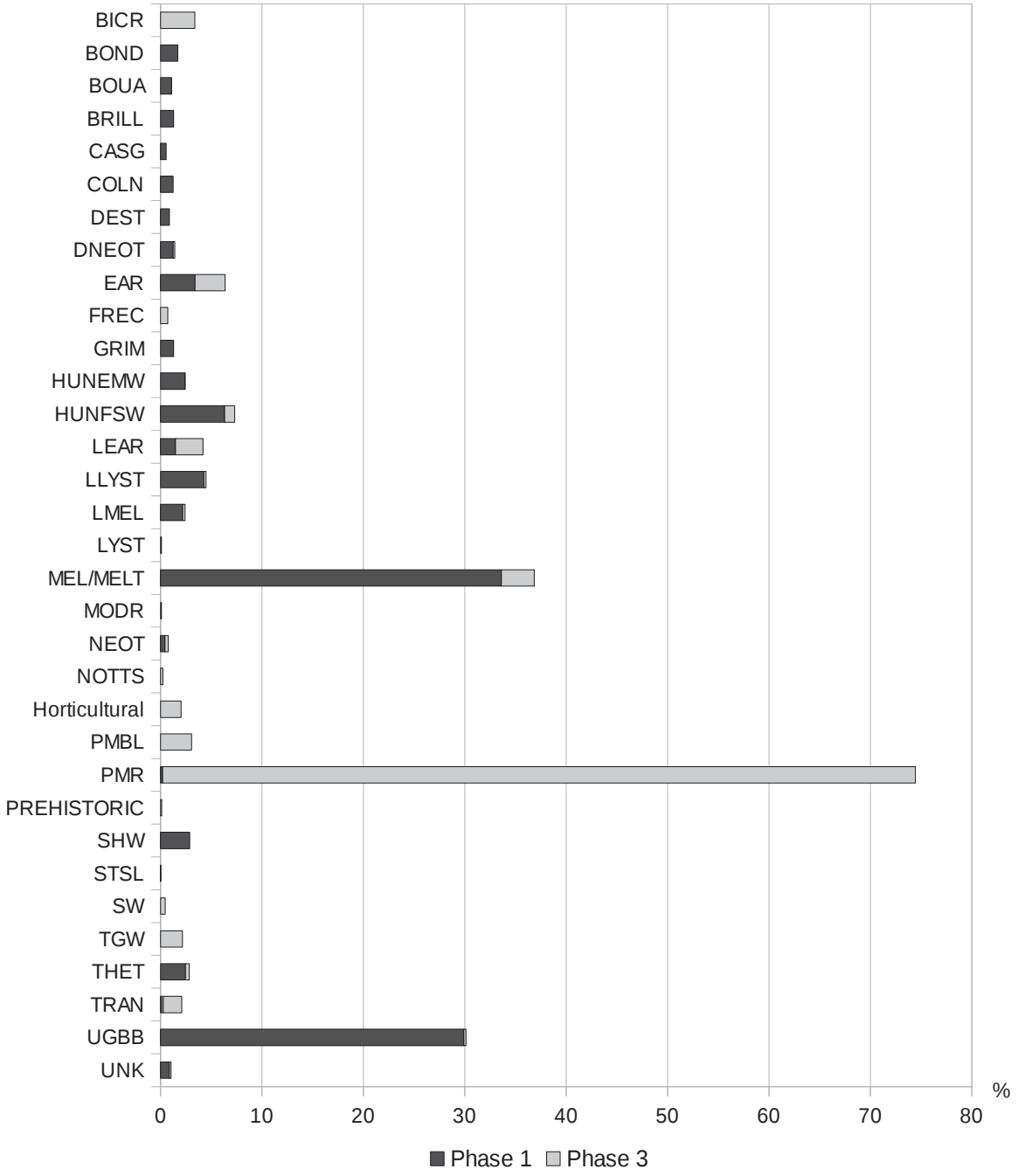
B.3.30 There are some residual sherds in Phase 1 including THET and HUNEMW, there are also a number of intrusive fabrics including LEAR, LMEL and a single jug sherd of CASG. This late medieval highly decorated redware fabric is named for where it was recognised but which has never been associated with a kiln in Cambridge or Cambridgeshire. Cotter in his work on the Colchester assemblage suggests that it is in Cambridgeshire that “some of the most competent English medieval sgraffito was undoubtedly made.” (Cotter 2000, p168).The forms and fabric of CASG suggest it to be an Essex redware, a view supported by Hall (David Hall pers comm). Cotter goes on to say that the majority of the sgraffito present in the Colchester assemblage are products of the Colchester-type industry. (Cotter 2000, p168). The presence of a number of later

medieval fabrics suggest some small level of later medieval or early post-medieval activity on the site.

B.3.31 In Phase 3 unsurprisingly the post medieval fabrics dominate, with PMR the most common. As previously discussed it is likely that the bulk of this material originates from redware kilns in and around Ely. It is probable that some material may have come from other East Anglian redware kilns including those in Essex. However Essex ceramics are otherwise a very small element of this assemblage.

B.3.32 Alongside the Glazed Red earthenware (PMR) the first imported wares appear in the assemblage in the form of a number of sherds of FREC a mid 16th-late 17th-century ware. In addition are two sherds from a TGW drinking vessel decorated with sponge-manganese dated to the first half of the 17th century (pit 152).

Graph 2: Fabric Type by Phase, showing percentage of phase assemblage by weigh(kg)

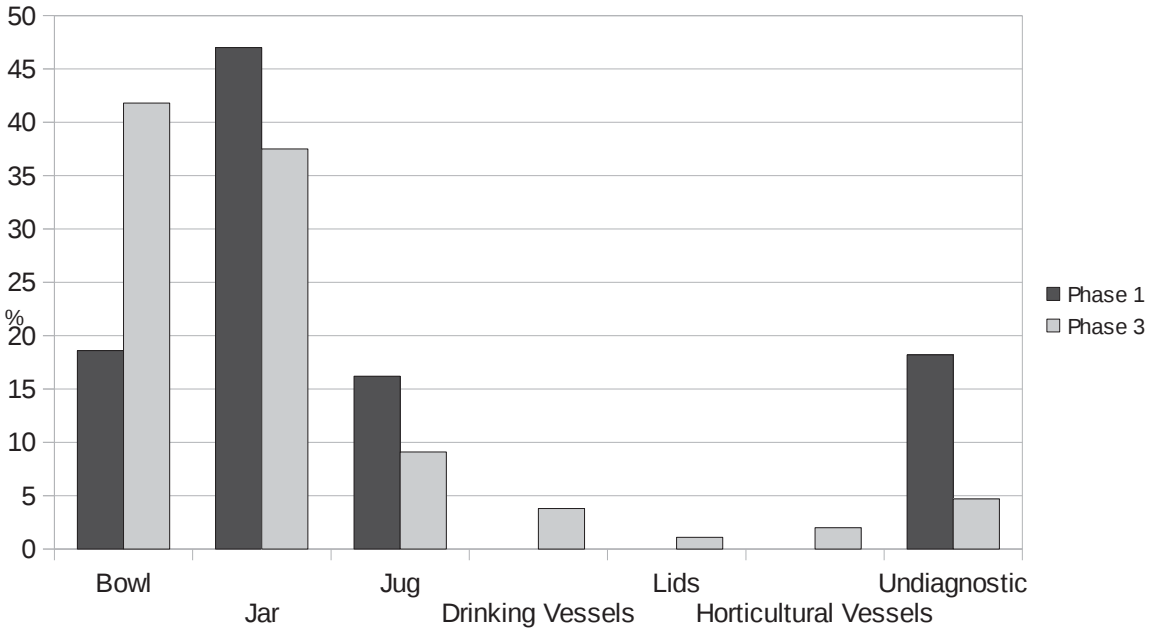


Forms

B.3.33 Graph 4 show the percentages by weight of each phase assemblage that can be attributed to broad vessel functional types and includes those sherds for which no form or function identification could be made to give a more complete picture of the assemblage. The graph Illustrates that the dominant vessel type changes between the medieval and post medieval period.

B.3.34 In Phase 1 jars makes up nearly half of the assemblage with jugs and bowls present in similar numbers. Jars are present in HUNFSW, MEL and SHW fabrics alongside some

residual HUNEMW vessels and a single THET vessel. The dominant jar fabric is UGBB manly the result of a single large jar in pit 303



Graph 4: Vessel Type by Phase, showing percentage of phase assemblage by weight (kg)

B.3.35 Bowls form the second group of vessels and are mainly MEL although a single EAR vessel is also represented and intrusive BOND and LLYST bowl sherds were also recovered. The jug assemblage contains both glazed and unglazed vessels, with BOUA, BRILL, DEST, EAR, GRIM, and MEL providing glazed examples and DNEOT, HUNFSW and SHW the unglazed sherds. Late medieval fabrics are also present LMEL, LLYST and a single sherd of CASG the origins of which were discussed previously.

B.3.36 Phase 3 sees a change in the assemblage bowls are now the predominant form in PMR, PMBL and BICR. Jars are well represented in this phase with few residual sherds the majority are PMR. The number of jugs by comparison has decreases to less than 10% of the functional assemblage. Within the jug assemblage are the sherds of imported FREC, a continental stoneware providing drinking jugs and common across the country almost all 17th-century domestic assemblages will contain at least one sherd of FREC.

B.3.37 This phase also contains a single example of a PMR lid (238), a similar unglazed lid was recovered from the Broad Street excavations (Cessford, C. et al 2066, p81, p83, fig. 59.1) alongside sggars associated with 17th century pottery industry of Ely.

The Assemblage in relation to excavated features

Tanning pits located to the north of the site, Phase 1 and 3

B.3.38 The tanning pits, with the exception of 304, produced small assemblages, the pottery they produced is briefly described in the following section.

B.3.39 Pit **14** produced 0.070kg of pottery containing MELT, SHW and residual HUNEMW jar sherds.

B.3.40 Pit **250** produced only 0.043kg of pottery including a single sherd from a MEL bowl.

B.3.41 Pit **304** produced the largest assemblage by feature (87 sherds, 1.466kg) including residual HUNEMW alongside MEL and SHW jar sherds and 60 unabraded sherds from a large sooted UGBB jar. Sherds from this vessel are also present in context 299 (**302**) although no cross-fits were established. In addition sherds from a MEL bowl were also recovered and a cross-fit established between rim sherds **304** and **302**. This alongside the presence of UGBB sherds from the same vessel, indicates these pits are contemporary and the material deposited in them originates from the same domestic source.

Pit 302, Phase 1 and pit 233, Phase 3

B.3.42 Pit 302 (27 sherds, 0.541kg) appears to be contemporary with pit 304 as discussed previously. Producing a similar range of fabrics including the cross-fit rim sherd from a MEL Bowl, UGBB jar sherds and jug sherds from both MEL and GRIM vessels.

B.3.43 Pit 233 contained the second largest assemblage (by weight) from an excavated feature, 27 sherds, 1.195kg from six contexts. Comprised mainly of PMR vessels including bowls and jars including pipkins. Two PMBL drinking vessels were also identified. BICR bowl sherds were also present as were a small number of residual HUNEMW and HUNFSW sherds.

Conclusions

B.3.44 A small amount of early medieval pottery is present in the assemblage, although no settlement activity of this date was present and it therefore forms a residual element within the medieval assemblage.

B.3.45 In the medieval and post medieval periods the assemblage originates mainly from the kilns in and around Ely, which lies approximately 27km to the north-east of St Ives. The pottery from Ely would almost certainly have reached St Ives on board boats via the river Great Ouse. The presence of HUNFSW in the medieval period indicates some trade, although at a low level, with the potters producing the local Huntingdonshire coarse wares. St Ives lies approximately 9km to the east of Huntingdon, which might suggest a more prominent role for the Huntingdonshire fabrics than is seen in the assemblage, however trade appears to have an eastern bias along the Great Ouse. Other wares including glazed sherds from Norfolk, Essex, and Buckinghamshire were reaching the site in small numbers. Those from Norfolk may also have reached St Ives from Kings Lyn via the Great Ouse.

B.3.46 During the 17th century the Ely kilns were supplying bowls of various sizes, jars and some jugs to the townsfolk of St Ives, these wares are most likely still transported to St Ives via the Great Ouse. Pottery from the wider region is also reaching the town, including pottery from the Midlands and stone wares from the continent. Some of this would also have arrive via boats using the Ouse and some by land as the road network improved.

B.3.47 The medieval assemblage although domestic in nature, relates to the disposal of rubbish in or around the medieval tanning pits and not to domestic occupation of the site. The 17th century ceramics present appear to relate to the infilling of pits and quarries and again the domestic occupation they represent is located away from the area of excavation.

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
8	HUNFSW	Jar	1	0.004	13th to mid 14th century
	MEL	Bowl	1	0.044	
	MELT	Jug	1	0.005	
	NEOT	Bowl	1	0.01	
10	BRILL	Jug	1	0.003	13th Century
	DEST	Jug	1	0.03	
	EAR	Jug	1	0.001	
	HUNEMW	Jar	1	0.002	
	HUNFSW		1	0.003	
	HUNFSW	Jar	1	0.017	
	MEL		1	0.001	
	SHW	Jar	2	0.046	
12	HUNFSW		1	0.008	Mid 12th to mid 14th century
	SHW	Jar	1	0.015	
13	HUNEMW	Jar	1	0.004	Mid 12th to mid 14th century
	HUNFSW		2	0.004	
	MELT	Jar	1	0.039	
16	MELT	Jug	1	0.002	13th to mid 14th century
19	MEL	Jar	1	0.004	Mid 12th to mid 14th century
28	EAR		1	0.014	14th century
32	PMR	Drinking Vessel	1	0.019	17th century
36	PMR	Jar	1	0.009	16th-18th century
38	RFEW	Jug/Vase	1	0.008	late 19th early 20th cent
41	HUNFSW		2	0.004	Mid 12th to mid 14th century
43	PMBL		1	0.002	17th century
44	FREC	Jug	1	0.01	17th century
	HUNFSWT		1	0.008	
	PMBL	Drinking Vessel	3	0.022	
	PMR	Bowl	1	0.024	
54	CREA		1	0.001	2nd half of 19th century
	RFWE		1	0.003	
	RFEW (TP)		1	0.002	
61	BCHIN		1	0.004	19th century
	CREA		3	0.01	
	Horticultural	Plant pot	1	0.005	
	NOTTS	Jar	1	0.009	
	RFWE		2	0.006	
	RFREW	Tea Pot (Spout)	1	0.048	
	PEARL		1	0.001	
63	HEDI	Jug	1	0.003	19th century
	Horticultural	Plant pot	1	0.004	
73	PREHISTORIC		1	0.004	Prehistoric
75	HUNEMW	Jug	1	0.003	Mid 12th-13th century
	HUNFSW		1	0.002	

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
85	DNEOT	Jug	1	0.043	13th to mid 14th century
	HUNFSW		1	0.001	
	MEL	Jug	1	0.008	
	MELT	Jar	1	0.011	
	MELT	Jug	3	0.087	
	NEOT		1	0.014	
116	NOTTS		1	0.001	17th century
	STSL	Bowl	1	0.008	
130	PMBL		1	0.002	17th century
140	LMEL	Jug	1	0.008	Mid 14th to end of 15th century
146	LEAR	Jug	3	0.078	14th to end of 15th century
150	MEL	Jug	1	0.003	13th to mid 14th century
151	NOTTS	Jar	1	0.008	17th century
	TGW	Drinking Vessel (Mug)	2	0.078	
156	PMR	Jar	2	0.094	16th-18th century
166	HUNFSW		4	0.014	Mid 12th to mid 14th century
	SHW		1	0.008	
168	BRILL	Jug	1	0.009	Mid 12th to mid 14th century
	HUNEMW		2	0.004	
	HUNFSW		3	0.027	
	HUNFSW	Jar	1	0.002	
	HUNFSW	Jug	1	0.008	
	MEL	Bowl	1	0.014	
	MEL	Jug	1	0.01	
169	HUNEMW		2	0.004	13th to mid 14th century
	HUNEMW	Jar	1	0.012	
	HUNFSW		3	0.004	
	MEL	Jug	2	0.006	
	NEOT		1	0.001	
189	HUNFSW		1	0.002	1200-1350 or 1350- 1500
	LLYST		1	0.007	
	LYST	Jug	1	0.003	
190	BOUA		1	0.03	13th to late 14th century
	COLN		1	0.016	
	MEL		1	0.027	
194	HUNFSW	Jar	1	0.005	13th to mid 14th century
	MEL	Bowl	2	0.025	
197	EAR		1	0.005	Mid 14th to end of 16th century
	EAR	Jug	2	0.088	
	LEAR		2	0.02	
	MEL	Jug	1	0.035	
198	EAR		1	0.001	Mid 13th to mid 14th century

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
	GRIM	Jug	1	0.014	
211	BOND	Bowl	1	0.044	Mid to late 15th century
	BOUA	Jug	1	0.007	
	CASG	Jug	1	0.019	
	EAR		1	0.026	
	HUNFSW		1	0.002	
	LEAR		1	0.011	
	PMR		1	0.003	
	SHW		1	0.001	
	TRAN		1	0.006	
	UNK		2	0.003	
212	HUNFSWT		1	0.011	Mid 12th to mid 14th century
221	PMBL		1	0.001	17th century
225	LEAR		1	0.012	Mid 14th century
	MEL		1	0.009	
	MEL	Bowl	1	0.013	
234	BICR	Bowl	1	0.096	16th-18th century
	PMR	Bowl	1	0.046	
	PMR	Jar	3	0.722	
	PMR	Pipkin	2	0.132	
235	BICR	Bowl	1	0.009	16th-17th century
	PMR	Jar	1	0.007	
236	STSL		1	0.001	17th century
237	DNEOT		1	0.006	17th century
	MEL	Jug	1	0.01	
	PMBL	Drinking Vessel	1	0.003	
	TRAN	Jug	1	0.02	
238	BICR	Bowl	1	0.007	17th century
	FREC	Jug	1	0.005	
	Horticultural	Plant pot	3	0.067	
	PMBL	Drinking Vessel	1	0.004	
	PMR	Bowl	10	0.803	
	PMR	Jar	11	0.296	
	PMR	Jug	1	0.053	
	PMR	Lid	1	0.04	
	STSL		1	0.003	
	SW		1	0.017	
240	COLN		1	0.014	13th to end of 15th century
	EAR		1	0.015	
	EAR	Bowl	1	0.048	
244	HUNEMW		1	0.001	17th century
	HUNFSW		1	0.002	
	PMBL		2	0.001	
	PMBL	Drinking Vessel	1	0.002	

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
	PMR	Bowl	2	0.006	
246	FREC	Jug	1	0.011	Mid 16th end of 17th century
	NEOT		1	0.002	
	THET		1	0.003	
247	Horticultural	Plant pot	1	0.006	19th century
248	PMR	Bowl	2	0.24	16th-18th century
249	GRIM		1	0.003	Mid 13th to late 15th century
	PMR		1	0.001	
	THET		1	0.062	
251	HUNEMW		1	0.004	13th to mid 14th century
	MEL	Bowl	1	0.004	
	UNK		1	0.003	
252	PMBL		2	0.003	17th century
	PMBL	Drinking Vessel	1	0.027	
	PMR		1	0.001	
253	BICR	Bowl	1	0.01	16th to late 17th century
	PMR	Bowl	3	0.084	
	TRAN	Bowl	1	0.045	
254	PMBL	Bowl	1	0.041	Mid to late 18th century
264	COLN		1	0.013	Mid 14th to late 15th century
	LEAR		1	0.04	
	LMEL		1	0.072	
	LMEL	Jug	1	0.001	
	MEL		1	0.007	
267	HUNFSW		1	0.004	Mid 12th to mid 14th century
	HUNFSW	Jar	1	0.014	
270	BOND		1	0.007	13th to mid 14th century
	BRILL	Jug	1	0.024	
	EAR	Jug	1	0.003	
	HUNFSW	Jar	1	0.018	
	THET		1	0.01	
271	HUNFSW		1	0.032	Mid 12th to mid 14th century
275	PMR	Bunghole Jar	1	0.022	16th-18th century
278	PMR	Jar	1	0.042	16th-18th century
281	MEL	Jar	1	0.006	16th-18th century
	PMR	Bowl	1	0.04	
	PMR	Jar	1	0.004	
282	HUNFSW		1	0.01	14th century
	THET		1	0.01	
	UGBB		1	0.007	
	UNK		1	0.006	
291	LLYST	Jug	1	0.138	15th century
299	BOND		1	0.008	Mid 13th to 14th century
	GRIM	Jug	1	0.012	

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
	HUNEMW	Jar	2	0.003	
	HUNFSW		1	0.004	
	MEL		1	0.005	
	MEL	Bowl	6	0.15	
	MEL	Jar	4	0.197	
	MEL	Jug	2	0.084	
	UGBB	Jar	6	0.073	
300	MEL		2	0.003	Mid 12th to mid 14th century
	SHW		1	0.002	
303	HUNEMW	Jar	2	0.019	Mid 13th to 14th century
	MEL	Bowl	12	0.335	
	MEL	Jar	11	0.128	
	SHW	Jug	1	0.025	
	THET	Jar	1	0.013	
	UGBB	Jar	60	0.946	
305	UNK		1	0.017	14th to 15th century
309	PMR	Jar	1	0.008	16th-18th century
318	PMBL		1	0.002	17th century
321	BRILL	Jug	1	0.007	13th to mid 14th century
	EAR		1	0.008	
	HUNFSWT		1	0.007	
328	MELT		1	0.01	16th-17th century
	PMR		2	0.01	
600	RFWE	Plate	1	0.005	18th century
10019	HUNEMW	Jar	1	0.028	13th to mid 14th century
10019	MEL		1	0.006	
10047	LLYST		1	0.01	14th century
	MEL	Bowl	2	0.016	
	UGBB		2	0.012	
10052	EAR		1	0.006	13th to mid 14th century
	HUNFSW	Jar	1	0.023	
10055	HUNFSW		1	0.005	Mid 12th to mid 14th century
10059	EAR		1	0.01	Mid 15th century
	TRAN	Jug	1	0.004	
10069	GRIM	Jug	2	0.005	13th to mid 14th century
	HUNEMW		1	0.003	
	HUNFSW	Jar	1	0.007	
	PMR		1	0.003	
	SHW		1	0.002	
	UGBB	Jar	1	0.004	
	UNK	Bowl	1	0.007	
10071	BRILL		1	0.002	14th century
	GRIM	Jug	4	0.011	
	HUNFSW		1	0.004	

Context	Fabric	Form	Sherd Count	Sherd Weight (kg)	Date range
	LMEL	Jug	1	0.003	
10075	HUNFSWT	Jug	1	0.053	13th to mid 14th century
99999	HUNEMW		1	0.009	Unstratified
	SHW	Jar	1	0.002	

B.4 The Glass

By Alasdair Brookes, Dphil

Introduction and Methodology

B.4.1 The glass terminology used in this report comes from the *Parks Canada Glass Glossary* (Jones and Sullivan 1989), which – despite its geographical origin and age – remains the recognised international single volume standard for the basic identification and typology of post-medieval glass, particularly later post-medieval glass.

The Assemblage

B.4.2 The majority of the glass (eight of the 12 fragments) is architectural window glass, as recovered from contexts 211, 54 (both one fragment) and 61 (6 fragments). Half of the fragments – the single item in context 54, and three of the pieces from context 61 – consist of prism glass (sometimes referred to as 'bank glass'), a type of window glass typically used in commercial buildings (Jones and Sullivan 1989:172).

B.4.3 The four fragments of bottle glass, one amber-bodied fragment from context 19, and one fragment each in olive green, green aqua and clear glass from context 61 appear to be typical blown-in-mould glass. Blown-in-mould (sometimes 'mould blown') is the generic term used to describe contact-moulded bottles where the precise manufacture technology (two-piece mould, Ricketts-type mould, etc.) is unidentifiable.

Dating and Discussion

B.4.4 Precise dating of small fragments of later post-medieval window glass is usually problematic, but the presence of prism glass strongly indicates 19th-century or later deposition. Given that window glass has a significantly longer use span than most domestic artefact classes, often over 50 years (Jones and Sullivan 1989:172) – and sometimes much longer – 20th-century deposition cannot be ruled out. The prism glass is also probably from a commercial building rather than a domestic building.

B.4.5 The bottle glass most probably dates from the 19th century. While contact moulding was known to the Romans (Jones and Sullivan 1989:24), the earliest post-medieval contact-moulded bottle glass technologies were only re-introduced to any large degree between c.1730-c.1750 (Miller 2000:8). The two-piece mould, the most common industrial technique from c.1810 through to 1880s, is a primarily 19th-century technology (Jones and Sullivan 1989:27).

B.4.6 As a whole, the glass from contexts 19, 54, 61, and 211 would therefore seem to date no earlier than the 19th century.

B.5 **The Clay Pipe**

By Alasdair Brookes, Dphil

Introduction and Methodology

B.5.1 The excavation at St. Ives East Street (STI EST 07) produced a small quantity of diagnostic post-medieval artefacts. Of particular interest were the clay pipe assemblage, which consisted of eight objects (six stems and two bowls) from five contexts, and the glass, which consisted of 12 objects (8 fragments of window glass, and four fragments of bottle glass) from four contexts.

B.5.2 The clay pipe terminology used in this report was taken from Bradley (2000). The pipe bowls, considered the most diagnostic part of the assemblage, were identified and dated using the standard typology for English pipe bowls, as featured in this case in Orser and Fagan (1995:104). This is a broad international typology, rather than a local Cambridgeshire-based one, but the basics of date and type usually hold across regions. Where relevant, pipe stems were dated using the present author's own metric adaptation of the pipe stem bore hole diameter method originally developed for English pipe stem fragments by Harrington (1954, 1990; see also Orser and Fagan 1995:103-106). Harrington's system (the original version of which measured boreholes in 64th of an inch increments), and the concept of bore hole dating in general, have both received justified methodological criticism (see Bradley 2000:119-120 for a summary), but it can still provide helpful supporting date data so long as pipe bowls are used as the primary diagnostic feature.

The Assemblage

B.5.3 All of the pipe fragments are made from white ball clay (sometimes inaccurately referred to as 'kaolin' clay), and are most likely English in manufacture. With the exception of rouletting just below the rim of the three bowls, a common feature of 17th-century English pipe bowls, there are no decorative features on any of the fragments. As a whole, the assemblage is characterised by its simplicity.

Dating and Discussion

B.5.4 The three pipe bowls from contexts 234, 237 and 275 are small bulbous rouletted bowls, as typical of the period *c.*1620-c.1660 (Orser 1995:104). Three of the four pipe stems from context 238 have a stem bore hole diameter of about 3mm, which also usually indicates an early- to mid-17th-century date (generally c.1630-c.1670). The exception features a diameter more typical of early 18th-century pipes, but caution must be used in ascribing dates to single stems given known variations in bore hole manufacture within periods. No attempt was made to date the individual examples of pipe stems from contexts 22 and 54 given the problems inherent in dating contexts from single stem examples. As a whole, however, most of the assemblage is typical of the early- to mid-17th century. No further interpretive analysis is possible on such a small assemblage.

B.6 **The Brick**

By Robert Atkins BsocSc, DipArch

Introduction and Methodology

B.6.1 A mixed group of parts of three white brick types of varying dates were seen in layer 65 and a representative sample was retained. No definite fragments of red bricks were found. 'White' or whitish bricks were made from gault or lime rich clays, or clays to which lime has been added. The very fragmentary nature of the assemblage can be seen in that there were no complete lengths or widths recovered. About half the layer comprised melted bricks that have been fire damaged and half were unburnt. The latest brick type in this layer will date between *c.*1800 and 1850.

B.6.1 The three brick types were:

- Bricks 2¼-2⅜ inches (*c.*60mm) thick. Evidence of creased faces but fairly well made with sharp horizons and relatively smooth surfaces. A date is likely between *c.*1700 to later 18th century.
- Suffolk White type 2⅝-¾ inches (*c.*65-70mm). A distinctive pale brick in cream and pinkish colour with sandy fabric. No creases, parallel horizons with very smooth surfaces. Suffolk Whites were common in East Anglia and dated c.1750-1850 but are more common from the end of the 18th century. Equivalent to Ryan and Andrews 1993 type H, plate 17.
- Floor brick tile. 1½ inch (c.40mm) thick. Extremely well made with no creases or parallel horizons. Flooring bricks improve with age, and none can be dated with certainty before the 18th century when they are often rougher but by the 19th century they are often very precisely made (Ryan and Andrews 1993, 96). A date for the flooring brick is likely to be *c.*1800 to 1850.

Appendix C. Environmental Reports

C.1 The Faunal Remains

By Chris Faine MA, Msc BABAO

Introduction and Methodology

C.1.1 A total of 120 "countable" bones were recovered from the East St, St Ives excavation, with a further 180 fragments not identifiable to species, (60% of the total sample). All bones were collected by hand apart from those recovered from environmental samples; hence a bias towards smaller fragments is to be expected. Residuality appears not be an issue and there is no evidence of later contamination of any context. Faunal remains were primarily recovered from a series of large pits dating from the late medieval to post medieval periods.

C.1.2 All data was initially recorded using a specially written MS Access database. Bones were recorded using a version of the criteria described in Davis (1992) and Albarella & Davis (1994). Initially all elements were assessed in terms of siding (where appropriate), completeness, tooth wear stages (also where applicable) and epiphyseal fusion. Completeness was assessed in terms of percentage and zones present (after Dobney & Reilly, 1988). Initially the whole identifiable assemblage was quantified in terms of number of individual fragments (NISP) and minimum numbers of individuals MNI (see table H1). The ageing of the population was largely achieved by examining the wear stages of cheek teeth of cattle, sheep/goat and pig (after Grant, 1982). Wear stages were recorded for lower molars of cattle, sheep/goat and pig, both isolated and in mandibles. The states of epiphyseal fusion for all relevant bones were recorded to give a broad age range for the major domesticates (after Getty, 1975). Sheep/goat differentiation was attempted on the distal metapodials using Payne (1969). Measurements were largely carried out according to the conventions of von den Driesch (1976). Measurements were either carried out using a 150mm sliding calliper or an osteometric board in the case of larger bones.

Species Distribution

C.1.3 Tables H1-3 show the species distribution for both the entire assemblage and individual phases. Figure H1 shows the species distribution of the main domesticates. Cattle are the dominant species in both medieval and post medieval phases (even discounting the large number of horn cores recovered from post medieval context **270**). Sheep/Goat are the next most prevalent taxon, occurring in relatively equal proportions (27.5% vs. 27.7%) in both phases. Although infrequent throughout the assemblage generally, numbers of pig remains decline into the post-medieval period: a feature of the post-medieval economy seen in many sites nationally. However, given the small and specialised nature of many of the deposits (see *conclusions*), it would be unhelpful to see this a feature of the economy of St Ives as a whole. Horse remains (although again infrequent) are present in roughly equal proportions in both phases. Only one dog element was recovered from a medieval context. Bird remains are limited to two fragments of pheasant and goose (wild or domestic) from post-medieval contexts.

Cattle

C.1.4 As mentioned above cattle are the most prevalent species in both periods. Figures H2 & H3 shows the cattle body part distribution for both phases. The distribution for the

medieval periods suggests disarticulation of carcasses, with the animals being brought to the site either on the hoof or as undressed carcasses. Of the sexable elements from this phase, 50% derive from females, 30% from males and 20% (a single animal) from castrates see below) All horn cores recovered from this phase were from “short horn” types, with a single core from a “medium horned” animal. Average withers heights for the period range from 105-133cm with an average of 118cm. Epiphyseal fusion data suggests a population for around 2-3years of age at death (see Figure H4). Two horn cores were classed as “young adult”, the other 2 as “adult”. Some evidence of bone working was recovered from site in the form of a sawn metatarsal and humerus. All horn cores were chopped at their bases leaving only a small portion of parietal attached.

C.1.5 The cattle remains from post-medieval contexts are dominated by the presence of 15 horn cores from pit context **270**. Unlike those from medieval contexts all have been butchered with more of the parietal attached (in some cases leaving the entire parietal attached up to the palatine suture). It is highly likely that this represents a waste deposits from crafts such as tanning or horn working. Disregarding 4 cores from juvenile animals, 90% were derived from bulls with 10% (a single animal), from females. However, it is worth noting that age of castration affects horn core morphology, with earlier castration producing larger horns more identifiable as oxen, with horns of those castrated later being more hard to distinguish from intact males (Armitage & Clutton-Brock, 1976). On a morphological basis several of the horn cores from **270** were hard to distinguish, with the result that oxen may be underrepresented in the assemblage. All but one were from “short horn” animals, with a single “medium horned” individual. Figures H6, H7 & H8 show the size and shape of the horn cores compared to those from a similar post-medieval industrial deposit from New Inn Yard, Wisbech. This indicates in general more robust animals than those from New Inn Yard (an assemblage with a similar sex distribution). The body part distribution for the remaining postcranial elements is also consistent with craft waste, with metapodia, phalanges and tarsals being most common.

C.1.6 Unfortunately due to fragmentary nature of the assemblage it was not possible to calculate withers heights for the post-medieval cattle population. Epiphyseal fusion data indicates animals were killed at a slightly later age than in the medieval period, around 4 years of age (see Figure H5). This is contrary to trends seen in the late/post medieval period as a whole, where the focus ceased to be on using older cattle for traction, with younger animals being exploited more and more for meat (Trow-Smith, 1957). However, the small and specialised nature of the post-medieval sample means few links can be drawn between it and the wider husbandry strategy in the area.

Sheep/Goat

C.1.7 All elements from the assemblage that could be assigned to species belong to sheep. The species were separated using morphological and metrical criteria (see “ methodology”). Goat remains are scarce in most British archaeological assemblages, being better adapted to a warmer, rockier environment (Albarella et al, forthcoming). Their numbers declined especially in the late and post-medieval periods as they considered destroyers of hedgerows and other land boundaries (Burke, 1834). In any case goats were probably bred for milk production in rural areas, and their presence in any numbers in urban contexts would be unexpected (Albarella et al, forthcoming). Sheep/Goat remains are present in roughly equal numbers in both medieval and post-medieval periods.

C.1.8 Figure H9 shows the body part distribution for sheep/goat for the medieval period. As one can see the assemblage is dominated by metapodia, astragali and loose teeth. The majority of this material is concentrated in pit fill **240**, and most likely represents horn workers or tawyers waste. Although few ageable mandibles were recovered from this period epiphyseal fusion data suggests animals were slaughtered at around 3-4 years of age remains (see Figure H11). This is consistent with the pattern of animals being raised to maturity for maximum wool and hide yield before slaughter. Tables H4-H6 and Figures H13-H16 show the size and shape of the medieval sheep population compared to two similar assemblages from New Inn yard, Wisbech and the Oxford road water mill, Aylesbury. As one can see the animals from St Ives are more robust but on the whole shorter than those from Wisbech and Aylesbury. Two groups are visible (particularly in the metatarsal plots) that could indicate sexual dimorphism. One would expect little difference in size and shape between the Wisbech and St Ives populations given their geographical proximity, so the differences may be the result of the presence of more gracile wethers in the Wisbech animals. Wethers are typical wool animals in the late medieval period (Albarella et al forthcoming). Despite the interpretation of the medieval sheep/goat assemblage as industrial waste, one aspect of the assemblage is unusual. Metapodia are often kept attached to the hides after skinning along with phalanges, and removed later immediately the tanning process. However, none of the material from the medieval assemblage shows any of the cut marks associated with the removal of the metapodials. Although unusual, this could simply indicate that perhaps only the phalanges were left attached in this case (none were recovered from this phase).

C.1.9 Sheep/Goat remains from the post-medieval contexts shows an altogether different pattern, consisting largely of meat bearing elements (scapulae, upper limb bones etc, see Figure H10). Epiphyseal fusion data suggests a slightly older population than the preceding periods (see Figure H12). Whilst this is still indictive of wool production, the body part distribution of the material here suggests mutton was also consumed during this period (Albarella et al, forthcoming), with older animals possibly being slaughtered once their wool quality began to decline (Payne, 1973).

Pig

C.1.10 Very few pig remains were recovered from either phase, with slightly more material being recovered from medieval contexts (see Figure H1). Material from both contexts consists of meat bearing elements from animals aged around 1 ½ to 2 years of age. This is typical of a species bred almost exclusively for meat throughout the British archaeological record. Although slight changes in this pattern do occur, these are recognisable through tooth wear analysis: no ageable mandibles were recovered from either phase.

Horse

C.1.11 As with pig few equid remains were recovered; those that were consisted mainly of phalanges and cervical vertebrae. All remains were from adult animals, with a single mandible from an individual around 2 years old being recovered from a medieval context. No butchery marks were seen on any element. Horses were exploited in a variety of ways throughout the medieval and post medieval periods including meat, hides, riding and traction. Whilst the presence of postcranial horse remains in association with post medieval industry could suggest the production of hides, the sample size is too small to draw any further conclusions from.

Other Mammals

C.1.12 A single dog radius was recovered from a medieval context, most likely representing a commensal species. Evidence for the exploitation of wild species is scarce, consisting of a single butchered rabbit inominate.

Birds

C.1.13 Bird remains are limited to a single goose carpometacarpal and pheasant ulna, both from post-medieval contexts. Whilst no butchery marks were seen they most likely represent food waste.

Conclusions

C.1.14 Although the sample size is quite small several conclusions can be drawn. It is clear that in both medieval and post-medieval periods the site was the focus of industrial activity of varying kinds. In the medieval period cattle were brought to site either on the hoof or as undressed carcasses then butchered. The animals were largely young adults of mixed sex. Contemporary to these is the presence of waste pits from tawying, with mature sheep (again of mixed gender) initially bred for wool (and possibly mutton) being slaughtered for hides and possibly bone working. The animals were of different stature to those from other contemporary sites, with their generally robust nature possibly being attributed to the absence of castrates rather than any particular difference in breed. Pigs were kept for meat. Horses were most likely kept for riding and possibly meat and hides. No evidence of on site breeding was seen.

C.1.15 The post medieval period is characterised by a reversal of this pattern, with almost exclusively male cattle being exploited for hides and possibly bone working. No improved breeds were detected, with the size of cattle being comparable to those from contemporary sites. Cattle are on the whole older than the preceding period, indicative of their increasing use for traction in the post medieval period. Older sheep were butchered for mutton, possibly when their quality of wool declined. Pigs were again kept for meat. Horses were again kept for traction and possibly meat and hides. There is limited evidence for the exploitation of wild and domestic birds. Again no evidence of on site breeding was seen.

	NISP	NISP%	MNI	MNI%
Domestic Mammals				
Cattle (*Bos*)	60	50	30	46.2
Sheep/Goat (*Ovis/Capra*)	23	19.2	13	20
Sheep (*Ovis aries*)	15	12.6	4	6.1
Pig (*Sus scrofa*)	8	6.7	6	9.2
Horse (*Equus caballus*)	7	5.8	6	9.2
Goat (*Capra Hircus*)	3	2.5	2	3
Dog (*Canis familiaris*)	1	0.8	1	1.6
Wild Mammals				
Rabbit (*Oryctolagus cuniculus*)	1	0.8	1	1.5
Birds				
Domestic Goose (*Anser sp.*)	1	0.8	1	1.6
Pheasant (*Phasianus colchicus*)	1	0.8	1	1.6
Total:	**120**	**100**	**65**	**100**

Table 8: Species distribution for the entire assemblage

	NISP	NISP%	MNI	MNI%
Domestic Mammals				
Cattle (*Bos*)	26	43.4	13	36.1
Sheep/Goat (*Ovis/Capra*)	13	21.7	8	22.2
Sheep (*Ovis aries*)	13	21.7	8	22.2
Pig (*Sus scrofa*)	4	6.5	3	8.1
Horse (*Equus caballus*)	2	3.3	2	5.5
Goat (*Capra Hircus*)	1	1.7	1	2.7
Dog (*Canis familiaris*)	1	1.7	1	2.7
Total:	**60**	**100**	**36**	**100**

Table 9: Species distribution for the medieval assemblage

	NISP	NISP%	MNI	MNI%
Domestic Mammals				
Cattle (*Bos*)	27	62.7	11	47.8
Sheep/Goat (*Ovis/Capra*)	8	16.6	5	21.7
Horse (*Equus caballus*)	4	9.3	3	13
Pig (*Sus scrofa*)	3	6.8	2	8.7
Birds				
Domestic Goose (*Anser sp.*)	1	2.3	1	4.4
Pheasant (*Phasianus colchicus*)	1	2.3	1	4.4
Total:	**43**	**100**	**23**	**100**

Table 10: Species distribution for the post-medieval assemblage

	GL	Bd	SD	Withers height. (m)
Metacarpus				
Range	110-127.1	12.8-26	12.0-19.0	0.55-0.62
Number	8	8	8	8
Mean	118	23.3	14.3	0.58
SD	5.65	4.2	2.1	0.027

Metatarsus				
Range	123-137.7	21.7-25	10-12.7	0.55-0.62
Number	8	8	8	8
Mean	128.2	23.2	11.4	0.58
SD	5.79	1.06	0.804	0.025

Table 11: Summary of the East St, St Ives sheep/goat metapodial measurements

	GL	Bd	SD	Withers height. (m)
Metacarpus				
Range	116-136	22.2-25	11.8-14	0.56-0.73
Number	11	11	11	11
Mean	122.5	23.8	12.6	0.6
SD	6.24	0.93	0.66	0.05

Metatarsus				
Range	118-140	22-24.2	10-12.5	0.53-0.63
Number	8	8	8	8
Mean	131.7	22.9	11.1	0.59
SD	6.7	0.72	0.69	0.03

Table 12: Summary of the New Inn Yard, Wisbech sheep/goat metapodial measurements

	GL	Bd	SD	Withers height. (m)
Metacarpus				
Range	101.3-135.1	21-27.5	11.3-16.7	0.49-0.65
Number	170	191	170	170
Mean	114.8	24.3	13.2	0.56
SD	6.5	1.282	1.052	3.193

Metatarsus				
Range	99.8-145.7	19-26.3	9.3-13.7	0.45-0.66
Number	148	137	147	148
Mean	122.7	23.1	11.4	0.56
SD	8.9	1.3	0.942	4.023

Table 13: Summary of the Oxford Rd watermill, Aylesbury sheep metapodial measurements (after Baxter, 2004)

Table H7 (below) guide to abbreviations:

B: Cattle
S/G: Sheep/Goat
CAP: Goat
OVA: Sheep
EQ: Horse

Measurements largely follow Von den Driesch (1976). All measurements are in 10ths of a millimetre.

Taxon	Phase	L	Wmax	Wmin
B	M	2500	530	490
B	M		350	220
B	M	1660	560	450
B	M	1300	382	341
B	PM		521	470
B	PM		600	541
B	PM	1365	515	420
B	PM		409	370
B	PM		520	455
B	PM	1520	395	315
B	PM	1425	562	460
B	PM		630	500

Taxon	Phase	Element	Bd
B	PM	AS	440

Taxon	Phase	Element	BT	HTC	SD	Bd
B	M	HUM	720	430	345	718
B	?	HUM	810	465		820
S/G	M	HUM	290	180	150	
S/G	M	HUM	280	180	183	
S/G	M	HUM	271	190		
S/G	M	HUM	278	181		
S/G	PM	HUM	263	160	130	
S/G	PM	HUM		171	151	

Taxon	Phase	Element	Bd	Davis 3	SD	BatF	Davis a	Davis b	Dd	Bp
B	M	MC	480	232		440	230	225	260	
B	M	MC			240	410				440
B	PM	MC			350	590				650
B	PM	MC	640	280		569	292	390	300	
B	PM	MC	640	275		570	229	280		

Taxon	Phase	Element	GL	Bd	SD	WC	WT
CAP	PM	MC	1210	230	140	132	90
OVA	M	MC	1208	235	190	120	110
OVA	M	MC	1271	128	150	129	120
OVA	M	MC	1165	250	140	120	100
OVA	M	MC	1210	260	138	110	110
OVA	M	MC	1140	240	120	110	101
OVA	M	MC	1250	260	148	116	110
OVA	M	MC	1150	248	135	100	110
OVA	M	MC	1100	240	120	109	90

Taxon	Phase	Element	GL	Bd	Davis 3	SD	BatF	Davis a	Davis b	Bp
B	M	MT	2450	585	310	270	578	271	278	500
B	M	MT		529	249		500	248	250	
B	M	MT		556	218	300	523	250	260	
B	?	MT	1935	450	220	209	439	200	220	370
B	?	MT	2160	510	300	250	479	250	240	

Taxon	Phase	Element	GL	Bd	SD	WT
CAP	PM	MT	1261	230	110	90
CAP	PM	MT	1300	239	115	92
OVA	M	MT	1230	232	115	101
OVA	M	MT	1230	231	127	90
OVA	M	MT	1241	220	100	90
OVA	M	MT	1377	250	120	107
OVA	M	MT	1361	241	120	100
OVA	?	MT	1263	217	112	90

Taxon	Phase	Element	LA	Rim Ht
B	M	PE	530	350

Taxon	Phase	Element	GL	SD
S/G	M	RA	1460	160
S/G	M	RA		170

Taxon	Phase	Element	Bd
S/G	M	TI	280
S/G	M	TI	280
SUS	?	TI	300

Taxon	Phase	Element	Bd	Bp	SD	Dd
EQ	PM	TI	605	862	360	346

Taxon	Phase	Element	GLPe	Bp	SD	Bd
EQ	PM	P1	910	460	245	395

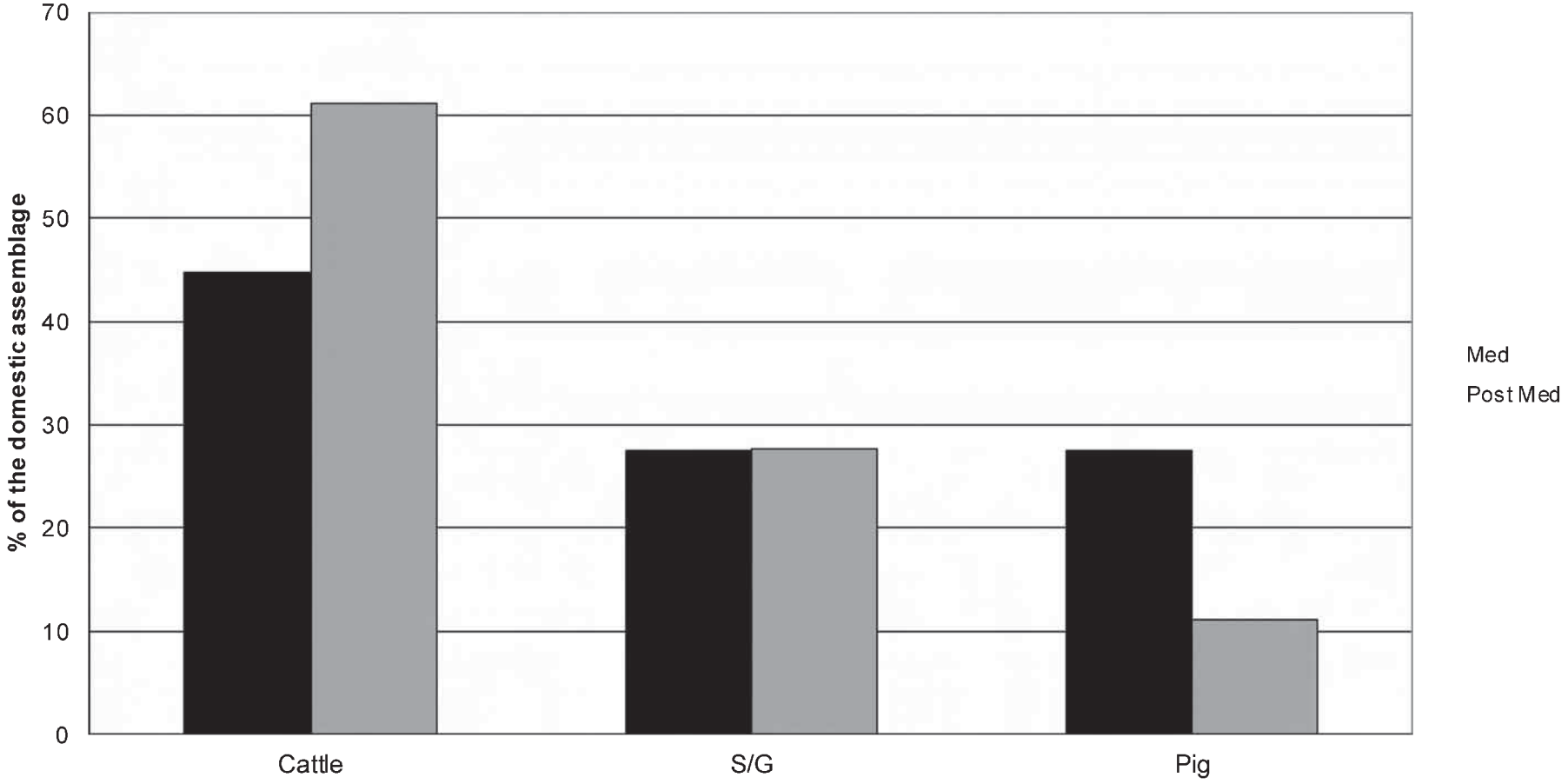
Taxon	Phase	Element	GLPe	Bp	SD	Bd
EQ	PM	P2	480	557	260	490

Table 14: Measurement data for the entire assemblage

Taxon	Phase	Dp4W	M1W	M2W	M3W	M3L
S/G	M			70		
S/G	M	59	110			
S/G	PM			70		
S/G	PM			79	71	
S/G	?		110			
B	M	340	138			

Table 15: Tooth measurement data for the entire assemblage

Figure 1: Domestic mammal distribution for the Medieval and Post-Medieval periods (MNI)



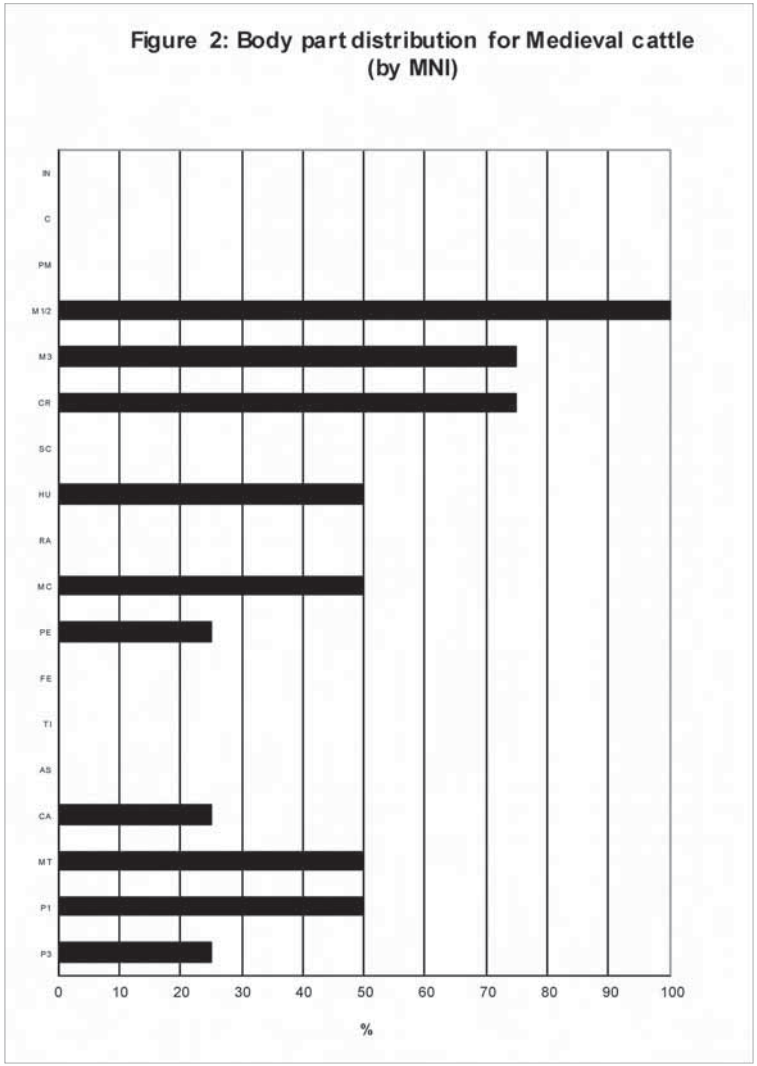


Figure 2: Body part distribution for Medieval cattle (by MNI)
IN
C
PM
M1/2
M3
CR
SC
HU
RA
MC
PE
FE
TI
AS
CA
MT
P1
P3
0
10
20
30
40
50
60
70
80
90
100
%

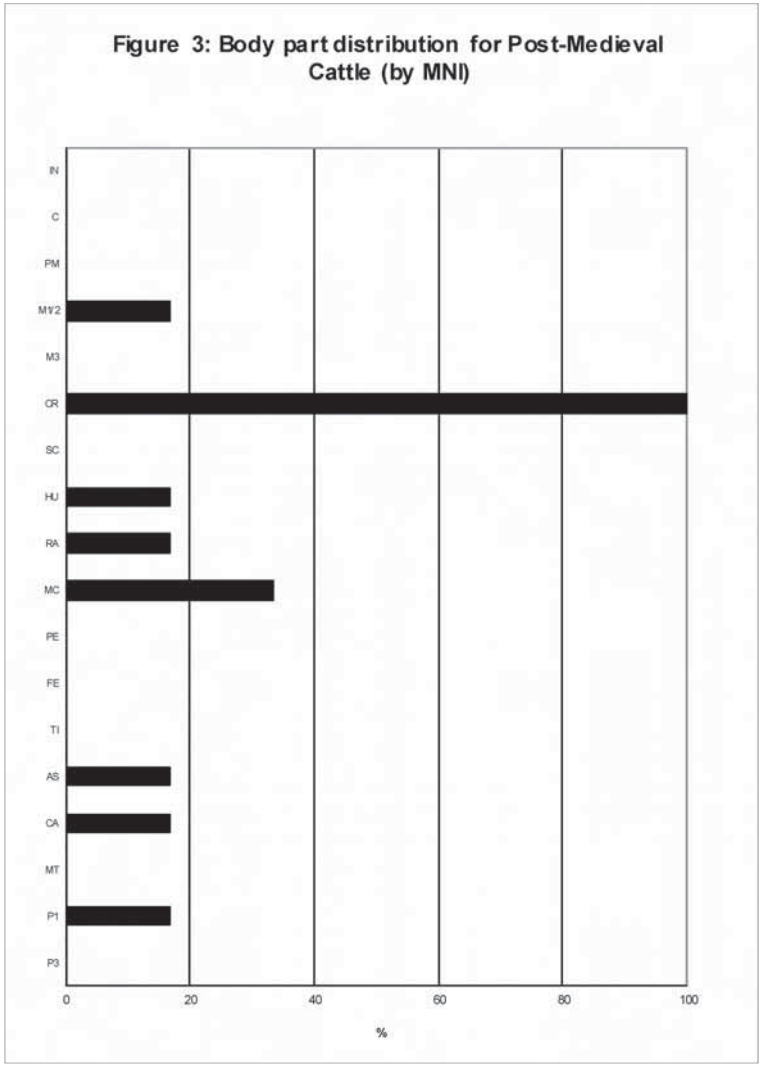


Figure 3: Body part distribution for Post-Medieval Cattle (by MNI)
IN
C
PM
M1/2
M3
CR
SC
HU
RA
MC
PE
FE
TI
AS
CA
MT
P1
P3
0
20
40
60
80
100
%

Figure 4: Epiphyseal fusion data for Medieval cattle

Figure 5: Epiphyseal fusion data for Post-Medieval cattle

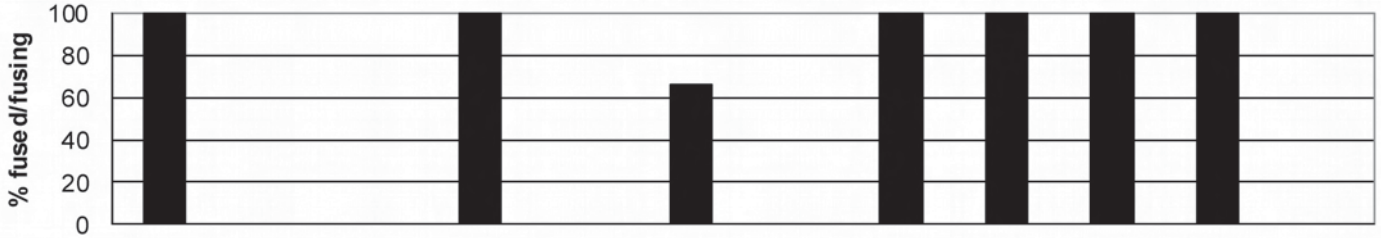


Figure 6: Size of cattle horncores from St Ives

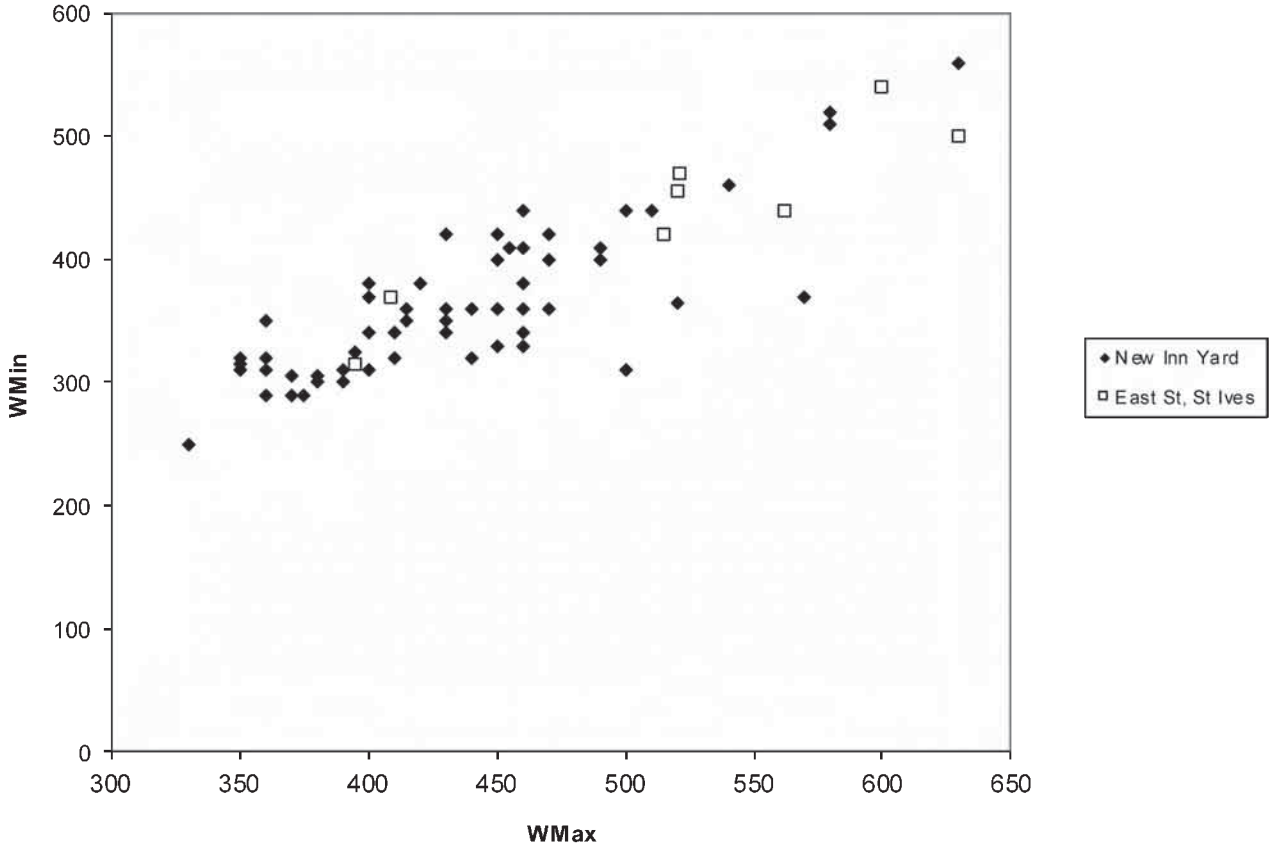


Figure 7: Size of cattle horncores from St Ives

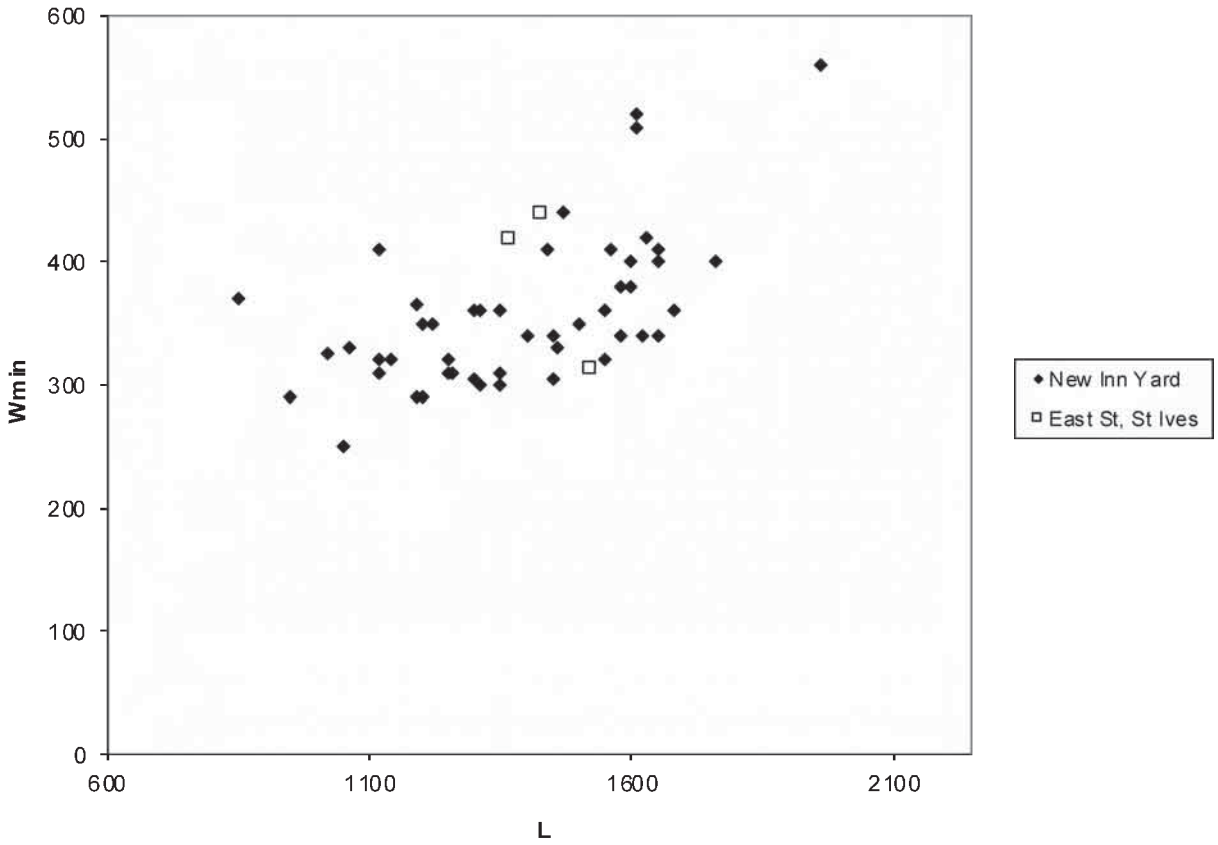
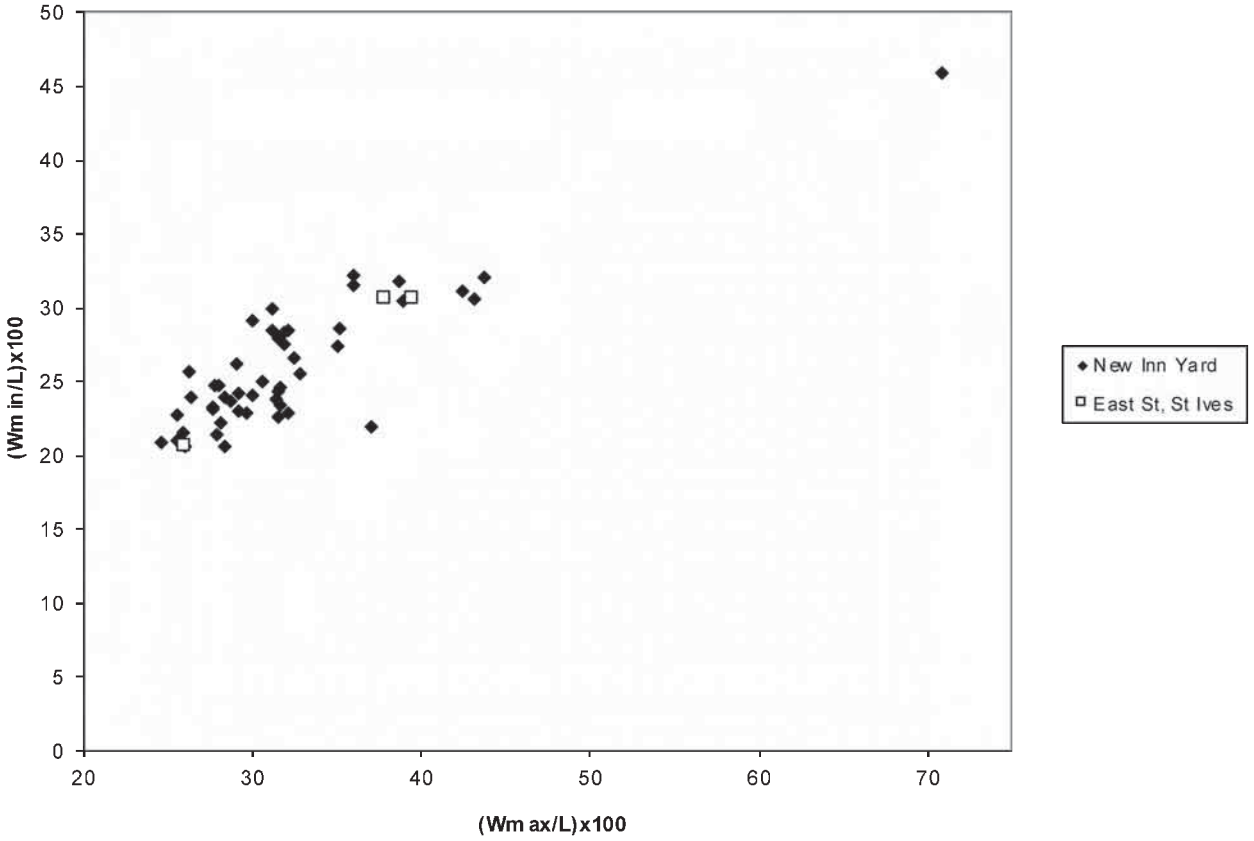


Figure 8: Shape of cattle horncores from St Ives



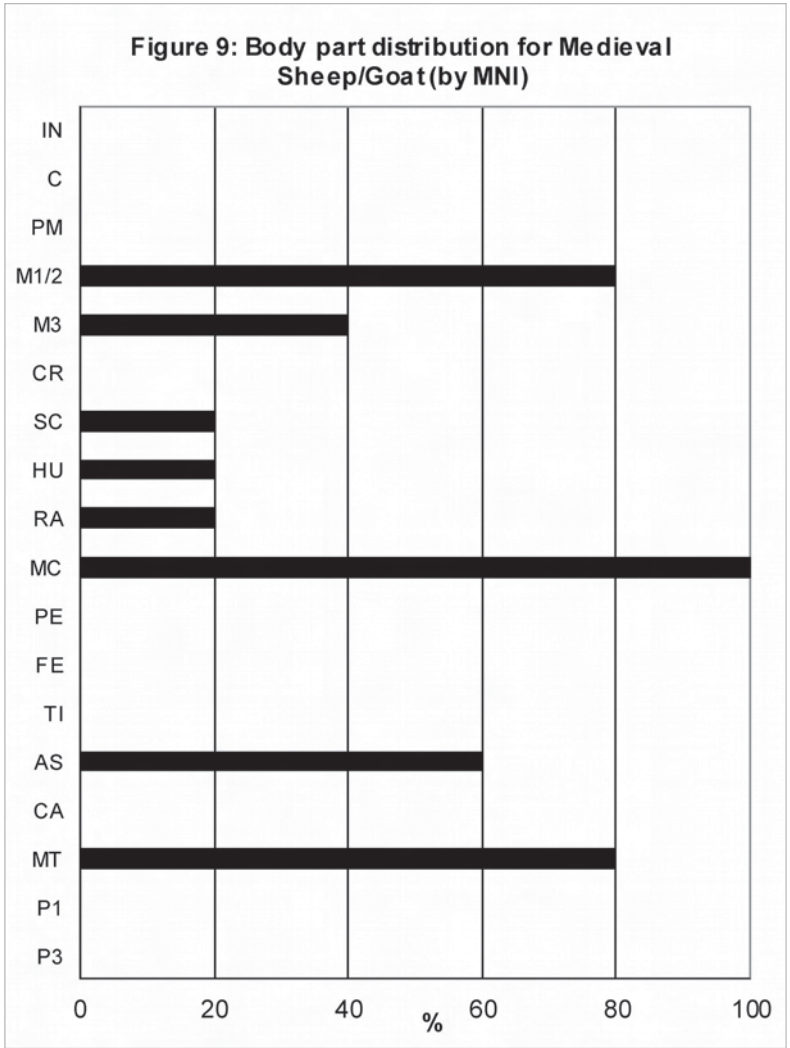


Figure 9: Body part distribution for Medieval Sheep/Goat (by MNI)
IN
C
PM
M1/2
M3
CR
SC
HU
RA
MC
PE
FE
TI
AS
CA
MT
P1
P3
0
20
40
%
60
80
100

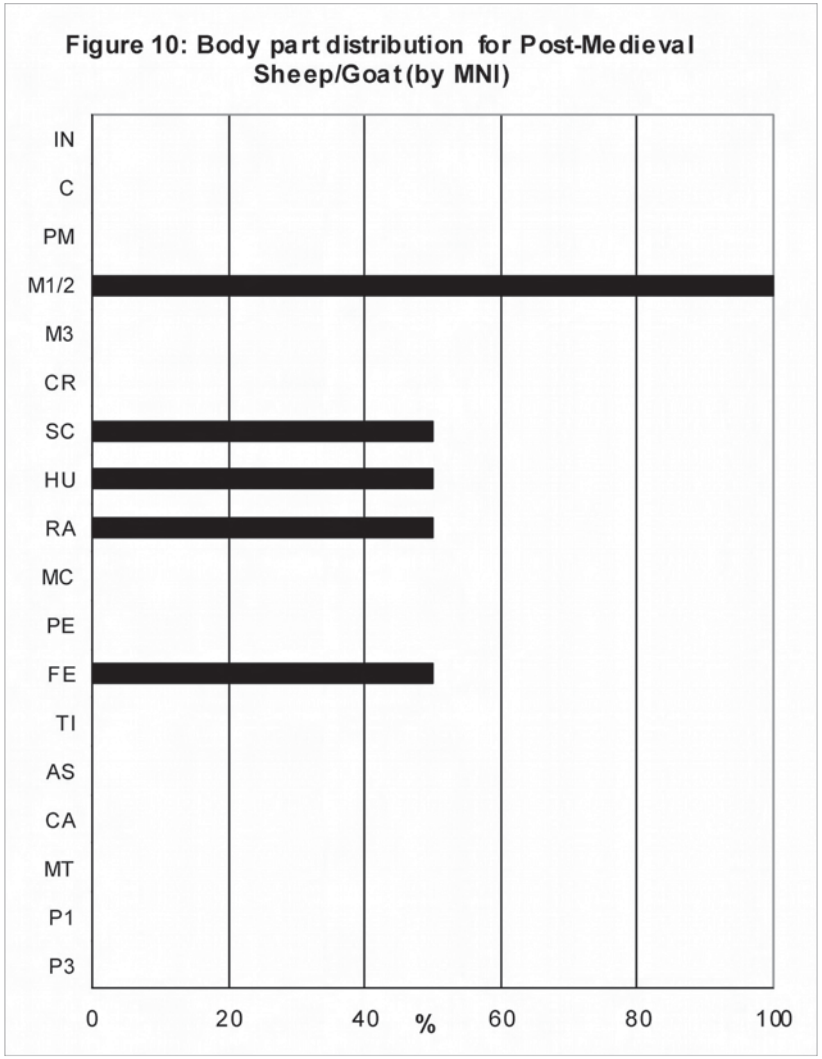


Figure 10: Body part distribution for Post-Medieval Sheep/Goat (by MNI)
IN
C
PM
M1/2
M3
CR
SC
HU
RA
MC
PE
FE
TI
AS
CA
MT
P1
P3
0
20
40
%
60
80
100

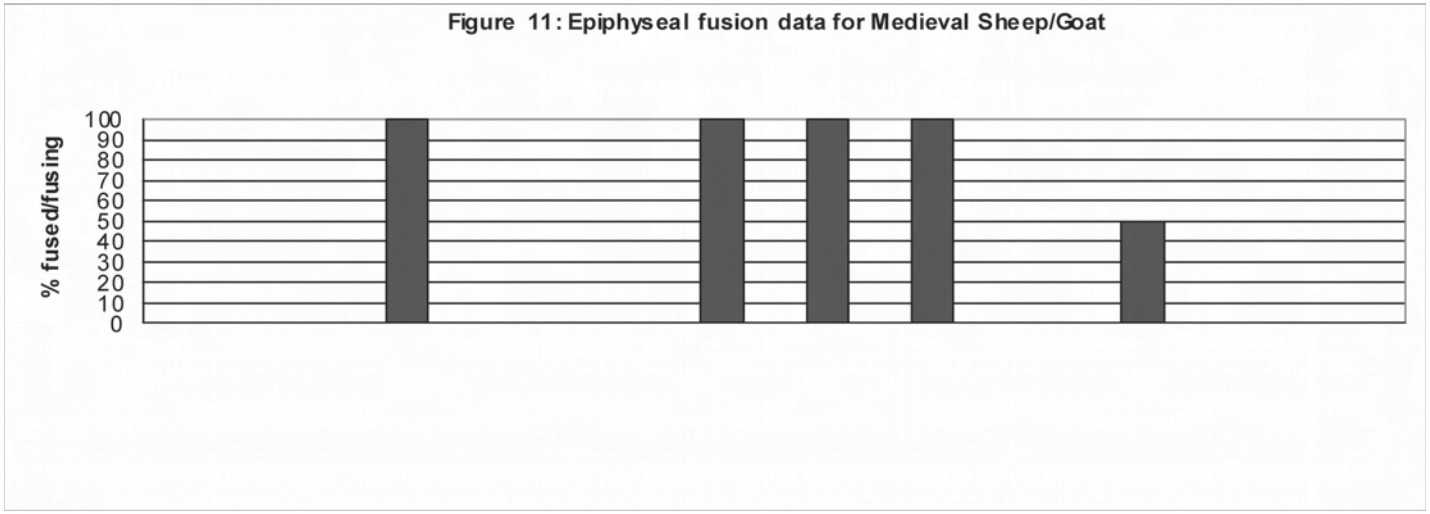


Figure 11: Epiphyseal fusion data for Medieval Sheep/Goat
% fused/fusing
100
90
80
70
60
50
40
30
20
10
0

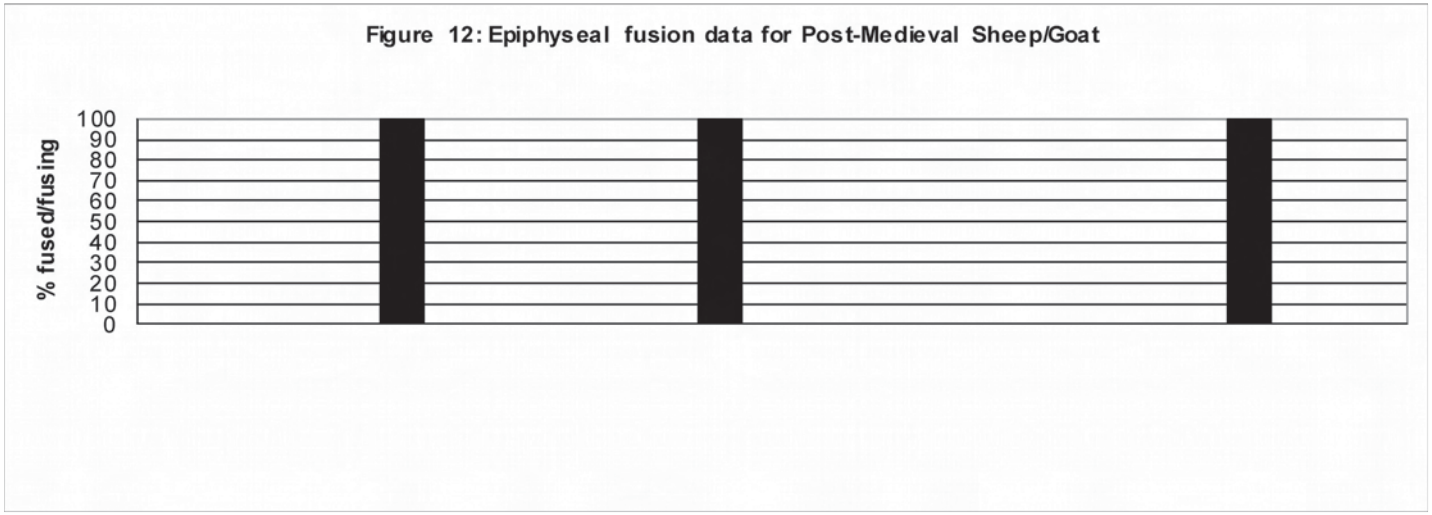


Figure 12: Epiphyseal fusion data for Post-Medieval Sheep/Goat
% fused/fusing
100
90
80
70
60
50
40
30
20
10
0

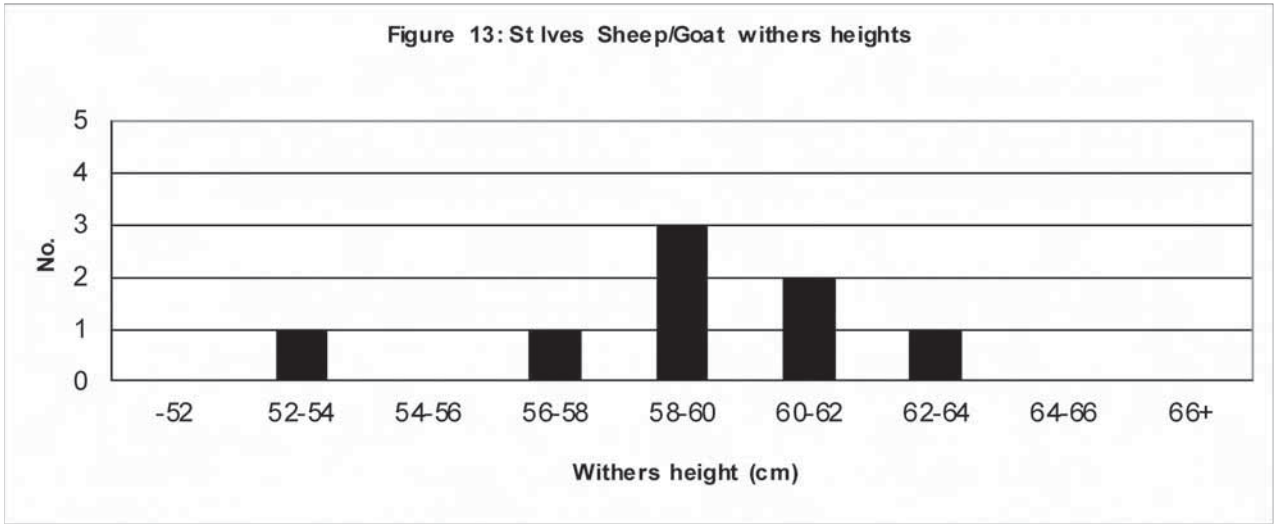


Figure 13: St Ives Sheep/Goat withers heights
No.
5
4
3
2
1
0
-52
52-54
54-56
56-58
58-60
60-62
62-64
64-66
66+
Withers height (cm)

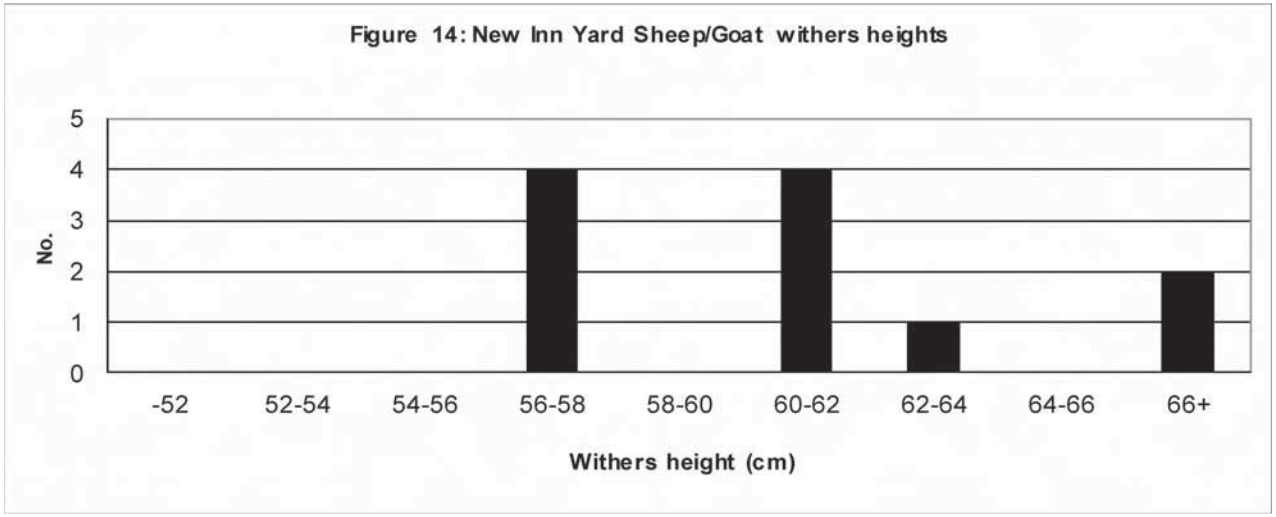


Figure 14: New Inn Yard Sheep/Goat withers heights
No.
5
4
3
2
1
0
-52
52-54
54-56
56-58
58-60
60-62
62-64
64-66
66+
Withers height (cm)

Figure 15: Size of sheep metacarpals from St Ives

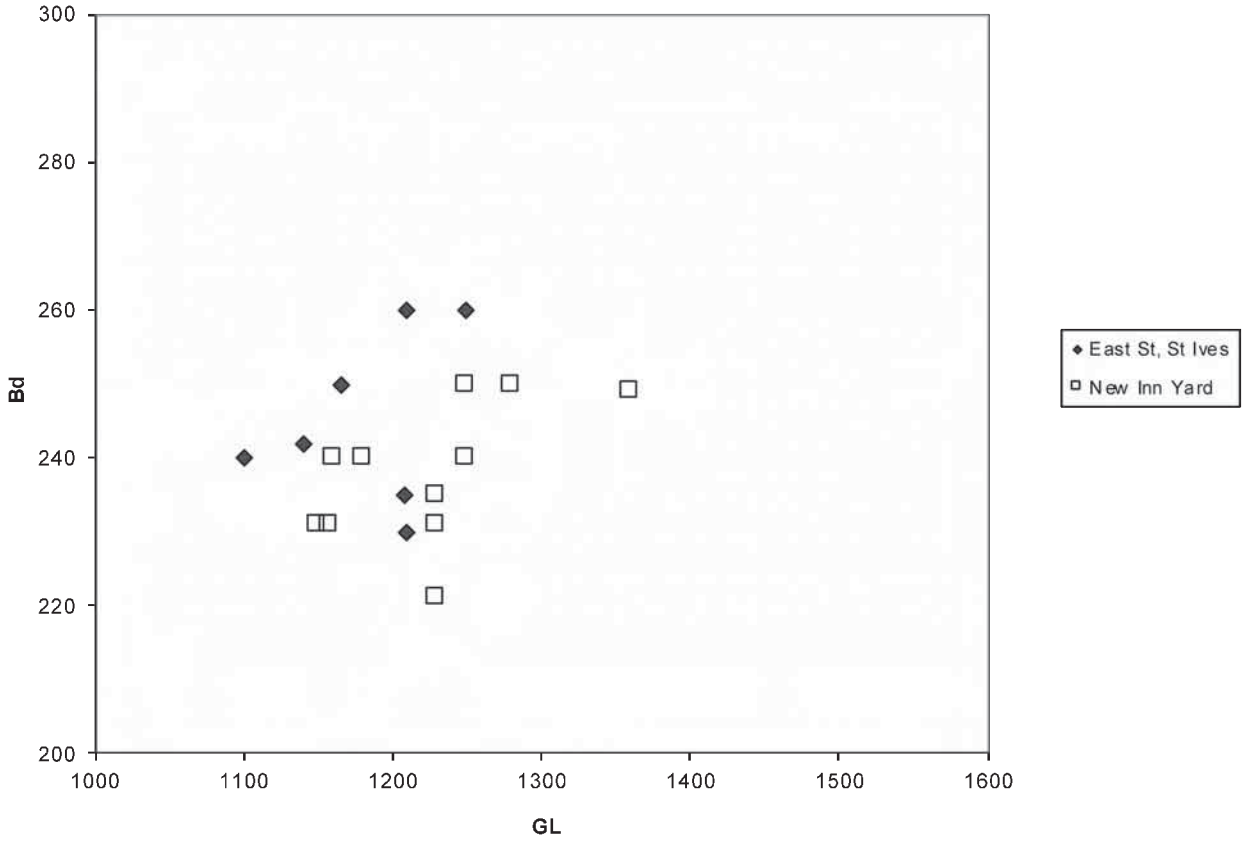
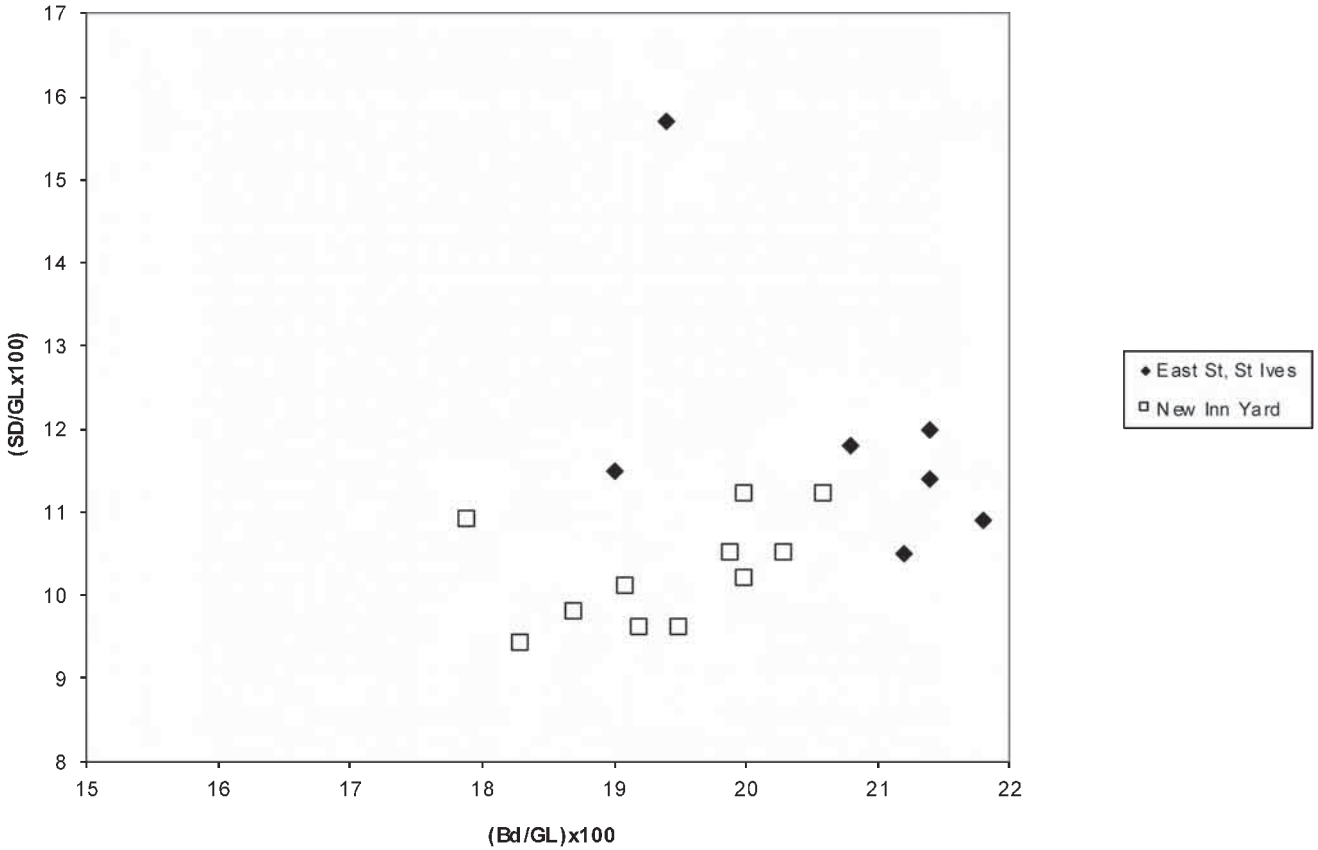


Figure 16: Shape of sheep/goat metacarpals from St Ives



C.2 Environmental Assessment

by Val Fryer BA, FSA, MIFA

Introduction and Methodology

C.2.1 Excavations at Crownstreet Mews, St. Ives, undertaken by the Cambridgeshire Archaeology Field Unit (CAM ARC), revealed features within an area which appeared to have been used for the processing of animal products (including horn, bones and hide) during the medieval and post-medieval periods. Samples for the retrieval of the plant macrofossil assemblages were taken from pit, ditch and post-hole fills across the excavated area.

C.2.2 Seventy three samples were bulk floated, and the flots were collected in a 500 micron mesh sieve. An initial evaluation of the assemblages was conducted by CAMARC, and this showed that eighteen contained a sufficient density of material for the current assessment. These assemblages were scanned by the author, using a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Tables I1 and I2. Nomenclature within the tables follows Stace (1997). The plant remains within most assemblages were charred, but de-watered and mineral replaced macrofossils were also recorded.

Results

C.2.3 Cereal grains/chaff and seeds of common weeds and wetland plants were present throughout at low to moderate densities, along with occasional tree/shrub macrofossils. Preservation was mostly good, although a number of grains were puffed and distorted, probably as a result of combustion at very high temperatures, and a proportion of the de-watered macrofossils were misshapen and fragmented.

C.2.4 Charred barley (*Hordeum* sp.) and/or wheat (*Triticum* sp.) grains occurred within all but four of the assemblages studied, along with rachis nodes of both bread wheat (*T.aestivum/compactum*) and rivet wheat (*T. turgidum*) types. Oat (*Avena* sp.) grains and awn fragments were also recorded, most notably from the fills within pit **233**. However, specimens were so rare that it was assumed that most were present as contaminants of the main barley and wheat crops. Silica skeletons, mostly of indeterminate cereal awn fragments but including rachis nodes of both bread wheat and rivet wheat, were noted within sample 55, from fill 274 within pit **233**. Other food plant remains occurred very infrequently, but did include a cotyledon fragment of an indeterminate large pulse (Fabaceae) and rare de-watered seeds of fig (*Ficus carica*) and strawberry (*Fragaria vesca*).

C.2.5 Charred weed seeds occurred relatively infrequently. Most were of common segetal taxa including stinking mayweed (*Anthemis cotula*), small legumes (Fabaceae), grasses (Poaceae) and dock (*Rumex* sp.). In contrast, the de-watered samples contained diverse assemblages, within which ruderal and grassland herbs were predominant. Taxa noted included orache (*Atriplex* sp.), hemlock (*Conium maculatum*), henbane (*Hyoscyamus niger*), dead nettle (*Lamium* sp.), knotgrass (*Polygonum aviculare*), buttercup (*Ranunculus acris/repens/bulbosus*), black nightshade (*Solanum nigrum*) and nettles (*Urtica dioica and U. urns*).

C.2.6 With the exception of the saw-sedge (*Cladium mariscus*) nutlets, which were charred, all the wetland/aquatic plant remains were de-watered. The species range was limited, but did include sedge (*Carex* sp.), spike-rush (*Eleocharis* sp.) and marsh pennywort

(*Hydrocotyle vulgaris*). Tree/shrub macrofossils, comprising charred hazel (*Corylus avellana*) nutshell fragments and elderberry (*Sambucus nigra*) seeds, occurred within only four assemblages.

C.2.7 Charcoal/charred wood fragments were present throughout although, with the exception of pit **233**, rarely at a high density. Other plant remains occurred infrequently, but did include pieces of charred root/stem and indeterminate buds and culm nodes.

C.2.8 Animal macrofossils, some or all of which were possibly derived from dietary refuse, were present throughout. Bone, fish bone and eggshell fragments were especially common, although pieces of marine mollusc shell (mostly oyster and mussel) were also recorded. Possible faecal concretions were noted within samples 46, 57 and 63, although it was unclear whether these were derived from human sewage or animal manure.

C.2.9 The fragments of black porous and tarry material, which were present, often at high densities, within most assemblages, were probably largely derived from the combustion of organic remains (including cereal grains) at very high temperatures. However, some had the appearance of industrial detritus and these, along with the coal fragments, vitreous residues and ferrous globules were, perhaps, more likely to be associated with the industrial activities which were occurring on or near the site during the medieval period.

Discussion

C.2.10 With the exception of the samples from within pit **233**, the charred assemblages are relatively sparse, with most probably being derived from scattered or wind-blown refuse of unknown origin. The six assemblages from pit **233** are generally more substantial, with sample 53 (context 252) containing moderate densities of wheat chaff and grains along with numerous culm nodes and culm fragments. It would appear most likely that these assemblages are principally derived from small deposits of mixed refuse (including hearth waste, culinary refuse, fuel residues and possibly remnants of burnt flooring materials), which were dumped within the fills of the pit.

C.2.11 The de-watered assemblages from samples 30 (Pit **181**), 44 (Pit **222**), 46 (Pit **245**, Plate 7) and 63 (Pit **250**, Plate 3) appear to indicate that some areas of the site were poorly maintained and probably overgrown with colonising weeds, although shrub growth appears to have been managed and kept to a minimum. Of particular note within these assemblages is the abundance of seeds of henbane and black nightshade, both plants found on rich soils with high levels of phosphates and nitrogen. The industrial processes which were being conducted nearby, would almost certainly have resulted in an abundance of offal, hide, blood and other animal products which, over time, would have enriched the soil, providing an ideal habitat within which these species would have flourished. Other macrofossils within the de-watered assemblages (for example the buttercup seeds and sedge fruits) appear indicate that hay and other plant materials were being imported onto the site, either for use as part of the industrial processes, or as flooring materials.

Conclusions and recommendations for further work

C.2.12 In summary, the malodorous nature of the industrial practises, which were being conducted on or near the site during the medieval period, would almost certainly have militated against this area of St. Ives being used as a main centre of domestic activity. This does appear to be reflected within the plant macrofossil assemblages, where there

is minimal evidence for the dumping of small quantities of charred refuse, but nothing to indicate the primary deposition of detritus from any nearby settlement. Noxious industrial waste products were almost certainly soaking into the soil, creating ideal growing conditions for certain ruderal plants, a number of which it should be noted, are extremely toxic in their own right.

C.2.13 As the density of material within the samples is generally very low (mostly <0.1 litres in volume), most assemblages contain insufficient material for quantification and analysis (i.e. <200 specimens). Therefore no further work is recommended at this stage. However, a written summary of this assessment should be included within any publication of data from this site.

Appendix D. OASIS Report Form

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-318191		
Project Name	Excavation at The Bowd Engineering Works Site, East Street, St Ives		
Project Dates (fieldwork) Start	01-08-2007	Finish	30-11-2007
Previous Work (by OA East)	No	Future Work	Unknown

Project Reference Codes

Site Code	STIEST07	Planning App. No.	H/06/03477/FUL
HER No.	ECB 2735	Related HER/OASIS No.	ECB 2319

Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPG15
Development Type	Urban Residential

Please select all techniques used:

☐ Field Observation (periodic visits)	☐ Part Excavation	☐ Salvage Record
☐ Full Excavation (100%)	☐ Part Survey	☐ Systematic Field Walking
☐ Full Survey	☐ Recorded Observation	☐ Systematic Metal Detector Survey
☐ Geophysical Survey	☐ Remote Operated Vehicle Survey	☐ Test Pit Survey
☒ Open-Area Excavation	☐ Salvage Excavation	☐ Watching Brief

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Quarry Pits	Medieval 1066 to 1540	Pottery	Medieval 1066 to 1540
Boundary Ditch	Medieval 1066 to 1540	Pottery	Post Medieval 1540 to 1901
Quarry Pits	Post Medieval 1540 to 1901		Select period...

Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	
District	Huntingdonshire	Old Bowd Engineering Works Site East Street, St Ives Cambridgeshire	
Parish	St Ives		
HER	Cambridgeshire		
Study Area	194sqm	National Grid Reference	TL3132 7140

Project Originators

Organisation	OA EAST
Project Brief Originator	CAPCA
Project Design Originator	James Drummond-Murray
Project Manager	James Drummond-Murray
Supervisor	Glenn Bailey

Project Archives

Physical Archive	Digital Archive	Paper Archive
CCC Stores, Landbech	OA East Offices	CCC Stores, Landbech
STIEST07	STIEST07	STIEST07

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☐	☐
Ceramics	☒	☐	☐
Environmental	☒	☐	☐
Glass	☒	☐	☐
Human Bones	☐	☐	☐
Industrial	☒	☐	☐
Leather	☐	☐	☐
Metal	☒	☐	☐
Stratigraphic		☐	☒
Survey		☐	☒
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☒	☐	☐
Worked Stone/Lithic	☐	☐	☐
None	☐	☒	☐
Other	☐	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☐ GIS	☒ Context Sheet
☐ Geophysics	☒ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☐ Spreadsheets	☒ Map
☒ Survey	☒ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☒ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

Drawing Conventions

Plans

Limit of Excavation

Deposit - Conjectured

Natural Features

Sondages/Machine Strip

Intrusion/Truncation

Illustrated Section S.14

Archaeological Deposit

Excavated Slot

Modern Deposit

Cut Number 118

Sections

Limit of Excavation

Cut

Cut-Conjectured

Deposit Horizon

Deposit Horizon - Conjectured

Intrusion/Truncation

Top Surface/Top of Natural

Break in Section/
Limit of Section Drawing

Cut Number 118

Deposit Number 117

Ordnance Datum 18.45m OD

Inclusions
(Stone/Brick)

Convention Key

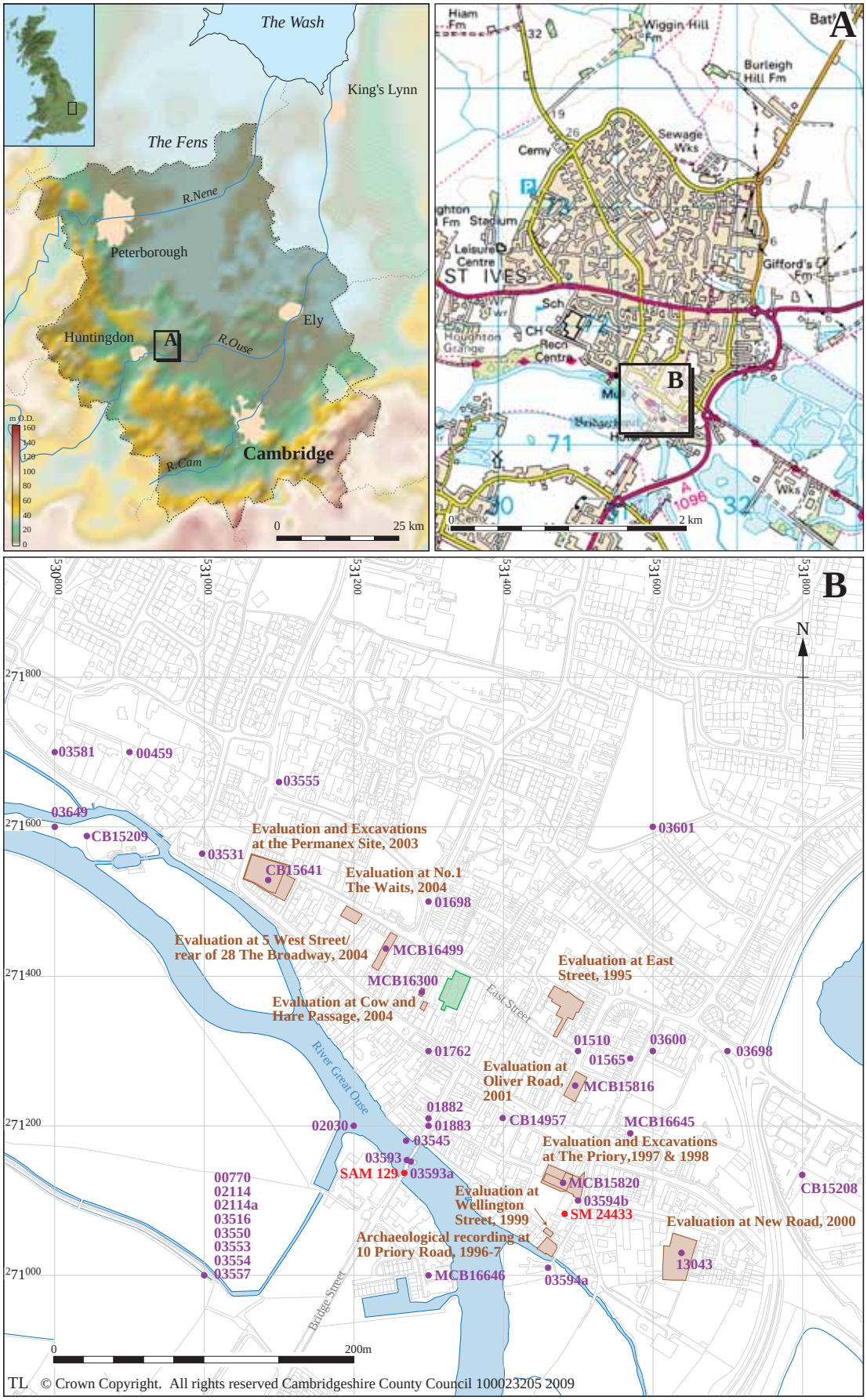
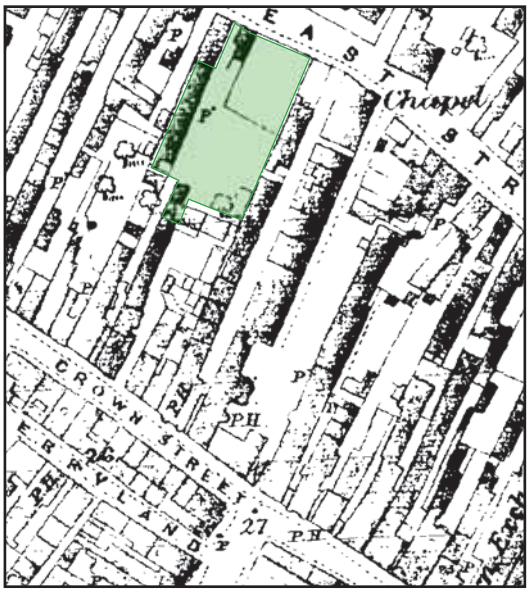


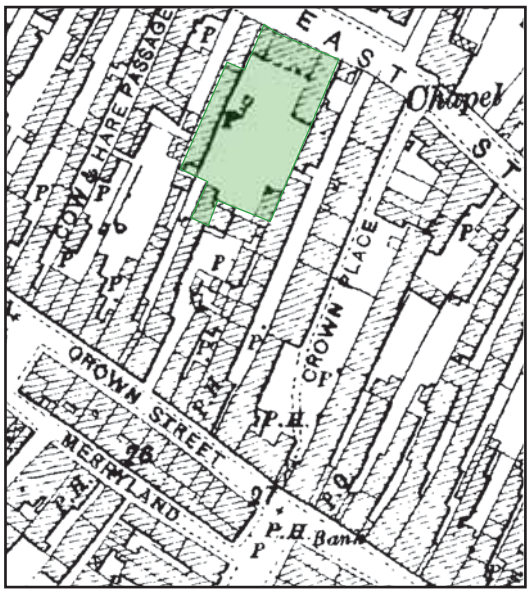
Figure 1: Location of development area (green) and local Historic Environment Records

Figure 2: Pettis' map of 1728, with the location of the site highlighted (green).

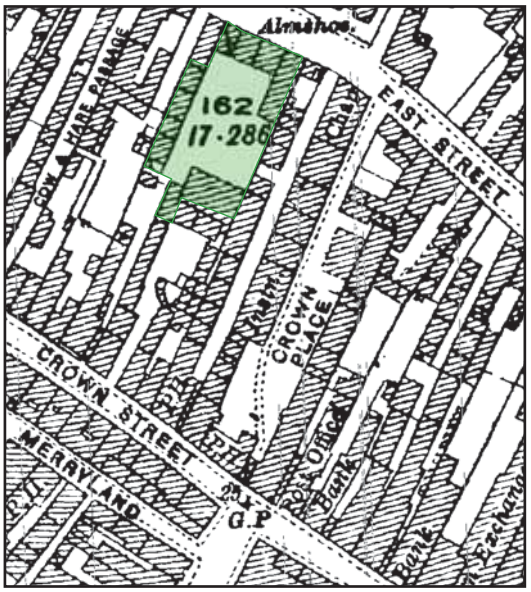
Figure 3: The Enclosure Map of 1808, with the location of the site highlighted (green)



1st Series 1885



2nd Series 1887

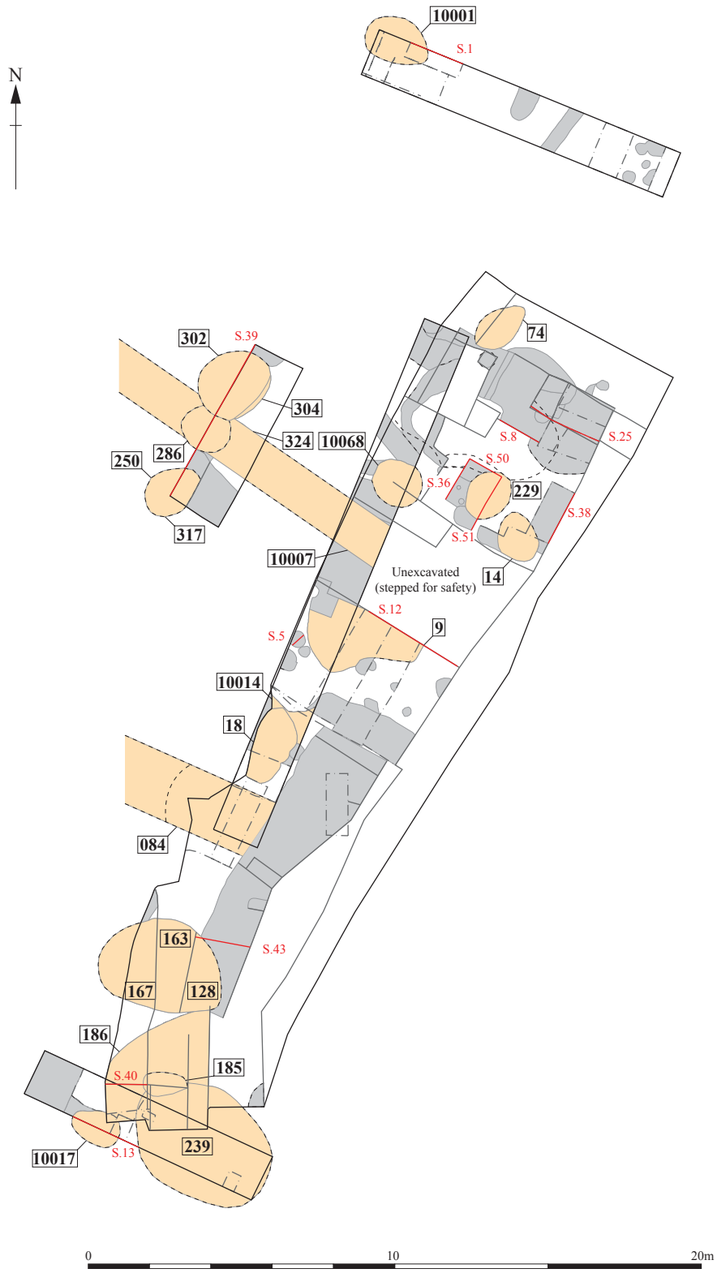


3rd series 1901

Figure 4: The Ordnance Survey maps of 1885, 1887 and 1901, with the location of the site highlighted (green)

Figure 5: Excavation Plan of the site showing evaluation trenches (1:150)

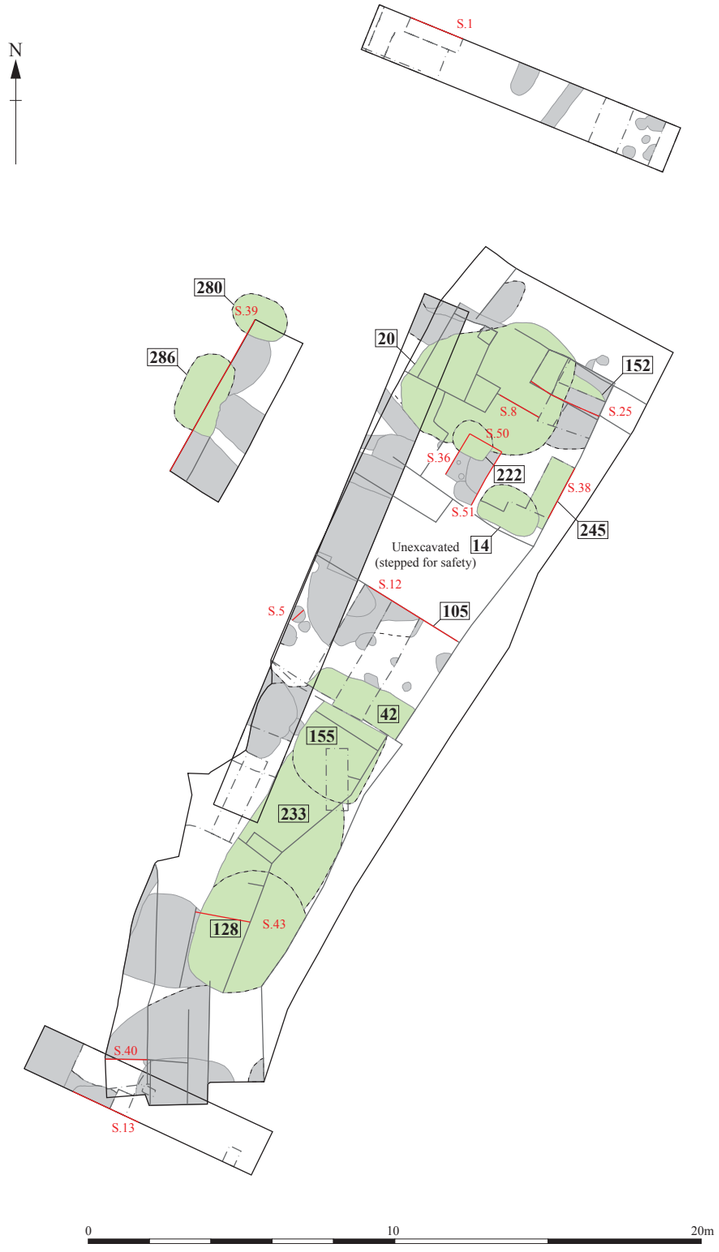
Phase 1: 12th/13th - 14th Century



Phase 2: 14th - 15th Century

Figure 6: Plans showing phases 1 and 2 of the site (1:200)

Phase 3: 16th - 17th Century



Phase 4: 19th Century - Modern

Figure 7: Plans showing phases 3 and 4 of the site (1:200)

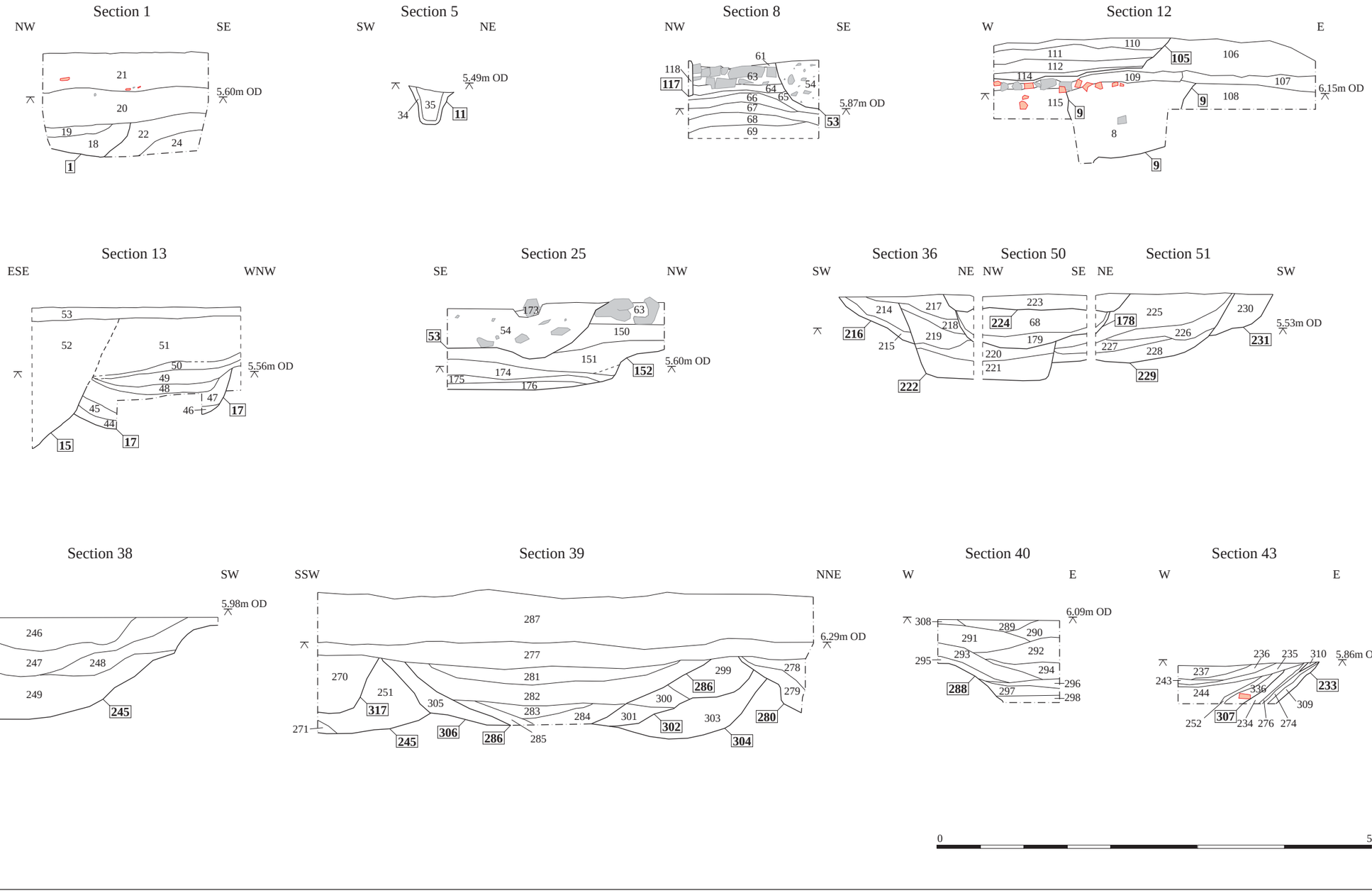


Figure 8: Sections (1:50)

Plate 1: Site stripping

Plate 2: Working shot

Plate 3: Pit 250

Plate 4: Pit 233

Plate 5: Pit 20 (equal to 156 and 178)

Plate 6: Pit 178

Plate 7: Pit 245 (equal to 11)

Plate 8: Working shot

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