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CAM ARC Report Number 992

New Inn Yard, Wisbech, Cambridgeshire

Excavation Report

Richard Mortimer
March 2008

Cambridgeshire County Council
Environment & Community Services

Commissioned by Peter Humphrey Associates

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Excavation Report

Richard Mortimer MIFA

With contributions by Nina Crummy, Chris Faine BA MA, Carole Fletcher BA AIFA, Val Fryer and Steve Hickling BA

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PROJECT DETAILS				
Project name	New Inn Yard, Wisbech			
Short description	Sequence of medieval and later medieval flood deposits and early post-medieval industrial pits and building remains with domestic and industrial dumping.			
Project dates	Start3/11/04		End	19/11/04
Previous work			Future work	No
Associated project reference codes	WIS NIY 04			
Type of project	Evaluation and Excavation			
Site status	none			
Current land use (list all that apply)	Developed land (standing buildings)			
Planned development	Residential block			
Monument types / period (list all that apply and use thesaurus of monument types)				
Significant finds: Artefact type / period (list all that apply and use MDA object thesaurus)	Early post-medieval ceramic and faunal assemblages			
PROJECT LOCATION				
County	Cambs.	Parish	Wisbech	
HER for region	Cambridgeshire			
Site address (including postcode)	New Inn Yard, Wisbech, Cambs.			
Study area (sq.m or ha)	200 sq m			
National grid reference	Easting	54613	Northing	30975
Height OD	Max OD	6.00m	Min OD	4.00m
PROJECT ORIGINATORS				
Organisation	Cambridgeshire County Council, CAM ARC			
Project brief originator	Andy Thomas, CAPCA			
Project design originator	Richard Mortimer			
Director/supervisor	Richard Mortimer			
Project manager	Mark Hinman			
Sponsor or funding body	Private			
ARCHIVES	**Location and accession number**		**Content (e.g. pottery, animal bone, database, context sheets etc)**	
Physical	CAM ARC Bar Hill		Finds – pottery, clay pipe, bone, metalwork, stone etc.	
Paper	CAM ARC Bar Hill		Plans, contexts etc	
Digital	\\ccc.cambridgeshire.gov.uk\data\Elh Afu\Active Projects\Cambs\Wisbech Town\New Inn Yard\Report stuff		Access archive, Excel tables, digital finds reports etc.	
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Summary

In November 2004 two stages of archaeological evaluation and excavation/watching brief were undertaken by CAM ARC (then the Archaeological Field Unit of Cambridgeshire County Council) at New Inn Yard, Wisbech. The site is close to the medieval core of the town to the north-west of the High St and Market Place and close to the east bank of the River Nene. The project was commissioned by Peter Humphrey Associates in advance of construction of a small block of flats.

The archaeology of the site covered three main periods. The later medieval period saw the deposition of layers of flood silts that overlay a deeper, cleaner deposit that may indicate the site lies on a roddon. There is no evidence for the direct occupation of the area until the 16th century when activities centred on the excavation, construction and utilisation of a variety of pits and associated buildings, and the deposition of both industrial and domestic waste, the latter possibly associated with an inn. Pit cutting and the deposition of domestic waste continued through the 17th century; the buildings were removed and a fence line constructed. Around the turn of the 18th century the area came under housing development and this continued, and intensified, through the 19th century.

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1 Introduction

This archaeological evaluation and excavation was undertaken in accordance with a brief issued by Andy Thomas of the Cambridgeshire Archaeology, Planning and Countryside Advice team (CAPCA; Planning Application F/YR04 3764 F) supplemented by a specification prepared by Richard Mortimer of CAM ARC, Cambridgeshire County Council (formerly the Archaeological Field Unit).

The site lies on the edge of the medieval core of Wisbech, lying 40m from the east bank of the River Nene and to the north-west of the High St and Market Place (Fig 1). Previous archaeological investigations had demonstrated that significant, stratified medieval and post-medieval deposits were likely to survive within the area. The project was commissioned by Peter Humphrey Associates in advance of the construction of nine dwellings. Due to the presence of deeply stratified archaeological deposits on the site the development was designed to sit on a concrete raft, effectively sealing any deep archaeological remains. Groundworks required for the building project were likely to affect up to a metre's depth from the then ground level and this project sought to characterise those remains under threat.

The evaluation stage of the project was undertaken between the 3rd and the 5th of November. The site occupied approximately 200 square metres, and, initially, two 3m x 3m Test Pits totalling 18 square metres, or approximately 9% of the site area, were excavated (Fig. 2). Test Pit 1, at the southeast of the site, was excavated into a backfilled post-medieval cellar, Test Pit 2, at the northwest, revealed complex early post-medieval stratigraphy of pits and deposits, with what appeared to be the back wall of a second cellar at its southern limit.

The evaluation results indicated complex stratified late medieval/early post-medieval deposits cut into silt flood deposits along the northern half of the site. The southern half of the site appeared to have been truncated by 18th century brick-built cellars to a depth of approximately 1.10 – 1.30m below ground level. Following on-site consultation between the CAPCA and the client a further programme of work was agreed upon and designed to include both excavation and watching brief. This second phase was carried out between the 15th and 18th of November 2004.

Construction of the foundations for the northern and eastern sides of the building necessitated the removal of archaeological deposits up to a metre deep (greater where archaeological deposits, continued below this depth). These trenches were to be opened by JCB, under the supervision of the author, to the level of significant deposits. These deposits would then be hand excavated.

The foundation trenches for the southern and central areas of the building were thought to be located in areas severely truncated by the 18th century cellars. A recording brief was designed to be undertaken on these trenches with all machine excavation to be under the supervision of an archaeologist.

The site archive is currently held by CAM ARC and will be deposited with the Cambridgeshire county stores in due course.

2 Geology and Topography

Solid geology in the vicinity of Wisbech comprises Jurassic Ampthill clays, and pre-Flandrian gravels have been observed at below minus 15.0m OD (Waller 1994, 228). Settlement patterns, however, have been dictated by a complex and locally variable Flandrian sequence of marine transgressions, river channel (or roddon) formation, and reed swamp growth. These have led to the deposition of a thick accumulation of silts, clays, and peats.

The Flandrian deposits (deposits since the last Ice Age) are mainly marine clays, silts and sands, with most Roman and later activity occurring on an upper silt deposit. The silt area of northern fenland is associated with complex environmental change over the past two millennia. There is a relatively high band of silt running roughly west to east, from the estuary at Kings Lynn to the Lincolnshire border, that underlies the town of Wisbech. The entire island lies below 10m OD, and has been subject to repeated flooding episodes. To the south of this island lies the fresh water peat fen and to the north the salt waters of the Wash. The Nene estuary at Wisbech marks a salt water intrusion into the silt island (Wisbech EUS draft).

The area within the town is relatively flat, with an average height of around 5m OD, ranging up to 7m OD at the east end of Hill Street. The ground level adjacent to the excavation, on the surface of the Nene Quay is at 5.50m OD. The benchmark on the entrance of the church of St Peter and St Paul which lies to the south east of the excavation is 5.10m OD, and is well over a metre above the floor level within the church itself.

The town of Wisbech is situated approximately 45km north of Cambridge. The town centre is flanked on the west side by the River Nene and was, until recently, defined on the east side by the disused Wisbech Canal (now the A 1101/Churchill Road). The town was originally situated where the Wellstream joined the Wysbeck: the former was, in recent times, part of the Wisbech Canal, the latter formed part of the main outfall of the Great Ouse, and is now part of the Nene. The town also lies on the crossing of the A47 Kings Lynn to Peterborough, and the A 1101 Ely to Long Sutton routes.

3 Meteorological Background

The fortunes of the town of Wisbech have been tied to the shifting outflows of the Nene and, particularly, the Ouse. Due to its precarious situation on low lying ground adjacent to the outfalls of these two major water courses the town appears to have been particularly prone to flooding and other climactic variations. The combination of a number of factors conspired to create what appears to have been a particularly extreme environment in the area surrounding Wisbech and across the whole of the Fenland throughout the medieval period, and it is important to consider these conditions when examining the development of the town in general.

The devastating effects of abnormally high tides, lengthy wet periods and stormy weather were further exacerbated by intermittent periods of drought. During these periods the rivers had insufficient power to scour away the silts accumulating within their tidal channels so that they became shallow and incapable of dealing with either high tides or freshwater inundations. Documentary sources relating to episodes of flooding and drought in the fens at this time are extensively reviewed in Hallam (1965) and will not be repeated here. The findings of previous excavations within the Town at Market Mews (Hinman 2002, Hinman and Shepherd Popescu in prep) recorded a series of flood borne silts up to a metre in depth. Such large deposits of silts trapped within and around the damaged buildings of the town significantly raised the ground level prior to rebuilding. It has been suggested (Hinman *op. cit*.) that these events may have significantly altered the medieval topography of the town.

The 16th and 17th century development at New Inn Yard appears to sit directly on a layer of medieval flood deposit which itself overlies a great depth of clean, firm silts. The height of these apparently unoccupied silts, compared to that of the intense medieval development recorded at Market Mews, may suggest that the New Inn Yard occupies part of the Ouse roddon system that runs beneath the town from southeast to northwest and is also occupied by the Castle and the Church of St Peter and St Paul.

4 Archaeological and Historical Background

4.1 Archaeological Background

Prehistoric remains are almost unknown in the parish, apart from generally unprovenanced stray finds.

Peat growth has been recently dated to the Late Bronze Age near Wisbech, and may have continued into the Romano-British period in

some places. The area was almost entirely submerged during the Iron Age, and dry land only began to emerge in the Roman period. (Wisbech EUS)

Roman activity in the area is of two main types – salterns and agricultural settlements. The salterns lie on the roddons along the fen edge, and are fairly numerous. While the predominantly urban nature of the parish of Wisbech masks potential archaeological finds, occasional finds of coins and pottery from within the town suggest the possibility of Roman predecessor to the Saxon and medieval town. The main Roman communication routes across the Fens lie well to the south of Wisbech.

There is very little evidence of Early Saxon activity which is limited to two brooches found at the Corn Exchange. However, the island was likely to have been settled throughout the Middle and Late Saxon period - a series of Middle Saxon sites occupied similar sites to the northeast of Wisbech. At some point before the medieval period Wisbech (first referred to as such in 1013) became the primary settlement, probably due to its location at the confluence of the two principal rivers (the Nene or Wys Beck and the Great Ouse tributary known as the Well Stream).

The only intensive archaeological excavation to have taken place within the town is that of the deeply stratified medieval and post-medieval deposits at Market Mews, approximately 120m east-southeast of the current site (Hinman 2002, Hinman and Shepherd Popescu in prep). Evidence was found here of an extensive sequence of episodic flooding interspersed by layers of occupation. The latter comprised floors and building footings, often associated with well-preserved organic remains and metalworking waste. The whole sequence covered the period from the 13th to the 17th century.

The subject site is located relatively close to Wisbech Castle (SMR CB2462: 120m south-southeast) and lies in an area of archaeological significance in the corner of land formed by the confluence of the Rivers Nene and Wellstream. The line of the Wellstream is today marked by Churchill Road.

4.2 Historical Background for the Town of Wisbech

Wisbech is first referenced as a grant to the abbey at Ely *c.* 1000AD from the East Anglian Bishop Aelfwine. The scale and nature of Saxon occupation is unknown but a manor is currently thought to have been located on the west bank of the Wysbeck due to its site there and presumed pre-Norman origins of the Old Market (VCH Vol. IV, 243).

The 'New' Market Place is situated on the tongue of land bound by the two water courses, and north of the outer ditches of the former castle,

whose topographical influence is still reflected in the fan-shaped distribution and wedge-shaped building plots bordering the south side of the Market Place. The relocation of the market to its current location is likely to have been broadly contemporary with the construction of the castle in 1089 and the church of St Peter and St Paul. These elements combined could be seen as evidence for a conscious decision to develop Wisbech, as a place already of some importance, through the stimulation and regulation of trade (Pestel 2001).

New Inn Yard lies within a funnel-shaped piece of land with the Castle and the market on its east, Hill Street at its north and the River Nene to the west. New Inn Yard is one of two narrow throughways between the market place and the quay, the other, New Bell Lane, presumably also named after a public house.

The development of the port town of Wisbech has been inextricably linked to the viability of the Nene outfall and Fenland waterways. Continuous silting up of the Nene was a recurrent problem, preventing all but the smallest ships from reaching the town. The success of the early port is uncertain, the impression given by surviving records is that during the 13th century Wisbech was a large and slightly urbanised village. Also, at some time around the beginning of the 14th century violent storms caused the diversion of the River Ouse from Wisbech to its present course via King's Lynn. The cutting of Morton's Leam from Peterborough to Guyhirn in 1480 improved the flow of the Nene with a consequent increase in trade. The town became a corporate borough in 1549 and by the early 18th century was becoming a major port. As Taylor (1977) notes this period of prosperity, which continued into the 19th century, is still reflected in the architecture of the town. The town has also suffered episodic severe flooding, the first documentary reference to which is made in 1236, when flooding destroyed the castle and probably dramatically affected the whole area around the market place, (Hoyland 1992, 3).

4.3 Historical survey of the area around New Inn Yard

The date for the emergence of the modern street pattern around the Market Place is not clear, but the map of Castle estates in 1792 shows Bridge Street and High Street, with houses marked between the Castle boundaries and the High Street and Market Place.

One of the oldest buildings in Wisbech is the Rose and Crown Inn (No. 25 Market Place), which is recorded under its older name of the Horn and Pheasant in 1475 (Gardiner 1898). Recent building work inside the building has confirmed that the structure has several phases of greater antiquity than the visible fabric would suggest. The listing description states that the current building is a 17th century (1601) coaching inn with a much later 19th century facade. This has implications for other properties in the vicinity, for the area is comprised of similar faced

buildings, and there is a possibility that other 17th century or earlier buildings lie behind Georgian and Regency facades (Wisbech EUS).

Hill Street was originally divided into Lower and Upper Hill Street until the 1950s when the modern, all-inclusive name was adopted. Formerly Lower Hill Street was known as Ship Lane, and was probably renamed in 1825 when a schedule for Ship Lane/Hill Street is listed in the Corporation Records. Another example of medieval architecture hidden within the fabric of seemingly later buildings is No.27 Hill Street (formerly the Guildhall of Holy Trinity and later the Grammar School), parts of which date to the 14th century (Wisbech EUS).

The change in name of Ship Lane may be a reflection of the physical change in the topography of the town through the medieval period. Excavation at Market Mews (Hinman 2002, Hinman and Popescu in prep) suggests that change may have been both profound and widespread, brought about by the deposition of huge quantities of riverine silts in times of flood.

4.4 Corporation Records relating to the New Inn

John Crane, an apothecary at Cambridge but a native of Wisbech, died in 1651 leaving, amongst other charitable bequests, an inn called the Black Bull, in Wisbech; the revenue to cover the schoolmaster's wages at the free grammar school, and to be given to the poor at Christmas (Watson 1827). The earliest reference to the New Inn (then The Bull) in the Minutes of the Wisbech Corporation was in 1659, with further mentions throughout the early 1670s with respect to conveyancing, until 1674 when arrangements were made for letting of the Bull and its mills. This is the first mention of the oil mills that were attached to the property. In 1675 there is a record of repairs and the cost of lathing the inn's stable. In 1678 the inn was let again, for a period of 20 years, followed a year later by the oil mills, let at £16 a year, and again the following year, at the same price. There are further references of repairs to the brewhouse in the 1680s, new stairs built in the 1690s and apparently a complete rebuilding of the inn in 1695. 18th century references are to the letting of the Bull estate in 1738, repairs in 1761, thatching the granary in 1772 and the rebuilding of the gable of the Bull yard in 1778. In 1801 the inn was put up for sale under the new name of the Three Tuns and in 1816 the final reference is to a subscription towards the paving of the yard of what by now was called the New Inn.

5 Methodology

The majority of the trenches were machine-excavated and recorded in section, with limited excavation of the lower levels of some of the deeper features. More detailed hand excavation was only possible in trenches 3 & 5, following on from that carried out in evaluation trench

2. Figure 2 shows the locations of all trenches and of the sections reproduced in the report.

A plan (at 1:50) was produced of the site area, trenches and test pit locations. Each individual trench or test pit was then hand drawn at a scale of 1:20. Thereafter, single context and/or excavated feature plans were produced for all exposed and excavated features. Trenches and features were tied in to the OS grid. Sections of all trenches were drawn at 1:10 the majority of which are illustrated in the report. The written record is based on CAM ARC's single context system and monochrome, colour slide and digital photographs of trenches and excavated features form part of the archive.

Bulk samples were taken from a wide range of deposits to test for the presence and potential of micro- and macro-botanical environmental indicators. Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

Site conditions were poor during both the evaluation and excavation phases, with heavy rain, sleet and snow and freezing temperatures. The development area was too limited to allow for the positioning of site accommodation.

Site phasing was derived utilising the limited stratigraphic data available in combination with dating derived from artefactual assemblages, primarily ceramics and metalwork. Grouping of associated features is fairly broad based and the results of this work have been determined in part by the restricted nature of the excavation.

6 Results

A total of 6 phases of activity spanning the medieval period to the present day were recorded at New Inn Yard. The majority of the excavated remains dated to the post-medieval of the 16th and 17th centuries (Phases 3 and 4).

6.1 Phase 1: Medieval Flood Deposits (13th-14th century)

Flood-deposited silt layers were recorded at varying depths across the site. These deposits were generally pale, light yellow-brown sandy clay silts, with occasional thin, coarser, finely laminated streaks and lenses. These appeared to be the remains of reeds and other organic matter, presumably torn from the beds of the rising rivers and mixed into the flood silts.

The earliest datable context was flood deposit 104 recorded in Trench 3 (Section 25, Fig. 9) at between 5.10 and 5.25m OD. A small

assemblage of five pottery sherds was recovered from this layer, all moderately abraded.

No datable material was recovered from any of the other flood deposit sequences recorded at or below this level. These contexts are listed in Table 2 below: These silts were clean, compact and very, very pale.

Trench	Contexts	Section	Max recorded level
3	105 – 106	25	5.05m
7	174	16 & 17	4.90m
10	226 – 229	not illustrated	3.90m
11	245 – 247	14	4.40m
12	139 – 141	13	4.40m

Table 1: Undated (Phase 1) flood deposits

6.2 Phase 2: Late Medieval (mid 14th to 15th century)

6.2.1 Flood deposits

The main datable flood deposits across the site lay between *c.* 5.20m and 6.00m OD. The location of the recorded Phase 1 and 2 flood deposits are shown on Fig. 4.

Trench	Contexts	Section	Max-Min depth AOD
3	42, 56 -7, 111, 152, 156, 158	21	5.25 – 6.00m
3	103	25	
4	89, 91	19	5.20 – 5.65m
4	151/169, 213, 214	n/a	
6	171, 172, 173, 178	not illustrated	5.30 – 6.00m
7	176, 182 – 5	16 & 17	5.00 – 5.70m
11	244	14	5.30 – 5.60m
12	138	13	5.30 – 5.60m

Table 2: Phase 2 flood deposits

A small assemblage of pottery was recovered from the layers within this phase, the majority from layers within Trench 3, and at depths between 5.50m and 6.00m. The faunal assemblage was small with only a few identifiable bones recovered by hand. The sieved assemblage from a bulk sample (context 151) consisted entirely of fish bone.

6.2.2 Features

Two possibly cut or natural features were recorded within the flood deposits.

Cut 186; Trench 6, Section 16, Fig. 9; Cut 16; Trench 1, Fig. 4

A possible terrace (**186**) was cut into flood deposit 174 (Phase 1) and filled by flood deposits 185, 176 and 184 (see Table 3). The feature had the appearance of a natural cut, perhaps formed by a current in the floodwaters, by the effects of scouring as the waters receded or by the presence, perhaps even temporarily, of an obstacle,

a timber or branch. The base of this feature lay at *c*. 4.85m OD and a second, similar feature (**16**) was recorded to the south, heavily truncated by post-medieval cellar 248, the base of which lay at exactly the same level.

6.3 Phase 3: Post-Medieval (16th century)

6.3.1 Pits (Fig. 5)

Eleven pits have been assigned to this phase, though the dating for some is tentative and the overlap between the two phases is not clear cut. There were five large pits, between 2.50 and 3.25m wide and up to 1.65m deep (**26**, **99**, **204**, **255** and **149**), four small pits, up to 1.00m wide and 1.00m deep (**194**, **197**, **199** and **201**), a narrow but very deep feature (**116**) and a large, circular, plaster-lined pit (**188**). Noteworthy finds assemblages were recovered from three of the large features (26, 99 and 255) and broadly date the infilling of the features to the second half of the 16th century.

Large pits

Four of the large pits were grouped at the northwest of the site and were subject to variable levels of excavation. Pit 26 saw a complete section taken across its centre, pits 99 and 255 had sections excavated at their northern ends and pit 204 was recorded in section only. The full extent of the latter three features is not known. These four pits were set very close together but only one stratigraphic relationship could be ascertained – pit 26 truncated pit 204. Only in pit 26 was the base of the feature definitely recorded, though the excavations in pits 99 and 255 both appeared to have reached the base of the feature.

A fifth large, narrow pit (149) was recorded in two sections at the southern edge of the site and a deep, slot-like feature (116) between this and the northern group was recorded in section, and partially excavated.

Pit 26; Trenches 4 & 5, Sections 12 and 19, Fig. 9

A large pit, 3.25m square and 1.65m deep. The sides were near vertical where cut through solid flood deposits, less steep at the southeastern corner where cut into pit 204. The base was uniform and flat. The southern edge of the feature had been removed by a brick soakaway (118, Phase 5). The pit had undergone four distinct episodes of infilling: the basal fill a deposit of industrial waste material, the lower fills a series of small domestic dumps and the central fills a capping of redeposited flood silts. A final series of domestic dumps infilled the hollow at the top of the feature and have been assigned to Phase 4.

Basal Fill (context 24)
The basal fill of the feature comprised of animal bone, principally being cattle horn core, in a white, limey matrix. This material may represent the dumping of waste products, perhaps from tanning or horn working. Black-brown silts from the layers immediately above had worked their way into the layer, though there were still many voids within it. Over seventy complete or near-complete horncores were collected along with large numbers of sheep tailbones. The horncores had been dumped in a relatively even layer across the base of the feature.

An environmental sample from the fill contained tufaceous concretions which could be related either to the storage or heating of water, along with small numbers of freshwater snail shells. There is, however, insufficient evidence to ascertain whether the pit was designed to contain water, whether the water was incidental or whether the evidence for water storage/heating was introduced with the horncore dump.

Lower Fill (contexts 12/43/84)
A relatively dense black-brown ashy silt with frequent charcoal fragments, ash lenses, brick fragments, pottery, oyster shell etc. A mixed layer of dumped material, chiefly from domestic contexts, and dumped in parts in individual layers. The main dumps of material appeared to have entered from the north and west but with thin ashy charcoal lenses washing in from truncated feature 204 (see below) in the eastern pit side. A relatively small assemblage of contemporary pottery was recovered from the fill, along with a small metalwork assemblage. The faunal assemblage contained a wide range of domestic and wild mammals and birds.

Central Fills (contexts 85-88)
The central part of the pit was filled by a dump of redeposited flood silts, some clean and yellow (88), some dirty brown (86, 87) and with lenses of mortar and patches of charcoal throughout. Very little artefactual material was recovered from these fills, though an environmental sample taken from one of the darker, more mixed layers (86), contained an assemblage suggesting that parts of the fill were derived from hearth refuse.

Pit 99; Trench 3, Section 25, Fig 9

A large pit, 2.00m wide and a minimum of 1.20m deep, with a flattish base. The feature extended 0.75m north from the section edge and its form and the angle of its sides were unclear. The fill sequence showed four main fills interleaved with weathering/slip from the pit sides. The infilled pit was cut by two Phase 4 postholes, **108** and **110**. Both the main lower (101/102) and upper (100) fills were of the same material, a very dark brown/black ashy, charcoal-rich silt with frequent inclusions. Capping fill 46 has been placed in Phase 4 (see below). The feature produced significant pottery and faunal assemblages. The make-up of both suggest two distinct episodes of infilling with the lower fill a mixed assemblage of general domestic and food-waste and the upper an incidental and more gradual infill.

Pit 255; Trench 3, Section 25 (partial) Fig. 9

Large shallow pit with gently sloping edges, 2.60m wide and 0.40m deep. The feature extended 0.70m north into the trench. The fill (47, 48) was a dark brown-black ashy, charcoal-rich silt with frequent inclusions. The eastern side of the feature was cut by posthole **251** (Phase 4). The feature produced a considerable pottery assemblage and a small but significant assemblage of metalwork. Unlike the other large pits in this area, very few faunal remains were recovered.

Pit 204; Trench 4, Section 19 Fig 9

This pit was recorded in section only and was 3.00m wide and a minimum of 0.75m deep but only seen at its very southern edge. The earliest recorded fills, 205 and 206, were dirty brown, weathered natural silts from the feature edge interleaved with

small lenses of charcoal and burnt orange silt. Above this was a thick, dense charcoal-rich fill, 207, capped by redeposited flood silts 208 and 209. The feature was cut by Pit **26** on its western edge and through the centre by brick soakaway or cesspit **210** (see below Phase 5).

Pit 149/230; Trenches 11 & 10, Sections 14, Fig. 10

A very large, rectangular pit approximately 1.60m deep and a minimum of 4.00m long, with a wide, open top and deep narrow base. Maximum width at the top of the feature 2.40m, with gradual sloping northern lip, steeper at the south. At a depth of 0.80m on the northern edge and approximately 0.30m on the southern, the edges became vertical. At this point the feature was 0.80m wide. The pit was not excavated and could only be recorded after the trench had been filled with concrete.

The basal fill 224/225 (section not illustrated) was a mixed and dirty, weathering of the flood silt edges; the main central fills 220-223 comprised of layers and lenses of redeposited flood silt and domestic refuse and debris, with frequent ash & charcoal hearth deposits. The feature was capped by a thick layer of dirty, redeposited silt (112/219) and the final fills (217, 218; 234-237, Section 14) had been dumped, or had slumped into the central compaction hollow. This final infilling was packed with brick and tile rubble. The earlier capping fill, 112/219 was cut by pit **148** (see below, Phase 4).

Pit 116; Trench 11, Section 14, Fig. 10

Pit 116 was 1.44m deep, 0.90m wide at surface level, 0.40m wide at the slightly rounded base. A deep, narrow slot-like feature, it extended 0.50m to the west of the section. The excavated basal fill 115 was a dark brown/black charcoal-rich ashy silt. Above this were two paler, grey-brown silt fills (95 and 114), dirty and with frequent charcoal inclusions. The feature was capped by redeposited pale brown flood silts (113, 232) and truncated at the north by cut 215 (see below, Phase 5). Despite very limited excavation the feature produced the second largest faunal assemblage from the site at 1.6kg, chiefly the leg bones of sheep/goat but including a variety of wild mammals, birds and fish.

Small pits

A group of five small to medium sized pits were recorded at the northeast of the site in Trench 6. Circular, sub-circular or oval, four of the pits varied up to 1.00m wide and 1.00m deep while the largest (188) was over 2.00m in diameter. The features occupied a relatively small area but only one stratigraphic relationship was recorded, pit 188 truncated pit 194. Some features were recorded in section only (199, 188); others were partially excavated (194, 197, 201). None of the features contained significant finds assemblages, none had been used for disposal of domestic, or clearly industrial refuse. However, two of the features had structural, mortared elements (197, 188) and two more contained fragments of mortar in their fills (194, 201).

Pit 194; Trench 7, Section 16, Fig. 9

Small, probably circular pit, diameter north-south 1.00m, extended 0.70m west from section. The feature had vertical sides, a flat base, and was a minimum of 1.00m deep. The single visible fill (195) was a soft pale brown clay silt with occasional mortar fragments.

Pit 197; Trench 7, Section 17, Fig. 9

Sub-circular pit, maximum diameter at base 0.75m, minimum depth 0.55m (truncated by later terrace cut). In the base of the pit was a layer of compact off-white mortar forming a flat foundation *c*. 0.05m thick. The main fill of the feature (198) was a pale brown dirty clay silt with occasional mortar fragments.

Pit 199; Trench 7, Section 17, Fig. 9

A small, probably circular pit or large posthole recorded in section only. It had a minimum diameter of 0.50m at the base and a minimum (truncated) depth of 0.40m. The main fill (200) was a clean, redeposited flood silt and could represent post-packing. There was a central fill of charcoal-rich black silt, possibly a post-pipe fill (175).

Pit 201; Trench 7, Section 17, Fig. 9

An oval or sub-rectangular pit 1.15m x 0.95m, with vertical sides to a flat base 0.65m deep. The main, basal fill (58) was a mixed dark brown silt with charcoal and frequent mortar fragments. Above this at the north was a dump of dirty mortar (202) and the feature was capped by a relatively clean and compact clay deposit (203).

Pit 188; Trench 7, Section 16, Fig. 9

A complex, structural pit recorded in section only. A minimum of 2.00m diameter north to south, it extended 0.40m west from the section. The feature was a minimum of 0.90m deep with very steep to vertical sides with a flat base. The bottom 0.10m of the pit was packed with a dense, clean brown clay (189) forming a compact, level base. A wooden tub (191), a minimum of 1.30m in diameter, had been placed or constructed at this level and back-filled behind with dirty mixed silty clay (192). The walls of the tub had then been thinly plastered on the inside, though the base had not. The plaster had survived where the wooden sides had decayed, and the planked base survived, partially waterlogged on the clay base. The basal fill of the plastered tub was an off-white gritty mortar (193) and the upper/main fill was a soft brown silt (62). The feature truncated pit 194 and was itself truncated by two later features 197.

6.3.2 Structural features (Fig 5)

A number of structural elements were recorded across the northern part of the site and have been phased largely by their relationships to other features. The principal elements at this phase were the remains of two probable wall footings, aligned northeast to southwest (**159**, **161**) and set approximately two metres apart upon a level clay floor surface (**157**). Both footings had what appeared to be respecting relationships to the group of large pits, which themselves cut the clay surface. A third possible wall footing (**249**) lay at the same level a further two metres to the east. Only one of these three features was recorded in plan (161), the others being seen in section, 159 apparently at its southern butt end. A shallow, mortar-lined pit (**160**) sat to the east side of wall 161 and was also cut into surface 157.

Surface 157; Trench 3, Sections 21, Fig. 10

Level across Trench 3 at approximately 6.00m OD, a thin, and very compact, flat levelling clay layer, up to a maximum of 0.08 - 0.10m thick. The surface extended part of the way down Trench 6 (S26) and covered an area of approximately 7.50m by

2.00m. The three brick footings (159, 161, 249) were constructed on this layer and pits 26, 99, 255 and 160 all appeared to be cut from this level.

Brick footing 159; Trench 3, Sections 21, Fig. 10

Probable remnant of brick footing. A single course of three bricks (one whole and two part bricks) was recorded in Section 21 impressed into clay layer 157. The width of the feature was 0.44m east to west.

Brick footing 161; Trench 3, Sections 21, Fig. 10

Four metres to the east of 159 a second brick footing was recorded in plan extending 0.50m south from section 21. The footing was approximately 0.55m wide and 0.25m high and was made partly of half-bricks and large brick fragments. A single course was recorded in plan, four courses in section. No particular method of laying or bonding the bricks could be seen. The footing appeared to be contemporary with pit 160 at its east and pit 255 to the south. Two bricks at the south end of the wall were aligned along the back edge of the latter.

Brick footing 249; Trench 6 (section not illustrated)

The sparse remains of a third probable brick footing were recorded in section, loosely aligned with 161 and *c*. 2.00m to the east. Three flat, level bricks were recorded over 1.00m of the, partially overlying a clay layer similar to, and at the same level as 157 to the west.

Pit 160; Trench 3, Sections 21, Fig. 10

A shallow, flat-based pit lined with compact white mortar at its base and sides. The feature was 0.22m deep, at least 0.70m long and extended 0.50m south from Section 21. The fill was a dirty brown redeposited silt.

Two further structural elements have been assigned to this phase: possible brick build 162 and large posthole 83, both in Trench 4.

Brick build 162; Trench 4, Section 17, Fig. 9

Two bricks were recorded in a slight depression at the east end of Trench 4. They were aligned together east to west and one overlay the clay infill of pit 120. It is possible that they represent remnants of a footing wall but they lay 0.50m deeper than the other footings and overlay a feature dated to this phase. Another interpretation would see them as levelling/support at the base of a posthole cut in from higher in the sequence.

Posthole 83; Trench 4 (section not illustrated)

A large, square posthole, 0.55m wide and 0.88m deep. The fills, 168, were a mottled brown/yellow/grey mix of clean and dirty redeposited, patchy silts, with the lower fills being the darkest.

Sample bricks were retained from the two principal wall footings (159, 161) and from 162. The bricks were all handmade, non-uniform, and orange- or yellow-pink. Their dimensions are given in Table 4 (in metric and imperial measurements). The difference in their dimensions, particularly length and breadth, indicates that they were not all made in the same mould, and could represent three separate episodes of construction.

Context	Length	Breadth	Thickness
159	230mm - 9”	115mm - 4 1/2”	50mm - 2”
161	240mm - 9 1/2”	120mm - 4 7/10”	60mm - 2 2/5”
162	245mm - 9 5/8”	120mm - 4 7/10”	55mm - 2 1/5”

Table 3: Phase 3 brick dimensions

6.4 Phase 4: Post-Medieval (*17th century*)

6.4.1 Pits (Fig. 6)

Six pits were recorded at this phase, which divide into two groups: four large, deep pits across the southern half of the site (**147**, **150**, **148**, **14**) and two smaller, shallower features in the northern part (**25**, **90**). None of the larger features were seen to their full extent but appeared generally sub-rectangular and were up to 1.80m wide and 1.40m deep. Three of these were recorded to their bases and all lay at approximately the same level, 4.50m OD. The two smaller pits were up to 1.80 long and their bases lay at *c*. 5.00m OD.

The final infilling sequence of the large Phase 3 pit **26** also dates to this phase with a series of domestic dumps infilling the hollow at the top of the feature. The finds assemblage from these fills was the largest from the site and dates the infilling to around 1640. These fills were subsequently cut by pit 25.

Only one other feature (pit **25**) produced a sizeable finds assemblage, suggesting its infilling around the middle of the 17th century, though much of the assemblage could be residual material from the upper fills of pit 26. The other features produced sufficient material for broad dating.

Large pits

Upper fills Pit 26; Trench 2, 4, 5 Sections 12 and 19, Fig. 9

A sequence of mixed layers and lenses of charcoal, dirty silts, oyster-rich dumps and hearth refuse (contexts 8, 10, 19-23, 33, 67-70) containing large quantities of pottery and other ceramic materials, the largest faunal assemblage from the site and a variety of other domestic objects.

On the west side of pit 26, at approximately 6.00m OD and equivalent to the uppermost layer of the Phase 2 flood deposits, was layer 27. A heavily disturbed surface layer, presumably by activities associated with pit 26, it contained a mixed residual and contemporary pottery assemblage alongside brick rubble and oyster shell.

Pit 14 Trench 10 (section not illustrated)

The base of a large rectangular pit beneath the floor of Phase 5 cellar (below). The pit was 1.90m wide and a minimum of 2.50m long (east-west) with a flat base and near-vertical sides. It survived truncation to a depth of approximately 0.40m. The

basal fill was a dense black, charcoal-rich silt, deeper along the southern edge of the feature. Above this was a relatively loose building rubble fill including stone tile, mortar and brick/tile fragments (13). No excavation of the feature was possible.

Pit 148; Trench 11, Section 14, Fig. 10

A large sub-rectangular or oval pit 1.50m deep, 1.70m wide at the surface, 0.90m wide at the base. The pit sides were near vertical but there was a wide lip at the top, southern edge. The feature was recorded extending 1.20m west from Section 14.

The lower fills (92, 93, 94) were excavated and produced a small finds assemblage. The basal fill (94) consisted of weathered or washed silts from the pit sides and base; fill 93 was a dark brown clay silt, an accumulated, possibly waterlogged deposit. An environmental sample taken from fill 93 indicates the dumping of burnt refuse and sewage waste and suggests the possibility that the feature may have contained standing water. Above this, fill 92 was a relatively clean redeposited silt, dumped or washed in from the south. The upper fill 233 was a relatively homogenous, mixed mid-dark brown silt with common inclusions – charcoal, mortar etc.

Pit 150; Trench 11, (section not illustrated)

A large pit, possibly sub-circular or sub-rectangular, extended 1.40m east from the section. The pit was 1.50m wide at the surface, 1.00m wide at its flat base, near-vertical sided and 1.40m deep. The basal fill (241) was a very dark grey-brown sandy silt with frequent charcoal; above this was a homogenous mottled red/brown silt containing frequent small fragments of brick and tile (117). This was sealed by a thin band of very clean redeposited flood silt (240) and above that fills 238 and 239 were broadly the same material as 117. The bottom 0.50m of the feature were excavated but the feature produced very few datable finds, the bulk of the fill consisting of crushed building rubble in dirty silts.

Pit 147; Trench 12, Section 13, Fig. 10

A large pit recorded in section only with a minimum size of 1.80m north-south and 0.75m west to east. The base of the feature was not seen but it was at least 1.00m deep. The sides were vertical, slumped to undercut. The fills were a series of mid brown slightly clay silts with lenses and patches of charcoal (136, 142-5). The feature had been heavily truncated by the insertion (and removal) of a large sewer pipe (**146**).

Small pits

Pit 25; Trench 4, Section 19, Fig. 9

A sub-rectangular or oval pit approximately 1.80 long, 1.00m wide and 1.20m deep. Vertical-sided and cut into the southwestern part of pit 26 from the topmost level. The single fill (9) was a homogenous dark brown silt with frequent inclusions. A relatively large pottery assemblage was recovered along with a sizeable assemblage of clay tobacco pipes dating to between 1600 and 1660.

Pit base 90; Trench 4 (section not illustrated)

A similar feature to pit 25, though almost completely truncated by trench 4. The base survived at 1.60m west to east, 0.90m north to south and only 0.10m deep. The fill was a redeposited yellow-grey silty sand with charcoal inclusions.

6.4.2 Structural features (Fig. 6)

At the northeast of the site were two small terrace cuts, one (**53**) possibly a realignment of the other (**64**). The construction of the earlier terrace incorporated a contemporary posthole (**81**). The fill of the second terrace was cut through by one of a line of ten postholes, possibly marking a boundary fence line. The fills of all these features contained construction or demolition rubble, bricks, roof tiles and mortar. Datable material was recovered from both terrace fills and some of the postholes; the best dating evidence is for the infill of terrace 53 and suggests the second half of the 17th century.

Terrace cut 64 and posthole 81; Trench 3 (section not illustrated)

A terrace cut or wide slot/trench aligned northwest to southeast at the eastern end of Trench 3. Minimum of 3.00m in length, minimum of 0.60m wide, and 0.50m deep. The feature was cut into by terrace 53/187 at the south and continues into the eastern limit of excavation. The fills (63, 96) were mixed redeposited brown silts with frequent inclusions (bricks and brick, tile and mortar fragments). To the west the cut of posthole **81** was continuous with that of the terrace, the two features contemporary. The posthole was sub-rectangular with a flat base, length 0.36m, width 0.22m and depth 0.27m from the base of terrace cut 64. The fill, a dark orange-brown slightly clay silt with brick, tile and mortar fragments, was similar to the fill of the terrace.

Terrace cut 53/187; Trenches 3 and 7, Sections 16 and 17, Fig. 9

A large, flat-based terrace cut, maximum 0.60m deep. Truncated earlier terrace 64 and may be a re-alignment/recutting of the same. The back of the cut was aligned roughly west to east, a minimum of 2.50m in length to the limit of excavation (Section 16, where the cut was rising sharply). The western side of the cut was a minimum of 3.00m long and was truncated by Trench 4. The fills (52, 59, 61) were a mixed yellow/brown silt with charcoal, brick, tile and mortar fragments.

Postholes 155, 250, 110, 108, 251, 79, 77, 75, 73, 55, Trench 3

Ten postholes were recorded in Trench 3, all had been truncated to some extent. The postholes formed an alignment, northwest to southeast, 11.00m long and broadly perpendicular to the earlier building remains and parallel to the majority of features on the site. They were not evenly spaced. Three of the postholes were dated by finds evidence (**155**, **73**, **55**) and three by truncating relationships to earlier features (**110**, **108**, **251**). The remainder are assigned to this phase by association.

The bases of the postholes all lie between 5.75m and 5.50m OD and there is a general but gentle downward slope from northwest to southeast. There can be no certainty as to the level at which they were cut, all having to some extent been truncated. The post alignment could either represent the wall line of a building, with all trace of footings truncated, or perhaps more likely at this date, a fence line. A narrow alleyway runs along the northern side of the site broadly parallel to the post alignment. It is possible that the fence line marks the earliest manifestation of this throughway.

From west to east the postholes were:

155 Projection on Section 21. Sub-circular, rounded base, diameter 0.45m, depth 0.37m. Base at 5.75m. Fill, a yellow-brown slightly clay silt with occasional brick fragments and small stones.

250 Circular, rounded base, diameter 0.22m, depth 0.15m. Base at 5.62m. Fill, a grey-brown slightly clay silt with occasional brick fragments and small stones.

110 Sub-rectangular, rounded base, length 0.40m, width 0.24m, depth 0.15m. Base at 5.63m. Fill as that of pit 99 that it cut - a very dark brown slightly ashy, charcoal-rich silt with frequent inclusions.

108 Sub-circular, rounded base, diameter 0.40m, depth 0.48m. Base at 5.58m. Fill as that of pit 99 that it cut - a very dark brown slightly ashy, charcoal-rich silt with frequent inclusions.

251 Sub-circular, more pointed base, maximum diameter 0.24m, depth 0.30m. Base at 5.45m. Fill, much as that of pit 255 that the posthole cut - a dark brown-black ashy, charcoal-rich silt with frequent inclusions.

79 Sub-circular, rounded base, diameter 0.20m, depth 0.20m. Base at 5.72m. Fill, a dark orange-brown slightly clay silt with occasional brick/tile fragments and small pebbles.

77 Sub-circular, flat base, diameter 0.24m, depth 0.20m. Base at 5.58m. Fill as for 79.

75 Sub-circular, flat base, diameter 0.20m, depth 0.10m. Base at 5.65m. Fill as for 79.

73 Sub-circular, flat base, diameter 0.30m, depth 0.17m. Base at 5.60m. Fill as for 79.

55 Sub-square, flat base, width 0.36m, depth 0.37m. Base at 5.50m. Fill, a dark brown clay silt with occasional small pebbles.

6.5 Phase 5: Post-Medieval (late 17th/18th century) (Fig. 7)

Phase 5 represents a major change in the land-use and layout of the site, with considerable ground-raising taking place and the construction of major brick-built buildings, the two almost certainly related. The ground level for these buildings has subsequently been truncated and only parts of the below-ground features associated with these buildings remained. The principal feature was a brick-built cellar with a possibly contemporary cesspit at one side. The cellar, and its construction cut, occupied much of the eastern half of the site. On the western half of the site, three brick-built shafts were recorded, perhaps originally associated with buildings above. Parts of two further brick builds were seen at the eastern and western limits of the excavation but were neither investigated nor accurately recorded.

6.5.1 Brick Cellar 248

Evaluation Trench 2 had been excavated into the centre of infilled cellar 248 where the brick floor, northern wall and central brick pillar were recorded. The cellar walls were recorded photographically where revealed, were of single-brick thickness, laid lengthways, and stood to approximately 0.90m high. The construction cut for the cellar (**196**/**215**) was recorded along with its brick floor (6), the base of the central roof support (5), and the fill of a possibly linked, contemporary cess pit (71). There was no evidence that the bricks in any of these elements had been re-used. Recorded across the northwestern part of the site was a layer (45) of redeposited, ground-raising material that may represent the upcast from the construction of the cellar.

Cellar Construction Cut 196; Trenches 4, 6, 7, Sections14, 16, 17 and 19

Large, roughly ovoid, shallow pit or terrace, parts were recorded or observed in Trenches 4, 6, 7, 10 and 11. Recorded dimensions; minimum 7.00m northwest to southeast, approximately 4.00m wide at narrow northwest and 7.50m at wide southeast. Appears to be the construction cut for cellar **248**. The highest level at which the cut was recorded was at 6.40m AOD, it shelved down to c. 5.30m and then again to the level of the cellar floor at c. 4.85m. The fills were a homogenous mid-dark brown clay silt with frequent brick, mortar and charcoal fragments. The feature truncated pits **116** and **188** and terrace cut 53/187.

Cellar floor (6) and roof support (5); Trench1 (section not illustrated)

At the centre of the cellared area was a brick plinth (5), the base of the central roof support of the cellar. The base measured 0.50m x 0.38m and survived to 0.66m high. The plinth was constructed freestanding onto the compact silts below.

The floor at the western side of the cellar was constructed of a single layer of well-laid brick, not mortared but very close-fitting. The bricks were laid end to end in north-south rows which occasionally slightly overlapped with each other. The floor abutted the brick plinth on all three visible sides but came to an end just before the section edge in a broadly north-south line on the plinth's southern side. Beneath the brick floor was a thin (*c.*10mm) layer of compact dirty black silt (7), either an original earth floor or the trample from the construction phase of the building. This layer, or another of almost exactly the same material, continued eastwards in the slight north-south hollow, to the south of the central plinth where the brick floor ended. All the bricks in the cellar were of the same size and a single handmade orange/red brick was retained from the cellar floor. Its dimensions were length 230mm, width 100mm, thickness 65mm.

Fill of Brick Cess pit 71; Trench 9 (section not recorded)

At the eastern side of the cellar was a slightly deeper brick construction, possibly a soakaway or cesspit. It was hollow and appeared to be part of the same construction as the cellar. The trench was narrow and unsafe and could not be recorded but finds were removed from the basal fill of the feature by machine. The fill appeared to either be or contain cess, though as the material could not be recorded *in situ* it was not sampled. It is assumed that the finds were contemporary with some part of the use-life of the cellar and the building above it. However, it is conceivable that they were removed from an earlier feature truncated by the cellar. The fill is precisely dated, by the clay tobacco pipe and glass bottle assemblages, to the first quarter of the 18th century.

Layer 45; Trenches 5, 7, 3 & 12, Sections 12, 16, 13 & 21, Figs 9 & 10

Overlying the majority of features in the northern and western part of the site, in Trenches 3, 5, 7 and 12, including all pits, surfaces and building remains, was a thick dump layer of dirty pale-mid brown mixed, redeposited silts. Inclusions of brick fragments, charcoal fragments and mortar were fairly common, the latter denser towards the base of the layer. The small pottery assemblage was comprised completely of residual material. This material may represent the upcast from construction of the cellar, and part of a major ground-raising event.

6.5.2 Brick soakaways or cess pits

Three brick-built shafts were recorded toward the western side of the site, two circular (**210** and **130**) and one rectangular (**118**). The two circular features had the appearance of wells but where seen (130)

their bases were not deep enough to penetrate the water table. The northern wall of rectangular feature 118 had been recorded in evaluation and taken to represent the northern wall of a cellar, similarly placed to cellar 248 to the east. On excavation (and its near-complete removal by machine in Trench 4) it was seen to be far smaller, more akin to the rectangular extension at the east of cellar 248 (see 71 above).

All three are essentially undateable, though all were truncated at the upper level of their section, and where recorded (210) the bricks in their construction were of the same size as those in cellar 248. The basal fill of one (130) has been dated to Phase 6.

Brick shaft 130; Trench 12, Section 13, Fig. 10

The greater part of the feature was removed by Trench 12, though the eastern side survived and was recorded in Section 13. The roughly circular construction cut (**134**) approximately 1.60m in diameter, contained a single brick thick concave wall, part of a circular or oval shaft, with an estimated minimum diameter of 1.00m. The backfill of the construction cut, 126, was crushed building rubble in a dirty greenish brown clay silt matrix. The green tinge was more noticeable lower down the context. The fill of the shaft had been removed by machine but for the bottom few centimetres (see 170, Phase 6 below). The remains of the fill of the shaft were green-tinged and slightly gritty silts. The base of the feature lay at 4.75m OD.

Brick shaft 210; Trench 4, Section 19, Fig. 9

Cut through the centre of pit 204 (Phase 3) was a curved, brick-lined feature, probably a soakaway or cesspit. Recorded in section only, it was seen at its very edge, with part of the brick lining removed by the trench. The recorded part of the feature was 0.80m wide, but with the remaining bricks angled outwards into the section the feature was clearly wider. The depth of the feature is unknown. There was no wider construction cut on this southern side of the feature, just that immediately behind the brick lining. The fill was a red-brown compact mix of brick, crushed brick and dirty brown silt. While both the construction and infilling of this feature are undateable, the bricks were of the same size as those in cellar 248 and it is included here alongside the main phase of brick construction.

Brick shaft 118; cut 120, Trench 4, Section 13, Fig. 10

The greater part of this feature was removed by Trench 4, though the north wall was located in Trial Trench 1 and the south wall was recorded at the northern end of Section 13. The feature was 1.70m wide (externally) and a minimum of 2.10m long (west to east). No fill was recorded and no finds were retrieved. The construction and infilling of this feature are both undateable. It was, unlike all other brick walls at this phase, constructed two bricks thick.

6.6 Phase 6: Modern (19th century)

Fill of brick shaft 130 (170)

The remains of the fill of brick-lined shaft 130. Only the very base of the fill survived, a few centimetres deep, and contained a pottery dump in a gritty green-tinged silt matrix. The finds assemblage recovered dates the infilling of the feature to the first half of the 19th century (Phase 6).

Layer 18; Trenches 2 and 3, Section 21, Fig. 10

A layer of dumped groundraising material, comprised of dirty, dark brown silts with frequent inclusions of charcoal, brick, tile and mortar fragments, was recorded along the northern edge of the site. The small pottery assemblage indicates a date in the second half of the 19th century (Phase 7).

Fills of Brick Cellar 248; Trench 1 (section not illustrated)

Brick cellar 248 survived to approximately 0.90m deep and had been infilled with layers of building rubble, charred waste and redeposited yellow flood silts (1, 2, 3, 4). The material had been dumped from the southern side of the cellar. The pottery, and more accurately the glass bottles, within these fills date the backfilling of the cellar, and presumably the destruction of the building above, to the last quarter of the 19th century.

Possible drainage culverts, Cuts 50, 252, 253; Trench 3, section 21, Fig. 10

Three large, square-cut, vertical-sided features that cut north from Trench 3. From the west these were numbered **252**, **50** and **253**, and they extended south into the trench by 0.10m, 0.30m and 0.05m respectively. Their widths were 1.60m, 2.20m and 2.20m, and their recorded depths 0.95, 1.05m and 1.10m. The bases of the cuts were not seen and their true depths are unknown. They were, as far as could be seen, aligned south to north, perpendicular to the trench, and were 3.40m and 1.80m apart. They were cut from the highest level of the section, immediately below the tarmac path that ran along the northern side of the site, though the amount of truncation that had occurred at the level of the path is not known.

7 Discussion

Given the very limited number of excavations within Wisbech to date it is essential to consider the results from New Inn Yard in relation to what little other information exists. The principal comparison site for New Inn Yard is the deeply stratified excavation undertaken at Market Mews in 1996 (Hinman 2002; Hinman and Shepherd Popescu in prep). The Market Mews site lay 500m to the east of New Inn Yard, on the northern side of the market square. Medieval occupation surfaces were recorded here to a depth of 3.50m OD, and these were not the earliest observed in the sequence. The earliest dated occupation at Market Mews was 1250-1350, from features that truncated earlier floor levels. The late medieval occupation of the area was intensive above these levels, interspersed with flood deposits of varying depth. The earliest phases recorded at New Inn Yard (Phases 1 and 2) correspond to the 13th to 15th centuries and record the silt deposition from episodes of flooding.

By comparison, the initial activity in the area of New Inn Yard does not appear to have begun until the 16th century, with a series of large pits and associated brick structures constructed at around 6.00m OD. The principal periods of *in situ* archaeological activity recorded are for the 16th and 17th centuries (Phases 3 and 4), with intrusive features recorded for the 18th and 19th centuries (Phases 5 and 6).

Table 4 below sets out the six phases of activity recorded at New Inn Yard alongside the corresponding Period and Phase designations from the Market Mews site. Four Periods encompassing 12 distinct phases of activity were recorded at Market Mews for the medieval and late medieval periods (1200 to 1600). Nothing like this intensity of occupation was seen at New Inn Yard, three Phases, with just one of these (Phase 3) representing direct occupation of the area, cover the same period here.

Wisbech New Inn Yard			**Wisbech Market Mews**	
Phase	Period	Date	Period	Phase
1	Medieval	1200-1400	1	1 - 3
2	Late Medieval	1350-1500	2 & 3	4 - 10
3	Post-Medieval/Transitional	1500-1600	4	11 - 12
4	Post-Medieval	1600-1700	-	-
5	Post-Medieval	1700-1800	-	-
6	Modern	1800-1900	-	-

Table 4: Correlation between phase designations at WIS NIY 04 & WIS MM 96

7.1 Flooding

Flood deposits of pale, light yellow-brown sandy clay silt, were recorded across the site between 3.90m and 6.00m OD. These deposits were clearly banded, with individual layers varying in thickness from a few millimetres to 0.65m. The earliest deposit datable by finds was recorded at between 5.10 and 5.20m OD. The small pottery assemblage recovered was of Late Medieval Unglazed wares, all moderately abraded, and dating to the 13th or 14th century.

The main datable flood deposits lay between 5.20m and 6.00m OD. These Phase 2 deposits are dated, by a relatively large pottery assemblage from several contexts, to the mid 14th to mid 15th centuries. The level of these flood deposits matches exactly those recorded in the Market Mews excavation, corresponding to Market Mews Phase 7iii, and dating to approximately 1450.

The Market Mews excavation results appear to support the idea that the severest floods produced the greatest depths of deposited silts and that these should best preserve the clearest evidence of occupation or activity prior to these floods. At New Inn Yard there was no evidence for *in situ* archaeological activity below this key, datable flood deposit, instead, dense clean silts were recorded between 5.20m and 3.90m OD. These dense, pale, clean silts were recorded in all areas of the site, with the foundation trenches for the new development excavated to depths across the site at which no stratified or intrusive archaeological features were encountered.

This depth and apparent purity of this silt could suggest that the site occupies part of the Ouse roddon system that runs beneath the town, southeast to northwest, and is also occupied by the Castle and the Church of St Peter and St Paul. However, if this is the case, reasons might need to be sought for the apparent inactivity in this area until the post-medieval period. The sequence recorded at New Inn Yard was very different to the dense and intricate stratigraphy seen at the Market Mews site – where archaeological features and layers were recorded throughout the sequence from as deep as 3.50m. The evidence here suggests that this part of Wisbech was not directly occupied until the 16th century.

7.2 Buildings

The earliest structural remains at New Inn Yard were two brick footings at the north of the site dateable to the early 16th Century (Phase 3). They were aligned northeast to southwest, were set four metres apart and their southern ends were roughly in alignment. They may represent the southern end of a building, or part of a building, but their limited exposure makes further interpretation difficult. Both footings are of sufficient size to represent the brick footing to a timber-frame building. Three or four bricks were recorded in section two metres to

the southeast and could represent the remains of a third footing. The alignment of this structure follows that of both the later buildings on the site and anticipates the modern layout of the town.

The size of the bricks in the footings and the other possibly contemporary contexts varies, they are handmade and have not been finished to an exact size. However, they are approximately 9 to 9 ½" (230-240mm) long, 4 ½" (115mm) wide and 2 ¼" (57mm) thick. Two statutes of 1571 and 1625 had attempted to standardize the size of bricks, chiefly in London but also beyond. The former statute set a standard size of 9" (230mm) x 4 ½" (115mm) x 2 $^{1}/_{4}$ " (57mm), and the latter set it at 9 ½" (239mm) x 4" (102mm) x 2 ¼" (57mm). While the two bricks (159 & 161) have lengths of 230 - 240mm, both are 115mm or more wide and therefore probably belong in the earlier category of pre-1625 bricks. Prior to this date bricks were made in a wide variety of sizes, despite attempts at regularisation, and dating them accurately by their sizes is probably less accurate than dating them by their stratigraphic positions within a site.

A fence line was subsequently constructed parallel to the southern end of the building (Phase 4) but there is little evidence to indicate whether it was contemporary with the building or whether the building had been demolished. What evidence there is suggests that the building may have come down. Most of the postholes in the area to the south and east of the building contained brick fragments, as did both terrace cuts at the eastern end of the post alignment and the closest of the large pits to the south (150) was packed with brick and tile rubble. Three shards of window glass were also recovered from this pit, and from the upper fills of pits 26 and 255 immediately south of the building. The fence line may also mark the inception of the alleyway at the north of the site, though the alignment of the large pits, and the positions of the building and the terrace cuts all suggest that the boundary itself may already have existed.

There is no evidence to suggest that the two terrace cuts were designed to take major buildings. However, the earlier of the two had an integral posthole on its back edge and it is possible they held wooden structures.

A major development in land-use on the site came in the later 17th or early 18th century with the construction of one or more brick buildings. A brick cellar, and its large construction cut, occupied the southeast part of the site. While all four walls survived, it had been truncated by later development and modern clearance to stand less than a metre high. The original height of the cellar is not known but the area has to have been truncated to at least a metre below the constructed ground level for the building above and no trace of this ground level survived. The western half of the site contained a number of broadly contemporary brick shafts, soakaways or cesspits, that may well have been part of further, uncellared buildings.

No clear date is known for the construction of this building but indications of date can be taken from the materials of its construction, the wear on the cellar floor, the fill of the possibly related cesspit and the date of the building's destruction:

All the bricks in the cellar were of the same size and a single handmade orange/red brick was retained from the cellar floor. Its dimensions were length 230mm, breadth 100mm, and thickness 65mm. This translates into Imperial measurements as 9 x 4 x 2 $^1/_2$ inches, a size somewhere halfway between the statutory size introduced in 1625 ($9^1/_2$ × 4 × $2^1/_4$ inches) and the size of a modern brick ($8^1/_2$ × 4 × $2^1/_2$ inches). The bricks that made up the cellar floor were very worn and must have seen heavy traffic over a considerable period. The wear was even and there was no indication that they had been re-used.

More accurate dates come from the fill of the cesspit that appeared to be an integral part of the cellar. This area was seen only briefly in an unsafe trench and could not be investigated or recorded adequately. However, its lower fills were machine excavated and give a date for deposition at the base of the feature in the first quarter of the 18th century. The date of the demolition of the building, from the cellar infill, is the second half of the 19th century, giving a lifespan for the building of perhaps 150-200 years. The dating of the construction of the building ties in well with a reference in the Corporation Records to what appears to have been a complete rebuilding of the then Bull Inn in 1695.

These buildings had been completely removed by late 19th and 20th century development and by site clearance for the current excavation. The density of building on the site shown on the 1st edition OS map of 1886 is very high, with not only the excavation area under buildings but practically the whole block of New Inn Yard between the alley at the north and a narrow access strip at the south (Fig. 11). The cellar would appear to have been backfilled at around this time (parts of the glass assemblage date to the last quarter of the 19th century), and what little detail can be seen on the I886 map appears to show buildings in exactly the same locations as later 20th century editions. It is possible that the first OS map shows the original 18th century building, with the cellar still in use, or that a new building had gone up on the same footprint as the earlier one.

The layout of the street frontages of Hill Street and High Street/Union Street are regular and known to have been built up, at least to some extent, since the medieval period – the former Guildhall on Hill Street dates in part to the 14th century, the Rose and Crown on the High St/Market Place from the 15th century. The 1st edition OS map shows both these streets densely occupied, with no gaps in the frontage, and this ordered pattern of development exists as a block approximately

20m deep from the frontage on both streets. On Hill Street this is broken into two parallel rows by the central 'back lane' of New Bell Lane and behind the second row of buildings is the alley that marks the northern side of the New Inn Yard site, now known as Rogby's Lane. The area to the south and west of these street frontages has the much less ordered look of later, post-medieval infill - certainly densely infilled by the time of the first OS map and on the evidence from this excavation from around 1700. However, with the medieval streets to the north and east this area could have remained relatively undeveloped, as back plots to the properties on the two frontages, until this time.

7.3 The form and function of the pits

Domestic

The earlier post medieval archaeology (Phases 3 & 4) was characterised by pits of different forms and functions. While many have domestic refuse included in their backfilling, very few would appear to have been cut primarily for the disposal of this waste although it has not been possible to determine the primary function of these features. Their form, size, and the nature of their infilling sequences suggest that these pits may represent industrial features into which a certain amount of domestic refuse has subsequently been dumped. To be defined as a 'domestic rubbish pit' a feature has to contain domestic rubbish as a primary function.

Of the six larger pits from the first occupation phase most contained at least some domestic waste, though not necessarily in large quantities and occasionally mixed with 'industrial' waste and often with redeposited flood silts. These silts appear to represent infills of convenience – disposing of spoil from the excavation of one pit by putting it into another, abandoned one. To have excavated a large and deep pit to hold domestic rubbish, only to infill it with upcast would be something of a wasted effort. Of the four large pits assigned to the later phase 4 only one contained small amounts of domestic refuse while two were infilled by building rubble.

The only one of the large features to be excavated to a significant extent was the large, square pit 26 which displayed a relatively complex infilling sequence. The basal fill was of tanning waste (see below) and above this were two episodes of domestic dumping separated by thick layers of dirty, redeposited flood silts. The flood silts filled more than half the depth of the pit and the domestic dumps below and above were datable to different phases (3 and 4).

Of the small pits in the earlier phase, none contained domestic refuse, though four of the five had either mortared structural elements or

mortar within their fills. Only two features, the smaller pits in Phase 4, might be described as domestic rubbish pits, though one (25) contained chiefly redeposited material from the fills of the feature that it cut through (26) and the other was so heavily truncated that no clear interpretation can be made (90). These two were of a similar size and shape to a group of pits of roughly the same date (Phase 11) defined as domestic rubbish pits at the Market Mews site.

Industrial

The evidence within the larger pit fills for industrial activity is sparse and present only in some of the earlier Phase 3 features. Dumps interpreted as tannery waste were present in two of the features: a dense layer of cattle horncores, interspersed with sheep tail bones, at the base of pit 26 and a large dump, only partly excavated, of the lower leg bones of sheep from pit 116 (Appendix 6). The remains in both these contexts were in quantities far too large to be regarded as domestic waste, and would have been produced by the large-scale butchering of animals, and by the allied trades of tanning and horn working. The dumps of charcoal seen in pit 204 might also be seen as 'industrial' in quantity, though this feature could not be excavated.

An environmental sample taken from the base of pit 26 suggests that the pit may have held standing water (small numbers of freshwater snails and quantities of limescale – see Appendix 7). It is unclear, however, whether this suggests that the pit was designed for water storage, as part of an industrial process, or whether the water was purely incidental, collecting in the feature after use. It is also possible that this material was introduced into the feature with the dump of horncores, and that they themselves had been within standing, fresh water. The cattle horns could well have been soaked to help in separating the horn from the horncores (Riddler pers. comm.).

Pit 26 cannot itself represent a tanning pit. There was no evidence to suggest it held a waterproof lining to contain the tanning liquor, and tanning was a noxious and unpleasant process, the tanning agents were strong chemical substances such as ash, urine and dog excrement. These would have left residues in the feature that should then be readily identified by the environmental sampling. They are not present. An environmental sample taken from one of the large pits to the south (148) did contain both ash and cess, though these could equally have been introduced with domestic dumps (Appendix 7).

The group of small Phase 3 pits at the northeast of the site contained neither finds nor environmental assemblages that suggested any industrial process. However, one had a mortar base and one held a large wooden 'tub' with interior mortared surfaces, bedded on clay. Only recorded in section, no excavation of this feature was possible, but it clearly possessed some kind of 'industrial' purpose. The other

features around it, of different forms and size, were also non-domestic in character. Some of these could also have held small tubs, barrels or large posts. The low level of excavation undertaken on these features makes further interpretation problematic.

While the few contexts that contained some form of industrial waste indicate that industrial activities were taking place in the vicinity of the site, they do not provide much information as to the original use of the pits themselves. The varied depths and forms of these features would seem to argue against their having a universal function. Amongst the larger features, some are very deep, some shallow, some wide and others very narrow. The smaller pits also vary greatly in their form. More extensive excavation may have elicited further information on the form of the pits (evidence for linings, ledges and other structural features) and on their fills, through finds and environmental assemblages and the structure and sequence of the fills themselves.

7.4 Domestic Consumption

The pottery and faunal assemblages from the site are the largest assemblages for this period to have been recovered from the town and give a sharp insight into the domestic life of the people of Wisbech in the early post medieval period. Due to the limited area of the excavation, and because the vast majority of the finds came from three adjacent pits (87% of the pottery and 75% of the bone in Phases 3 and 4 came from pits 26, 99 and 255), the material at New Inn Yard could be seen as having originated from the same household. It is likely that this land belonged to a particular property over this period.

The pottery assemblage is broadly domestic in character, with large jugs, bowls and jars for storage and for serving food. However, drinking vessels, mugs and cups were found in large enough quantities to suggest that the consumption and storage of liquids was a particularly important element of the activities taking place. This could suggest that the waste was from an Inn – the decades following the dissolution of the monasteries in the mid 16th century saw a great increase in their number - there would have been very many in the town at this time. The records of the Corporation of Wisbech have references to what was the Bull Inn (then the Three Tuns, then the New Inn) on the site at the frontage of Union Street from the 1650s. While it cannot be certain that what this part of what is now the New Inn Yard was always part of the Bull Yard (and Three Tuns Yard) it is at least a strong possibility.

The clay pipe assemblage, again chiefly from these same pits, shows a bias towards the first half of the 17th century, suggesting a relatively early uptake of pipe smoking in the household (Appendix 2). This could be linked to the town's status as a port, with sailors being amongst the

earliest groups taking up the habit, or it could be further evidence for the waste deriving from an Inn.

The faunal assemblage is very varied and, even after removal of the two large 'industrial' contexts (the horn core/sheep tails from pit 26 and sheep legs from pit 116), is a sizeable and important group, not least for what it reveals about the exploitation of fenland and marine resources.

The two industrial dumps aside, the majority of the large domesticate assemblage suggests domestic consumption with butchering going on elsewhere (Appendix 6). Alongside domestic fowl, significant quantities of wild bird remains were found, with duck the most common (both mallard and teal) but also elements of goose, coot and swan. While there is no way of determining whether the mallard and geese were domesticated or hunted, the teal, coot and swan are evidence for the exploitation of the surrounding fens. Forty-three elements from the six bird species were recovered, the vast majority from the fills of pits 26 and 99. Considering the relatively limited numbers of dumping episodes represented by these fills, this signifies an extremely varied diet, and possibly adds weight to the interpretation of these dumps having originated from an Inn rather than from a domestic household.

A variety of both freshwater and marine fish were also found, though in fairly low numbers. Species include cod, plaice, dab, thornback ray, pike, perch and eel. Most of the ray, and some of the dab, were found in flood deposits and could represent fish thrown up during flooding episodes (Appendix 6). However, most was recovered from more domestic contexts and there is evidence here for fishing being carried out both in the fens and rivers and from the beach or inshore waters. Dab, ray and plaice are all found in relatively shallow water and would have been easily caught around the shore. The cod are from both smaller fish that could also be caught in inshore waters and from larger fish that would inhabit much deeper water. The latter could have been imported, possibly dried. Large numbers of oyster shells, along with a few cockles, were also recovered from the fills of the three key pits (26, 99, 255), in both Phases 3 and 4. Some of these deposits were very large, too large to represent single meals for a family, and could again suggest the link to an Inn.

7.5 Domestic Activities

Considering the quantities of other domestic refuse (principally pottery and animal bone) from the site, the metalwork assemblage is fairly small (Appendix 5) but contains a range of objects typical of domestic contexts. Thimbles were found in two of the key pit fills (99 and 255) and indicate small-scale domestic manufacture and repair of clothing. Pit 99 also produced the only two possible craft tools from the site, parts of a metalworking punch and possible carding comb. An iron

weapon head, perhaps an arrowhead used for hunting was also found in pit 255.

The handle from a small copper vessel came from the lower fill of pit 26 and a bronze candlestick came from pit 149 toward the south side of the site. The only dress accessories recovered were a number of small pins and lace-tags and a fragment from a buckle or strap-end. A small iron knife, either for trimming nails or cutting up food, was found in a terrace cut to the east in Phase 4.

7.6 Trade

Evidence for trade beyond the immediate hinterland of the town is easiest seen, as is often the case, in the pottery assemblage - there was no known pottery industry in Wisbech in the medieval or post-medieval periods. The supply of pottery to the town, both as empty pots and as containers for foods and other goods, had a fairly limited basis of supply, with by far the majority across Phases 3 and 4 coming from the closest potteries of Lincolnshire, the Midlands and Essex (Appendix 1). The site was also receiving English pottery in small quantities from as far south as Surrey and continental imports from the Rhineland. For what would have been a relatively busy port the assemblage does not seem particularly varied.

Single pieces of slate (possibly intrusive) and lava quern (again from the Rhineland), while in no way rare, indicate trade in other materials.

The only clear evidence for trade beyond the surrounding countryside in the faunal assemblage are the large cod remains, probably imported as dried fish.

7.7 The water table

While major flood episodes could be catastrophic at Wisbech, as evidenced by both written records and recent excavation (Hinman 2002), they would have been *relatively* rare events. Minor flooding appears to have been a much more common event, however, particularly through the 13th to 15th centuries, and the level of the general water table beneath the town has to be taken into account.

The water table beneath the town would be affected on a daily basis by the tides, would have changed both with the seasons and also over the course of the centuries, rising through the high medieval and early post-medieval periods, falling from the 17th century as the fens were drained and river courses altered and canalised. It would also have varied greatly across the town, dependent upon the micro-topography and proximity to the rivers. The Market Mews excavation illustrated that the frequent abandonment of buildings was a relatively common occurrence due to flooding. There was also evidence from both thin-

section and environmental analyses that the changing level of the water table would have kept the floors of buildings damp for sustained periods (*ibid*).

That the larger and deeper pits in Phases 3 and 4 at New Inn Yard were all cut to a similar depth may not be coincidence. The bases could have been designed to sit at a level that did not, generally, put them within the water table. The base of the deepest of pit, 149/230, lay at approximately 3.90m OD, with three others in the same area (116, 148, 150) at between 4.20m and 4.25m. If these latter three were dug to the same level intentionally, the reason could have been either to keep them just above water level or put them an equal depth below it. An environmental sample taken from the base of pit 148 suggests the latter, with the possibility of sedge growing in standing water at the base of the feature (Appendix 7). However, the sedge could have been introduced to the feature as waste material, the fill subsequently being sealed and remaining damp, preserving the sedge fruits. The evidence pit 26 having held fresh, standing water (limescale and freshwater snails) is equally inconclusive – this material could have been introduced into the feature with the horn core dump.

The bases of the smaller 'industrial' pits on the site (199, 188, 197, 83, 201, 194) all sit within 18cm of each other at between 4.80 and 4.98m. That these features were of different forms and possibly for different purposes, yet were dug to (practically) the same depth may suggest that they were intended to sit above the water table at all times, whereas the larger, deeper pits, may have been affected by high water tables periodically.

By the 18th century further evidence for the level of the water table is revealed by the brick floor of cellar 248, clearly constructed to be above the water table at 4.90m OD, and the base of the soakaway or cesspit 134, perhaps designed also to sit just above at 4.70m.

7.8 Dating

The broad dating for the two main phases at New Inn Yard is reasonably precise, relying as it does on a few sizeable pottery assemblages and the relatively more accurate dating of the clay tobacco pipes. However, the dating of some of the individual features within the phases is less well defined and there is potential for movement across the two phases. Dating of the earlier flood deposits is less clear, as is that for the construction phase of the brick-built cellar and shafts.

The only other excavation within the town that acts as a comparison site is that at Market Mews. The final major phase on that excavation (Period 4, Phases 11-12, 1500-1600) should correspond to Phase 3 at New Inn Yard, though it appears to contain a markedly earlier pottery

assemblage, as a whole, than either of the main New Inn Yard Phases (Hinman 2002, App. ??). This is partly a result of residuality, with a larger number of earlier sherds within the assemblage, to be expected in the final recorded phase in a much longer occupation sequence. However, even taking this into consideration, the pottery assemblages at New Inn Yard appear to be sufficiently later to suggest that both phases 3 and 4 may post-date the final recorded phase at Market Mews. The two main Phases at New Inn Yard are in fact very similar in their make-up and it is likely that the greater part of the activity is in fact quite short-lived and spans the period 50 years either side of 1600.

Tighter dating for Phase 4 at New Inn Yard comes from the small clay pipe assemblage, recovered from five separate features across the site (Appendix 2). The majority of the assemblage can be securely dated to between 1600 and 1660, with some contexts more closely datable to 1640-1660.

8 Conclusions

Very few archaeological excavations have taken place within the medieval and post-medieval centre of Wisbech, and there is as yet no clear model as to how the town expanded. At Domesday the town was neither particularly large nor particularly important, and probably remained limited in size throughout the medieval period, perhaps in part due to the repeated and extensive episodes of flooding. A good indication of the size of the town is that only one church was built at Wisbech during the medieval period, compared to 42 in Huntingdon (Wisbech EUS).

The pre-Norman settlement is thought to lie on the west bank of the Nene, centred on the Old Market, with the development of the area of the New Market on the east bank taking place from the late 11th century onwards following the construction of the Norman castle. The principal roads in the Market area, including the High street and Ship Lane/Hill Street are known to be medieval in origin, with buildings along their frontages from at least the 14th century (Wisbech EUS).

Through the medieval period the area of New Inn Yard may have occupied a back plot, belonging either to a property on Ship Lane to the north (now Hill St) or High Street/Union Street to the east. The street frontages would have housed people engaged in a wide range of crafts and trades as well as domestic dwellings, and the back plots would have been used for an equally wide range of light industrial activities, as well as those linked to domestic occupation.

The first major activity on the site area, took place around the middle of the 16th century, and if seen as part of wider general development, could represent a fairly substantial expansion of the early post-

medieval town. As seen in this, admittedly limited area, it comprised a wide variety of pit types, some linked to brick-based structures, but lacking in sufficient evidence to indicate precisely what activities were represented. Significant dumping of both domestic and industrial waste was taking place, the former including cess, refuse from hearths and large quantities of food/drink waste and associated ceramics. The only clear evidence for industry points to butchery, tanning and possible horn working, though none of it *in situ*. A tentative interpretation for much of the domestic dumping – drinking vessels, early clay pipes, rich and varied faunal assemblage, large quantities of oysters – is that it may represent waste from an Inn. An Inn, then known as the Bull, has been recorded on the site of the current New Inn since 1651.

The starting point for this development, in the middle of the 16th century, coincides with the period, in 1549, at which Wisbech became a corporate town. The corporation of the town may well have proved a catalyst to the expansion of trade, and the economic expansion that would bring would also have brought population expansion and a parallel growth in the trades and service industries.

This 'back-yard' activity gave way to further, possibly residential development by the late 17th or early 18th century. While there is no precise dating for this development, the latest dating for the infilling of the earlier pitting phase is given by clay pipe bowls dating to 1660-1680. As the residential area at the core of the town expanded to infill these areas, the larger industries that had occupied them (e.g. tanning) would have moved further outwards, to the new margins of the town.

The population of Wisbech grew dramatically over this period. At the time of the earliest population return, in 1563, the town was around half the size of Cambridge, and ranked well below both Ely and Whittlesey, with an estimated population of around 1,000. A century later in 1676, the population had doubled to around 2,000 and by 1700 had reached 2,500. Still little more that half the size of Ely or Whittlesey in 1676, the town had grown to outstrip them both by the census of 1801 with a population nearing 5000 (VCH Vol. IV).

The large-scale, and successful, Fen drainage schemes of the middle of the 17th century proved the major stimulus for population growth in Wisbech (Wisbech EUS). With fen drainage fertile farmland replaced thousands of acres of Fen and Wisbech was ideally placed to profit from the boom in agricultural production which itself brought an increase in population. It is at this period at New Inn Yard that the residential development of the area appears to have begun.

In the first half of the 19th century the population more than doubled again, and by 1850 had reached 10,500. As in many 19th century towns, this rapid growth brought about overcrowding and unsanitary conditions and a cholera epidemic in 1849 affected Wisbech badly,

with a second outbreak, equally as bad five years later. The year after this second epidemic the Board of Health sanctioned the expenditure of large sums of money to radically improve both the sewerage and the water supply in the town. It is perhaps this, or similar improvements, that could provide an interpretation for the regular, broad and deep cuts that run off from the northern limit of the. A similar large, square-cut feature was recorded at the Market Mews excavations, and also remained unexcavated (Hinman and Shepherd Popescu in prep).

The excavations at New Inn Yard link up well with those at Market Mews, the onset of development at the former dating to the end of the intense activity at the latter. Together they shed some light on the development of the town between the 13th and 19th centuries, and on the forces, both natural and economic, that helped shape that development. However, the limited scale of both these excavations has allowed little more than a tantalising glimpse at the intensity and variety of archaeological remains that survive here. Whilst it would be unwise to construct development models for the town based on such limited evidence the excavations at New Inn Yard add significant new information on past activities in the town and reinforce previous statements regarding the importance of the well preserved archaeological resource first encountered at Market Mews that still survives below the streets of Wisbech.

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Wisbech EUS

Appendix 1: Post Roman Pottery

by Carole Fletcher

1 Introduction and Background

The excavation at New Inn Yard, Wisbech in 2005, produced a relatively small pottery assemblage of 505 sherds, weighing 11.952kg. Of the 246 contexts recorded, 63 contained pottery. Unstratified material is included in these totals.

Ceramic fabric abbreviations used in the following text are:

Babylon ware	BABL
Bichrome redware	BICR
Bourne B or Bourne B type ware	BONB/BONBT
Bourne D	BOND
Cream ware	CREA
Cistercian/ Cistercian type ware	CSTN/CSTNT
Ely White ware	ELYWW
English Stonewares	ENGS
Essex Micaceous	ESMIC
Frechen stoneware	FREC
Grimston	GRIM
Hertfordshire glazed ware	HERTSG
Late Medieval Ely ware	LMEL
Late Medieval Reduced ware	LMR
Local Medieval Unglazed	LMU
Lyveden–Stanion	LYST
Medieval Ely or Ely type wares	MEL/MELT
Metropolitan Slipware	METS
Nottinghamshire Stoneware	NOTS
Post–medieval Black Glazed ware	PMBL
Post–medieval Red ware	PMR
Raeren Stoneware	RAER
Refined White Earthenware	RFWE
Refined White Earthenware (Sponged)	RFWE(S)
Refined White Earthenware (Transfer)	TRANS
Staffordshire Slipped ware	STSL
Surrey White ware	SURWW
Transitional Redwares	TRANRW
Yellow ware	YELL

2 Methodology

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.

All the pottery has been spot dated and fully quantified on a context by context basis into an Access 2000 database using CAM ARC in-house system based on that 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. Sherds warranting illustration have been identified, as have possible cross-fits. CAM ARC curates the pottery and archive until formal deposition of the site archive.

3 The Assemblage

3.1 The Assemblage by Phase

The pottery assemblage can be divided into groups of types that together represent broad time brackets or phases. The pottery recovered from each site phase is outlined below, together with the relationship between each site phase and ceramic phase. The site was divided into six main phases of which only two (Phases 3 and 4) produced sufficient sherds (more than 100) to warrant detailed analysis.

*Phase 1: Medieval (*13th-14th century*)*

The pottery recovered from the early flood deposits in this phase totalled 5 sherds, 0.044kg. Phase 1 relates to ceramic phase 5, the high medieval period and fabrics present include BONB and LMU no glazed sherds were recovered.

*Phase 2: Late Medieval (*mid 14th to mid 15th century*)*

Pottery recovered from this phase of further flood deposits relates to ceramic phase 6, late medieval in date. 39 sherds, 0.414kg can be assigned to this phase. The fabrics are as Phase 1 with the addition of GRIM, ESMIC, MELT and intrusive sherds of BOND.

*Phase 3: Post-Medieval / Transitional (*16th century*)*

There are no flood deposits within this phase and the pottery relates to Ceramic Phase 7 and includes early post-medieval pottery Bourn D, later PMR, CSTN and RAER, also present are residual medieval fabrics. This phase is large enough to warrant statistical analysis with 135 sherds, 2.629kg.

*Phase 4: Post-Medieval / Transitional (*17th century*)*

Pits, buildings and redeposited flood deposits provide the pottery in this phase and relates also to Ceramic Phases 7 and contains a similar range of fabrics with the addition of FREC and METS. This phase is also large enough to warrant statistical analysis with 250 sherds, 5.015kg.

Phase 5: Post-Medieval **(18th century)**

This phase relates to Ceramic Phase 8 and contains PMR, STSL and NOTS. It is too small a group for analysis containing only one context and 15 sherds:0.90kg of contemporary pottery.

Phase 6: Modern (19th century)

The earlier part of this phase, the first half of the century, relates mainly to Ceramic Phase 8 and contains RFWE and TRANS, including a sherd of TRANS(S) a style which was not common after 1840. It is however too small a group for analysis containing only one context and 18 sherds of pottery; 0.37kg.

The second half of the century relates to Ceramic Phase 9 and includes YELL fabric commonly used in utility wares from the mid 19th century. RFWE, TRANS and CREA are all present in this group, which though producing 2.279kg of pottery consists of only 42 sherds. The largest single sherd is 0.419kg in weight unfortunately this BICR sherd is residual.

3.1.1 Ceramic and Phase Dates

The dating of pottery from Ceramic Phases 5 to 9 covers a period of 700 years. The relevant ceramic phases are:

Ceramic Phase 5 1200 to 1350 (Medieval)
Ceramic Phase 6 1350 to 1450 (Late Medieval)
Ceramic Phase 7 1450 to 1650/1700 (Post–Medieval/transitional)
Ceramic Phase 8 1700 to 1850 (Post-Medieval)
Ceramic Phase 9 1850+ (Modern)

There is not complete concordance between pottery dates and phasing based on stratigraphic interpretation. With both Phase 3 and 4 being within ceramic phase 7, however as these are the only phases large enough to undergo statistical analysis the differences between them should become apparent. There is a lack of pre 12th century sherds in the early phase and 20th century ceramics in the later phases. The lack of 20th century material is likely due to clearance of the site and its use during the last century as a business rather than a domestic property.

Sherds not assigned to a single phase have not been recorded in Table 5, which illustrates that the size of the Ceramic Phase assemblages is varied, while Table 6 shows the assemblage when examined by stratigraphic phase and produces a similar but more concise picture.

	No. Sherds	Weight (kg)	Ave. sherd weight (kg)
Ceramic Phase 5	18	0.208	0.012
Ceramic Phase 6	24	0.305	0.013
Ceramic Phase 7	377	7.514	0.020
Ceramic Phase 8	21	1.233	0.058
Ceramic Phase 9	55	2.617	0.047

Table 5: Pottery assemblage by ceramic phase

	No. Sherds	Weight (kg)	Ave. sherd weight (kg)
Phase 1	5	0.044	0.009
Phase 2	39	0.414	0.010
Phase 3	135	2.629	0.019
Phase 4	250	5.015	0.020
Phase 5	15	0.900	0.060
Phase 6	60	2.649	0.044

Table 6: Pottery assemblage by stratigraphic phase

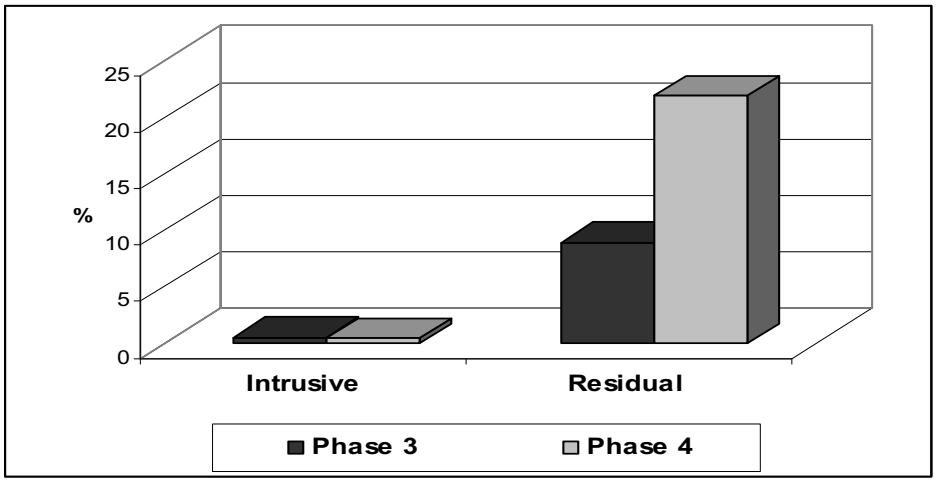
The average sherd weight of Phase 1 is low, due to the small and abraded nature of the sherds. Phase 2, has a slightly larger average sherd weight however it also relates to a small number of sherds. Phase 3 and 4 are relatively large groups with reasonable sized average sherd weight due to the presence of large sherds of PMR. Phases 5 and 7 have somewhat larger average sherd weights due to the small the number of sherds present of which the majority are large and unabraded.

It can clearly be seen in the table above that only phases 3 and 4 have assemblages large enough to warrant meaningful statistical analysis and therefore after this only these phases will be discussed in any detail.

There is some dating overlap between these phases and an attempt has been made to calculate residuality or intrusiveness as illustrated in Table 7 and Graph 1.

	Weight of Sherds (kg)	Intrusive (kg)	% Intrusive	Residual (kg)	% Residual
Phase 3	2.629	0.013	0.49	0.235	8.93
Phase 4	5.015	0.022	0.45	1.098	21.89

Table 7: Pottery residuality and intrusiveness by stratigraphic phase (by weight in kg)



Graph 1: Intrusiveness and residuality of pottery by stratigraphic phase (by weight)

Residual material within each phase shows the greatest change. Medieval pottery has become residual in both Phase 3 and 4. The levels of residuality in Phase 4 have increased from less than 10% in Phase 3 to almost 22% due to the inclusion of 16th century ceramics such as CSTN alongside the earlier ceramic material. Levels of intrusiveness are significantly lower in both phases at less than 1% consisting of single sherd of ENGS in each phase and an additional sherd of RFEW in Phase 4.

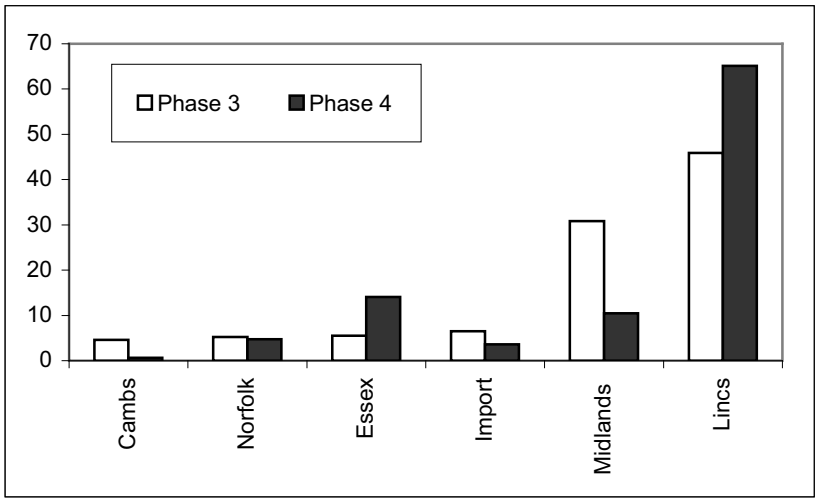
3.1.2 Fabrics and Forms

a) Provenance

The basic statistics relating to the source area for the assemblage are illustrated in Table 8 and Graph 2.

Region	Phase 3 (%)	Phase 4 (%)
Cambridgeshire	4.57	0.62
Essex	5.52	14.07
Hertfordshire	0	0.70
Import	6.54	3.59
Lincolnshire	45.91	65.12
Midlands	30.85	10.47
Norfolk	5.25	4.73
Northants	0	0.24
Surrey	0.53	0
Unknown	0.84	0.46

Table 8: General provenance by stratigraphic phase, showing percentage of assemblage by weight



Graph 2: Pottery general provenance by stratigraphic phase: percentage of assemblage by weight

The provenance of the assemblage does show some change across the two phases, in archaeological terms is a short time span (16th–17th centuries) In Phase 3 Lincolnshire fabrics make up more than 45% of the assemblage with fabrics from the Midlands at 30%. The minor elements of the assemblage are the medieval wares and later Post–medieval fabrics from Essex, Post-medieval sherds from Norfolk and the residual medieval sherds from Cambridgeshire and Northamptonshire, 6% of the assemblage are imports, which are important in helping to separate the phases ceramically.

By comparison 65% of the Phase 4 assemblage originates from Lincolnshire and the fabrics from the Midlands have fallen to a little over 10%. The percentage of fabrics from Essex has increased slightly to 14% and is almost entirely made up of Post–medieval sherds. There are still a number of residual medieval sherds present in the assemblage as indicated by the increased presence of a number of sherds from Cambridgeshire and Northamptonshire.

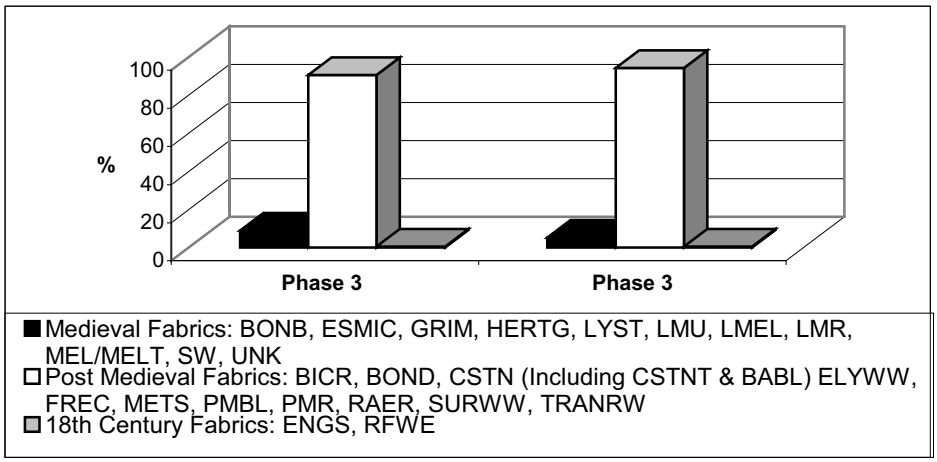
b) Fabric Types

Table 9 shows the quantification data produced by comparing the ceramic assemblages with grouping by pottery types or groups of 'like types'. The statistics show the changes in the pottery fabrics over time within the stratigraphic phases. This same information is presented graphically in Graph 3.

Broad Fabric Groups	**Phase 3 (%)**	**Phase 4 (%)**
Medieval Fabrics: BONB, ESMIC, GRIM, HERTG, LYST, LMU, LMEL, LMR, MEL/MELT, SW, UNK	8.94	5.24
Post Medieval Fabrics: BICR, BOND, CSTN (Including CSTNT & BABL) ELYWW, FREC, METS, PMBL, PMR, RAER, SURWW, TRANRW	90.56	94.30
18th Century Fabrics: ENGS, RFWE	0.50	0.46

Table 9: Percentages of broad pottery types by phase (by weight)

In Phase 3 and 4 the post medieval fabrics dominate, table 5 indicates that there is a board range of fabric types present however with reference to figure 2 it can be seen that much of the material originates in Lincolnshire, being mainly BOND. The above statistical details show both phases are very similar in their ceramic make up. It is therefore difficult to indicate that they may represent different phases of activity on the site.



Graph 3 Percentages of broad pottery types by phase (by weight)

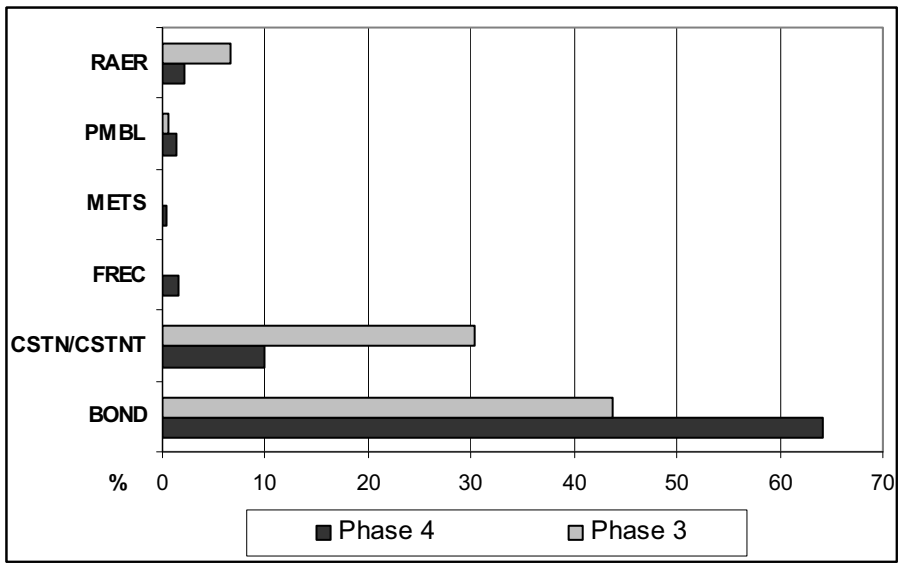
The broad picture given in graph 3 can be broken down into its component parts and a closer examination of the data indicates that there are several fabrics that are only present in Phase 4 and it is these fabrics that allow the division of the phases.

In table 10 as with graph 3 the small amounts of RFWE and ENGS have been grouped together as 18th century material and the medieval fabrics are combined as a second group leaving the post medieval fabrics separated out to allow the changes in this assemblage to be more clearly seen.

Fabric	Phase 3 %	Phase 4 %
BICR	3.96	3.87
BOND	43.67	64.09
CSTN/CSTNT	30.35	10.01
ELYWW	0	0.46
FREC	0	1.48
Medieval	8.94	5.23
METS	0	0.34
PMBL	0.57	1.42
PMR	4.22	8.28
RAER	6.54	2.11
18th Century material	0.50	0.46
SURWW	0.53	0
TRANRW	0.72	2.25

Table 10: Break down of Phase 3 and 4 showing Post medieval fabrics as individual wares to illustrate the differences between the two phases

.The pertinent points relating to Phase 3 and 4 are as follows; Phase 4 shows an increased presence of BOND and the almost parallel decrease of CSTN type wares compared to Phase 3. There is also a decrease of RAER material present and Phase 4 sees the introduction of FREC which first appears in the mid 16th century and METS a 17th century pottery type. The fabrics which most clearly identify the differences between Phase 3 and 4 are illustrated in graph 4 below.



Graph 4: Break down of Phase 3 and 4 showing the significant post medieval fabrics as individual wares to illustrate the differences between the two phases

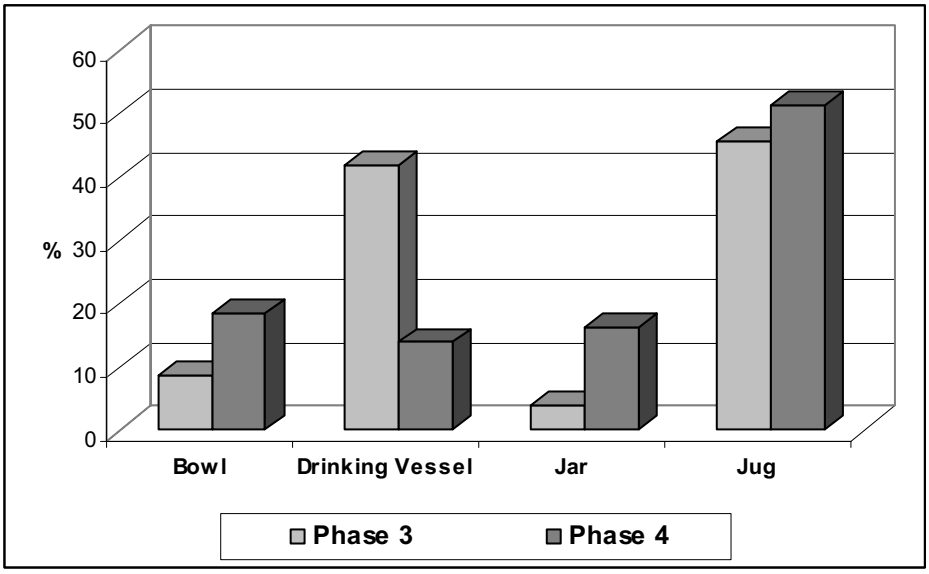
The dates for RAER, a moderate component of Phase 3 are approximately late 15th to mid 16th century, in the mid 16th century FREC replaces RAER as the imported stoneware used for drinking jugs, mugs etc. and continues to be present until the end of the 17th century. The CSTN type wares are present in both phases, though in much reduced numbers in Phase 4. This pottery type is a 16th century ware and though its presence in Phase 4 could seen be as a residual element, it is likely that some CSTN wares would still have been in use in the early part of the 17th century. BOND is also present in both phases; its increased presence in Phase 4 suggests that it is not residual in this phase. BOND production spans the 16th century and continues into the 17th century, with the kilns ceasing production in the 1630's. The METS material is a 17th century pottery type and first appears in Phase 4. Altogether these indicate that the date for Phase 3 is 16th century and Phase 4 is likely to be early to mid 17th century.

c) Vessel Types

Table 11 and graph 5 show the percentages by weight of each phase assemblage that can be attributed to broad vessel functional types. This data excludes those sherds for which no form or function identification could be made.

Basic Form	Phase 3	Phase 4
Bowl	8.68	18.59
Jar	4.00	16.18
Jug	45.52	51.36
Drinking Vessel	41.80	13.87

Table 11: Percentage of vessel functional types in (by weight in kg)



Graph 5: Percentage of vessel functional types in phase assemblages (by weight)

It is clear from graph 5 that the dominant vessel type in both phases is the jug, with the majority in both phases being BOND. There are some PMR jug sherds and residual BONB and GRIM jug sherds in both phases. In Phase 3 there are almost as many drinking vessels as jugs, however by Phase 4 the number of drinking vessels has decreased to less than 14% of the functional assemblage. This corresponds with the previously discussed decrease in CSTN wares in Phase 4. The majority of the drinking vessels in both phases are CSTN ware. In Phase 3 the imported RAER also provides a number of drinking vessels. In Phase 4 the number of RAER vessels decreases, their place is taken by FREC another imported stoneware.

The bowls in Phase 3 are predominantly BICR and BOND, with some PMR and, residual BONB, and a single sherd of SURWW. In Phase 4 BOND becomes the dominant fabric followed by BICR and PMR. Finally the jars in the assemblage, a minor element of Phase 3, are all residual medieval fabrics. Phase 4 jars are mainly BOND with a small number of PMR sherds, a single sherd of ENGS and residual medieval sherds.

Very few of the vessels showed evidence of sooting, a single MEL sherd in Phase 3 was sooted internally on the rim. In Phase 4 A single

BICR bowl is sooted externally and 5 sherds from a BOND jug were sooted externally and internally bore the traces of limescale. This small number of sooted sherds is not unexpected as there has been a move away from the standard medieval ceramic cooking jar by the 16th century. Those jars present in the assemblage may have been storage vessels rather than food preparation.

4 Conclusions

The supply of pottery to Wisbech, either as pots or containers for other goods, can be seen to have a wide basis of supply, with RAER and FREC from the continent, METS from Essex and white wares from Surrey. Yet throughout Phase 3 and 4 BOND from Lincolnshire remained the most common utilitarian ware. Bourne is some 54km north west of Wisbech and is a major supplier of post-medieval wares to the northern part of Cambridgeshire.

The whole assemblage is broadly domestic in character. The broad pottery groups have already been discussed. The Bourn kilns supplied large jugs, bowls and some jars for use storage and serving of food. Drinking vessels, mugs and cups were present some quantity in Phase 3 suggesting that the activity here involved the consumption and storage of quantities liquids. Phase 4 is more difficult to characterise ceramically. The early 17th century ceramic assemblage is not extensive, yet this is not due to a lack of suppliers or a restricted number of forms. Potters at this time were manufacturing chafing dishes, candlesticks, pipkins, and may other forms including moneyboxes, something that perhaps indicates the increased level of affluence in early 17th century society. Improved transportation and trade allowed access to a wide range of pottery from more distant sources. Increased trade and affluence also allowed for a wider choice of vessels made of other materials for use in the kitchen and at the table. For example the use of glass for bottles containing oil or vinegar, pewter continues to be used for plates, goblets, spoons, other domestic ware. However little evidence of this increased affluence can be seen and it would appear that activity in Phase 4 is also somewhat preoccupied with the storage or serving of liquids but with less consumption of liquids occurring on site.

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Appendix 2: Clay tobacco pipes

By Steve Hickling

Context	Feature	Phase	Description	Date
100	99	3	2 stem fragments	undateable
12	26	3	1 stem fragment, 1 complete bowl, small bulbous, flat foot and rouletting (Oswald type 5(?), 1640-1660, DUA, no parallels, Atkin type 5, early to mid 17th century). *Intrusive from context 9 Pit [25] see below.*	1640-1660
9	25	4	13 stem fragments, 4 bowls, 3 complete. The three complete bowls have small, bulbous bowls with rouletting and flat feet (DUA type 5, 1610-1640, Oswald type 4-5, 1600-1660). 3 of the stem fragments show evidence of burning, perhaps cleaning for re-use.	1600-1660
8	26	4	1 stem fragment, 1 complete bowl. The complete bowl is small and bulbous with rouletting and a flat foot (DUA type 5?, Oswald type 5, 1640-60)	1640-1660
10	26	4	9 stem fragments, 4 bowls, 2 complete. The 2 complete ones have small bowls, bulbous with rouletting and flat feet (DUA type 5, 1610-1640, Oswald type 4-5,1600-60). One of the incomplete bowls has a very pronounced foot, almost a spur.	1600-1660
11	26	4	4 stem fragments	undateable
69	26	4	2 stem fragments	undateable
52	53	4	1 small bulbous bowl with a flat foot and rouletting (Oswald type 5, 1640-60, DUA type 10/11/12, 1640-1670)	1640-1660
117	150	4	1 complete bowl, flat foot and slight rouletting (DUA type 18, 1660-1680, Oswald type 7/8, 1660-1680)	1660-1680
154	155	4	2 stem fragments	undateable
71		5	12 stem fragments, 5 bowls, 4 complete. 4 of the bowls have lips parallel with the stem (DUA type 25, 1700-1770, Oswald type 10, 1700-1740) one has a forward pointing lip, with slight rouletting (Oswald type 9, DUA 22? 1680-1710). Makers marks are visible on the feet of all these bowls, see below	1700-1740
170		5	1 complete bowl, pronounced spur and slight rouletting (Oswald type 24, 1810-1840, DUA type 27/28, 1780-1840. Marking on spur but nothing legible. Burning in bowl.	1810-1840
2	248	6	1 stem fragment	undateable
4	248	6	3 stem fragments, one with a shaped mouthpiece	19th-20thc.
18		6	4 stem fragments	undateable
99999	n/a	n/a	Large bulbous bowl with deep rouletting. Heavily burnt with a solid residue blocking the bowl. A slit has been sawn towards the base after burning. 'Irish style' (Ayto 1999)	1850-1910

Table 12: Clay tobacco pipes

Most of the clay pipes in this assemblage are devoid of maker's marks, apart from those from context 071, dated to 1700-1740, where all the bowls bear marks. Mostly these are illegible, but 4 of them may have PR (or RP) marked above the foot, while the other may have IN (or NI). Unfortunately these marks don't seem to coincide with the only known maker in the town in this period, Bryan Smith. However, we do have a family of makers in the first half of the 19th century, the Nicholls. The pipe marked with an I and N may have been made by one of their predecessors.

During the 17th century, Wisbech had only one recorded clay pipe maker, Bryan Smith, 1684 (Flood 1976). However, ports would have attracted pipe makers in order to supply sailors who were amongst the first to spread the habit (Atkin 1985). Large ports like Yarmouth and Kings Lynn had a strong pipe making tradition, while even smaller ports like Wells and Wisbech had makers by the 18th century. It is not possible to say whether any of this assemblage was made in Wisbech, but some nearby towns had makers at an early date. Peterborough is known to have had a maker in 1660, one Nicholas Hardy (Oswald, 1975), while Kings Lynn had several by the second half of the 17th century.

The clay pipe dates coincide well with the pottery dates for each context, either being the same date or a little later. The slightly later date of some of the clay pipe is to be expected as clay pipe tended to be less long lasting than pottery. The only major problem is context 071, where the pottery is dated 1770-1850, while the clay pipe is 1700-1740. This is also the largest and best-dated group of pipe from the whole site.

The assemblage shows an unusual bias towards the first half of the 17th century, suggesting an early uptake of the smoking habit, perhaps encouraged by the town's status as a port. It also exhibits the well-known trend of decline in the 18th century as snuff partially replaces the smoking habit.

In conclusion, this is a relatively large and important assemblage from such a small-scale investigation, which meshes in with the other dating evidence quite conclusively.

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Flood, R. J.	1976	*Clay Tobacco Pipes in Cambridgeshire*
Groves, J.	1984	*Guide to the DUA Clay Tobacco Pipe Type Series*
Oswald, A.	1975	*Clay Pipes for the Archaeologist* BAR 14

Appendix 3: Ceramic and stone building materials

By Richard Mortimer

Context	Cut	Phase	Context type	Material	Type	Wt in kg	Comments
56	layer	2	flood deposit	CBM	Brick	0.02	Brick frags. Not measurable.
	layer	2	flood deposit	CBM	Brick	0.51	3 coarse red brick fragments, l overfired/warped. 2 measurable at 55mm thick.
156	layer	2	flood deposit	CBM	Brick	0.02	Brick frags. Not measurable.
158	layer	2	flood deposit	CBM	Brick	0.15	Brick frags. Not measurable.
172	layer	2	flood deposit	CBM	Brick	0.03	Soft red brick frags. Not measurable.
173	layer	2	flood deposit	CBM	Brick	0.20	Overfired brick frag. 50mm thick.
169	layer	2	flood deposit	CBM	Brick	0.05	Brick frags. Not measurable.
173	layer	2	flood deposit	CBM	Tile	0.04	Smooth, even red sandy tile frag. One side dirty. 13mm thick.
84	26	3	lower fill large pit	CBM	Brick	0.05	Brick frags. Not measurable.
84	26	3	lower fill large pit	CBM	Brick	0.02	Brick frags. Not measurable.
84	26	3	lower fill large pit	CBM	Brick	0.63	2 brick frags; 1 soft orange 55mm thick, 1 coarse red ? X 120 x 55mm.
85	26	3	mid fill large pit	CBM	Brick	0.04	Soft brown brick frag. Not measurable.
87	26	3	mid fill large pit	CBM	Brick	0.03	Brick frags. Not measurable.
12	26	3	lower fill large pit	CBM	Tile	0.59	3 yellow-grey pegged and 1 pink roof tile frag. 14mm thick and 12mm thick.
24	26	3	basal fill large pit	CBM	Tile	0.01	Red tile frag. Not measurable.
84	26	3	lower fill large pit	CBM	Tile	0.01	Yellow roof tile frag.
84	26	3	lower fill large pit	CBM	Tile	0.43	1 yellow-grey tile 20mm thick, 1 creamy white 14mm thick.
84	26	3	lower fill large pit	CBM	Tile	0.28	3 yellow pegged roof tile frags. 14mm thick.
87	26	3	mid fill large pit	CBM	Tile	0.09	Yellow-grey roof tile frag. 14mm thick.
84	26	3	lower fill large pit	Stone	Tile	0.01	Fragment, 7mm thick.
12	26	3	lower fill large pit	Stone	Tile	0.39	Honey brown pegged tile; l fragment, l near complete 130 x 94 x 12mm.
84	26	3	lower fill large pit	Stone	Tile	0.02	Fragment, 6mm thick.
47	255	3	main fill pit	CBM	Tile	0.05	Brown/grey roof tile frag. 12mm thick.
100	99	3	main fill large pit	CBM	Tile	0.13	Yellow-pink roof tile frag. 12mm thick.
101	99	3	main fill large pit	CBM	Tile	0.18	Yellow-grey roof tile frag. 14mm thick.
115	116	3	lower fill large ph	CBM	Brick	0.20	2 coarse red brick frags, l overfired/warped, 1 measurable at 50mm thick.
115	116	3	lower fill large ph	Stone	Tile	0.02	Fragment, 5mm thick.
168	ph	3	posthole fill	CBM	Brick	0.17	Pink/orange brick frags. Not measurable.
159		3	brick build	CBM	Brick	2.69	Handmade yellow/pink brick. Touch of dk grey glaze on 2 sides. 230 x 115 x 50mm.
161		3	brick build	CBM	Brick	2.56	Handmade pink brick. 240 x 120 x 60mm.
162		3	brick build	CBM	Brick	2.42	Handmade pinky orange brick. 245 x 120 x 55mm.
9	25	4	pit fill	CBM	Brick	0.06	Brick frags. Not measurable.
9	25	4	pit fill	CBM	Brick	0.31	5 red brick frags. 2 measurable at 70mm and 40mm (poss. floor tile) thick.
9	25	4	pit fill	CBM	Brick	0.01	Brick frags. Not measurable.
9	25	4	pit fill	CBM	Tile	0.05	Yellow roof tile frag. 12mm thick.
9	25	4	pit fill	CBM	Tile	0.18	1 yellow, 1 pink roof tile frag. 12mm thick.

Context	Cut	Phase	Context type	Material	Type	Wt in kg	Comments
9	25	4	pit fill	Stone	Tile	0.01	Fragment, 6mm thick.
9	25	4	pit fill	Stone	Tile	0.33	Very thick (17mm) slightly burnt fragment.
9	25	4	pit fill	Stone	Tile	0.02	Fragment, 6mm thick.
8	26	4	upper fill large pit	CBM	Brick	0.02	Brick frags. Not measurable.
8	26	4	upper fill large pit	CBM	Brick	0.08	Brick frags. Not measurable.
8	26	4	upper fill large pit	CBM	Brick	0.02	Brick frags. Not measurable.
10	26	4	upper fill large pit	CBM	Brick	0.18	Brick frags. Not measurable.
11	26	4	upper fill large pit	CBM	Brick	0.04	Brick frags. Not measurable.
11	26	4	upper fill large pit	CBM	Brick	0.01	Brick frags. Not measurable.
19	26	4	upper fill large pit	CBM	Brick	0.01	Brick frags. Not measurable.
21	26	4	upper fill large pit	CBM	Brick	0.09	Overfired, warped brick frags. Not measurable.
22	26	4	upper fill large pit	CBM	Brick	1.00	Coarse handmade dark red (half) brick. ? X 120 x 60mm.
23	26	4	upper fill large pit	CBM	Brick	0.01	Brick frags. Not measurable.
69	26	4	upper fill large pit	CBM	Brick	0.28	8 frags. Red and orange brick. I measurable at 60mm thick.
69	26	4	upper fill large pit	CBM	Brick	0.02	Brick frags. Not measurable.
70	26	4	upper fill large pit	CBM	Brick	0.23	5 frags. Pinky-orange brick. I measurable at 60mm thick.
68	26	4	upper fill large pit	Stone	Spindle whorl	0.04	Creamy-white fine-grained limestone. 39mm diameter, 21mm thick
8	26	4	upper fill large pit	CBM	Tile	0.27	2 creamy yellow roof tile frags. 14mm thick.
10	26	4	upper fill large pit	CBM	Tile	0.15	1 yellow, 1 pink pegged roof tile frag. 12mm thick and 14mm thick.
11	26	4	upper fill large pit	CBM	Tile	0.01	Yellow-grey roof tile frag. 12mm thick.
70	26	4	upper fill large pit	CBM	Tile	0.06	Red pantile frag. With 60mm lip at edge. 14mm thick.
10	26	4	upper fill large pit	Stone	Tile	0.02	Fragment, 6mm thick.
8	26	4	upper fill large pit	Stone	Tile	0.01	Fragment, 5mm thick.
10	26	4	upper fill large pit	Stone	Tile	0.24	2 honey brown pegged tile fragments 11mm thick.
11	26	4	upper fill large pit	Stone	Tile	0.14	12mm thick pegged fragment.
54	55	4	posthole fill	Stone	Tile	0.02	Fragment, 11mm thick.
63	64	4	slot fill	CBM	Brick	1.83	Pink-brown brick, mortared on 3 sides. 210 x 110 x 65mm
63	64	4	slot fill	CBM	Brick	0.65	1 brick frag. Not measurable. 1 coarse red (half) brick. ? X 120 x 60mm.
72	73	4	posthole fill	CBM	Brick	0.10	Brick frags. Not measurable.
76	77	4	posthole fill	CBM	Brick	0.10	Brick frags. Not measurable.
78	79	4	posthole fill	CBM	Brick	0.03	Brick frags. Not measurable.
80	81	4	posthole fill	CBM	Brick	0.01	Brick frags. Not measurable.
90	90	4	basal fill shallow pit	CBM	Brick	0.15	Brick frags. Not measurable.
90	90	4	basal fill shallow pit	CBM	Tile	0.03	Roof tile frag. Heavily burnt and mortared both sides. 12mm thick.
46	99	4	top fill large pit	CBM	Tile	0.04	Pale creamy brown roof tile frag. 12mm thick.
109	110	4	posthole fill	CBM	Brick	0.85	Coarse handmade red (half) brick. ? X 130 x 60mm.
142	147	4	top fill large pit	Stone	Tile	0.01	Fragment, 7mm thick.
117	150	4	lower fill medium pit	CBM	Brick	0.14	Brick frags. Not measurable.
117	150	4	lower fill medium pit	CBM	Tile	1.24	3 yellow pegged roof tile frags. 14mm thick.
61	187	4	pit fill	CBM	Tile	0.15	Red/grey ridge tile, dark green glaze. Max thickness 14mm
27	layer	4	layer	CBM	Brick	0.13	Brick frags. Not measurable.
59	layer	4	layer	CBM	Brick	0.08	Burnt brick frags. Not measurable.
59	layer	4	layer	Stone	lava quern	0.56	Quernstone fragment, heavily burnt, 44mm thick.

Context	Cut	Phase	Context type	Material	Type	Wt in kg	Comments
5	248	**5**	brick cellar floor	CBM	Brick	1.80	Handmade red/orange brick. Smooth upper surface (floor). 230 x 100 x 65mm.
2	248	**7**	upper backfill cellar	CBM	Brick	0.37	2 coarse red brick frags. 1 measurable at 65mm thick.
1	248	**7**	top fill cellar	CBM	Tile	0.26	Red pantile fragment. Max. thickness 8mm
3	248	**7**	upper backfill cellar	CBM	Tile	0.07	Red pantile fragment. Max. thickness at edge 16mm
4	248	**7**	upper backfill cellar	CBM	Tile	0.01	Red pantile fragment. Max. thickness 10mm

Table 13: Ceramic and stone building materials

Appendix 4: Glass Catalogue.

By Carole Fletcher

1 Backfill of cellar 248.

Context 1

1 Small octagonal glass ink bottle. Blue glass or clear glass with dark blue tint. Complete except for a large chip in the rim. Short cylindrical neck with sloping rounded shoulders. Moulded in a two-part mould and embossed with the following legend written vertically reading from the top of the bottle down. On one panel BLACKWOO below this & Co (The d of Blackwood is not present as the embossed word is longer than the panel on the bottle). The next panel says LONDON.

Paralleled:
Museum of London (2) bottle; ink bottle
Accession number: 77.50/127
Collection place: Acton, London [Ealing] [Acton bottle dump]
Production date: 1866-1900
Material: glass
Measurements: H 57 mm; W 42 mm
Museum Section: Social History
Summary: Inkw

2 Complete clear glass bottle with green tint. Moulded and embossed mineral water bottle. This particular bottle has four indentations at the base of the neck, these catch the "marble" when the pressure is released in the bottle. The marble survives but appears to be vulcanised rubber rather than glass. The bottle is embossed on the front in curved lines - at the top curving up J RUDDERHAM, at the base curving down WISBECH. Below this and written around the bottle starting at the back - J W DOBSON MAKER BARNSLEY. The reverse of the bottle is embossed CHAPMANS (curved up), across the centre is PATENT STOPPER, below this curved up BIRKENHEAD.

3 Complete clear glass bottle with green tint. Covered partially in corrosion product. Codd bottle, clear glass with blue-green tinge. A cylindrical body with square shoulders; applied lip, a complete moulded bottle still with marble. Embossed mineral water bottle. Has a rectangular indentation approximately 20mm below the base of the neck, this catches the "marble" when the pressure is released and prevents it falling into the bottle. The stopper or marble survives and appears to be glass and moulded in two

pieces. The bottle is embossed on the front; in an upward curve is RUDDERHAM surrounding a central circular panel containing two entwined initials JR, below curving downwards WISBECH. The reverse of the bottle is embossed in an upward curve CODD'S BOTTLE, below this in short straight lines HIRAM CODD 41 GRACECHURCH St LONDON.E.C. On the base of the bottle inside the shallow moulded kick? are the numbers 2398 Codd bottles were patented in 1875 suggesting that this context dates to the last quarter of the 19th century. The bottle is another example of those used by J Rudderham soda water manufacturer.
(1) Name & Occupation: RUDDERHAM, John Soda Water Manufacturer
Address: Late Wisbech St. Peter, Isle of Ely, CAM
Date & Place of Death: 14 Feb 1882 Wisbech
Date & Place Will Proven: 5 Apr 1882 Peterborough
Executor: Amelia RUDDERHAM
Occupation: Widow, the Residuary Legatee
Address: Wisbech
Effects: £706.4s.5d (Admin with Will)

Context 3

1 Bottle, natural green glass which appears black. Fragment of base having broken away from lower body, rounded basal edge, shallow kick with un-polished pontil mark. The base of the bottle is somewhat flared suggesting a free blown bottle.

2 Bottle, natural green glass. Fragment of base having broken away from lower body, rounded basal edge, moderate kick but broken before the pontil mark. Sherd is covered in iridescent corrosion product. The base of the bottle is somewhat flared suggesting a free blown bottle.

3 Three fragments of natural green glass from a cylindrical bottle. Two sherds are covered in iridescent corrosion product.

4 Rim, neck and part of the shoulders of a dark olive green glass wine bottle. Moderate neck with rounded sloping shoulders and probably a more cylindrical bottle. The collar set below rim.
Paralleled
Museum of London (1) bottle; wine bottle
Accession number: 37.197/2
Collection place: unknown
Production date: c. 1751-1770
Material: glass
Measurements: H 232 mm; DM (body) 100 mm
Museum Section: Social History
Summary: Wine bottle, natural green

5 Rim, neck and part of the shoulders of a dark olive green glass wine bottle. Moderately short neck with rounded sloping shoulders and probably a more cylindrical bottle. The rim is very distinctive but parallel could not be found.
Mid to late 18th century

6 Upper part of neck and rim from a green glass bottle. Sherd covered in part in iridescent corrosion.

7 Upper part of neck and rim from a green glass bottle. Sherd covered in part in iridescent corrosion.

8 Base from a clear blue-tinted glass, rectangular bottle with hexagonal section, straight sided moulded bottle on the front of which are moulded horizontal lines which mark out the doses. The base is indented.

Paralleled:
Museum of London (1) bottle; chemist's bottle
Accession number: 77.50/8
Production date: 1876-1900
Material: glass
Measurements: H 165 mm; DM (girth) 62 mm
Museum Section: Social History
Summary: Octagonal straight-sided green tinted clear glass.

Context 4

1 Two sherds from the lid of a press moulded sweet bowl, dressing table ornament or similar. Together the sherds give a complete profile of the lid. Circular looped rod handle on the top of the lid decorated with circular blobs around the edge of the handle. The press moulded decoration is internal leaving the external surface smooth.

2 Sherd from the neck of a green/brown glass bottle.

3 Sherd from the neck and shoulder of a bottle, clear glass with a slight green cast and slightly cloudy. Probably part of what the Museum of London class as a food bottle.

Context 71

Rim, neck and part of the shoulders of a dark olive green glass wine bottle. The shape of the bottle and the type of lip/rim suggests it may be 18th century? Moderately long neck with rounded sloping shoulders.

Paralleled:
Museum of London (1) bottle; wine bottle
Accession number: 5370
Collection place: London [City of London]
Production date: c. 1711-1730
Material: glass
Measurements: H 160 mm; DM (girth) 125 mm
Museum Section: Social History
Summary: Wine bottle,
Early to mid 18th century

2 Other Features

Pit 255

Window glass. Small sub-rectangular opaque sherd. All edges are ancient breaks and there is no evidence of grozing. Likely to be late medieval but of unknown date.

Context 22, Pit 26

Window glass. Partially corroded being translucent rather than transparent. The glass would have been clear. There are numerous small faults in the glass and one side is distinctly smoother than the other.

Context 117, Pit 150

1 Window glass. Two sherds which are partially corroded being covered in iridescent corrosion. The glass would have been clear. Measurements are taken on the larger fragment.

2 Window glass. Triangular sherd, partially corroded being covered in iridescent corrosion which has darkened and is flaking off. Small areas of the glass are still clear and can be seen to have a slight green tint.

Appendix 5: Metalwork

by Nina Crummy

1 The coins

The two coins recovered both show considerable wear, the earlier halfpenny in particular. Both will have been deposited some time after the period of minting.

SF 1. (43). Lower fill of pit 26. Phase 3. Silver long-cross halfpenny, very worn; both legends are illegible. 14th or early 15th century. Diameter 13 mm, weight 0.45 g.

SF 27. (100). Main fill of pit 99. Phase 3. Silver halfgroat of Henry VII, profile issue, 1504-9; obverse HENRIC VII DI GRA AGL Z; reverse POSVI DEVM ADIVTORE MEVM; initial mark rose/rose. Diameter 19 mm, weight 1.08 g. As North 1748-52.

2 The small finds and bulk ironwork

Most of the copper-alloy objects were in poor condition, covered with thick corrosion mixed with random organics, a characteristic of items buried in damp conditions. In some cases there was little or no surviving solid metal beneath the layer of corrosion.

Considering the size of the features on the site, the assemblage is not large. The range of objects recovered is typical of a domestic assemblage, with only two possible craft tools present. SF 23a may be a fragment of a metal-worker's punch and SF 68 may be from a carding comb, used to prepare wool for spinning, but it is more likely to be part of a brush body. There are two pieces of iron-working debris, from pits 26 and 148 (listed in archive), but such a small quantity is insufficient to provide good evidence of iron-working on the site.

Two thimbles (SF 34 and 32) reflect both the importance of the cloth trade in the region and the domestic manufacture of clothing by most socio-economic groups. Thimbles are fairly frequent as site finds and occur in both urban and manorial domestic assemblages, for example, Norwich, London, Canterbury, Winchester, Colchester, Worcester, York and Writtle (Margeson 1993, 187-8; Egan 1998, 265-7; Garrard 1995, 1058; Biddle & Elmhirst 1990, 805; Crummy 1988, 28-9; 2004, 433-5; Ottaway & Rogers 2002, 2739-41; Rahtz 1969, 91, nos 130-2).

The preservation of a piece of cloth inside SF 32 is unusual, and is only the third reported example of a lining to date. The others are a piece of leather sewn to fit inside a thimble at York, and a linen lining found in one from Loversall, South Yorkshire (Ottaway & Rogers 2002, 2739-41).

Penelope Walton Rogers comments that the lining is a strip of linen textile measuring 45 x 10 mm, which has been curled around the inside of the thimble. It is a ZZ tabby weave, with 14-16 threads per cm in warp and weft, which was a common fabric-type, used for shirts, chemises and underwear.

Household equipment from the site consists of a handle from a small vessel and a candlestick (SF 33, SF 35). The candlestick has the remains of wooden dowel fixed in the hollow lower stem, used to attach it to a stand or drip-tray. A very similar candlestick from the Deansway site, Worcester, also had part of a wooden dowel remaining in the stem, although some sticks were solid and had tangs for the same purpose (Crummy 2004, 421, no. 280, fig. 242; Harvey 1975, fig. 245, 1882; Margeson 1993, fig. 49, 537, 539; Ottaway & Rogers 2002, fig. 1434, 15184). Mould fragments from the Deansway site point to manufacture of candlesticks such as SF 35 there in the late 15th century (Taylor 2004, 384). Most towns would have had a bronzefounder producing them alongside other domestic cast metal items such as ewers and skillets.

The dress accessories from New Inn Yard consist chiefly of a number of small pins and lace-tags. The former, used for pinning clothes in the medieval period and also later for sewing, are of standard long-lived types, with examples such as SF 2 being produced from the 12th or 13th century into the 19th or 20th century, although the more rudimentary form, as SF 29, ceased to be made in the early post-medieval period. Lace-tags also have a broad date-range, although not as broad as the pins, with the riveted form found here (*e.g.* SF 53), occurring from *c* 1375-1550/75 (Crummy 1988, 13, Type 1). The only other likely dress accessory is a fragment of what may be a strap-plate from a buckle or strap-end (SF 43).

A small iron knife (SF 25) is of a size suitable for personal use, either for trimming the nails or cutting up food. An iron weapon head is an unusual addition to this assemblage (SF 6); it may be an arrowhead used for hunting rather than warfare. The buildings in the area are represented by three lead came fragments (SF 41, 26) and an iron joiners dog (SF 12). A quantity of iron nails from Phases 2 to 6 may derive from buildings, fences or furniture. A large proportion of them come from pit 26, suggesting that it was used for the disposal of waste timber or nailed furniture.

SF 32. (101). Main fill of pit 99. Phase 3. Cast copper-alloy thimble with round drilled pits applied in an irregular spiral and a pair of incised grooves around the base. The top is domed. The inside of the thimble is lined with a piece of plain-weave cloth, the

ends overlapping rather than joined by a seam. This would have been inserted to protect the finger-tip or to provide a better fit if the thimble was too large. Height 18 mm, maximum diameter 18 mm. Date-range late medieval or early post-medieval. A closely comparable thimble from Writtle, Essex, came from a context dated *c* 1425-1521 (Rahtz 1969, 91, no. 131).

SF 34. (47). Lower fill of shallow pit 255. Phase 3. Severely corroded and distorted copper-alloy thimble. Despite conservation ands X-radiography the surface is too damaged to reveal any features, but the domed shape of the top suggests that it is probably contemporary with SF 32 above, Height 20 mm, maximum width (distorted) 27 mm.

SF 33. (12). Lower fill of pit 26. Phase 3. Copper-alloy suspension handle with hooked ends from a small vessel. Length 93 mm, width 108 mm.

SF 35. (112). Upper fill of pit/slot 149. Phase 3. Cast copper-alloy candlestick of Bunsen type with a fragment of a wooden dowel inside the hollow lower stem (Brownsword 1985). There are mouldings at the socket and base and a collar at the centre of the stem. Length 125.5 mm, maximum diameter 22 mm.

SF 2. (68). Upper fill of pit 26. Phase 4. Copper-alloy dress or sewing pin with globular wire-wound head. Length 45 mm. The form is Norwich Type 1 (Margeson 1993, 13).

SF 58. (115). Lower fill of pit 116. Phase 3. Copper-alloy pin as SF 2 above. Length 24 mm.
SF 29. (11). Upper fill of pit 26. Phase 4. Copper-alloy dress or sewing pin with wound wire head. Length 39 mm. The form is Norwich Type 3 (Margeson 1993, 13).

SF 56. (12). Lower fill of pit 26. Phase 3. Copper-alloy pin as SF 29 above. Length 29 mm.

SF 54a. (47). Lower fill of shallow pit 255. Phase 3. Copper-alloy pin as SF 29 above. Length 26 mm.

SF 53. (8). Upper fill of pit 26. Phase 4. Copper-alloy lace-tag with a rivet to attach the lace. Length 19 mm. The type is Colchester and Norwich Type 1 (Crummy 1988, 13; Margeson 1993, 22).

SF 55. (93). Lower fill of pit 148. Phase 4. Copper-alloy lace-tag as SF 53 above. Length 24 mm.

SF 57. (102). Main fill of pit 99. Phase 3. Copper-alloy lace-tag as SF 53 above. Length 17 mm.

SF 54b. (47). Lower fill of shallow pit 255. Phase 3. Copper-alloy ?lace-tag fragments. Lengths 17 and 5 mm.

SF 43. (84). Lower fill of pit 26. Phase 3. Copper-alloy sheet fragment (in pieces), probably part of a strap-plate. Largest surviving piece 23 by 18 mm.

SF 30. (176). Flood deposit. Phase 2. Copper-alloy stud with missing shank; the centre is domed and there is a rounded flange. Diameter 24 mm.

SF 25. (63). Fill of terrace 64. Phase 4. Tanged iron knife, lacking the tip of the blade, which is narrow, with a curved back and straight edge with irregular wear close to the tang. Length 123 mm, maximum width 12 mm.

SF 6. (47). Lower fill of shallow pit 255. Phase 3. Iron weapon head, with round-section tang and narrow leaf-shaped blade of elliptical section. Length 121 mm,

maximum width 17 mm. Arrowheads and crossbow bolts usually have hollow sockets, but this is short for a spear or lance and may be a variant of arrowhead.

SF 12. (67). Upper fill of pit 26. Phase 4. Iron U-shaped joiner's dog or staple, with the tip of one arm missing. Length 65 mm, width 26 mm.

SF 23a. (101). Main fill of pit 99. Phase 3. Iron square-section shaft fragment, probably from a punch or similar craft tool. Length 64 mm, width 11 mm.

SF 68. (101). Main fill of pit 99. Phase 3. Perforated thin iron plaque fragments, possibly part of a brush body or carding comb. Largest reconstructed piece 54 by 65 mm.

SF 41. (84). Lower fill of pit 26. Phase 3. Lead came fragment. Length 68 mm.

SF 26. (101). Main fill of pit 99. Phase 3. Two lead came fragments, one retains part of a junction and the other is bent at a right angle. Lengths 48 and 39 mm (bent).

2.1 Iron nails

Measurements of clenched nailed are taken only from the head to the outside of the bend.

SF	Context	Context type	Phase	Description	Length (mm)
36	57	flood deposit	2	incomplete	28
37	156	flood deposit	2	complete	43
61	12	lower fill of pit 26	3	?nail head	-
8	12	lower fill of pit 26	3	complete, clenched	57
48	84	lower fill of pit 26	3	complete, clenched, and with tip turned back up	29
15	84	lower fill of pit 26	3	shank fragment	27
9	84	lower fill of pit 26	3	Bag 1: 3 complete (1 with small head). Bag 2: 1 complete, 1 incomplete, 1 shank fragment. Bag 3: 1 complete, 1 shank fragment. Bag 4: 3 complete	Bag 1: 41, 35, 34. Bag 2: 32, 24, 33. Bag 3: 67, 35. bag 4: 69, 66, 60
46	84	lower fill of pit 26	3	Bag 1: 2 complete. Bag 2: 1 complete, 1 incomplete. Bag 3: 3 incomplete. Bag 4: 2 complete. Bag 5: 2 incomplete. Bag 6: 2 complete. Bag 7: 1 complete. 1 incomplete. Bag 8: 2 shank fragments.	Bag 1: 70, 58. Bag 2: 55, 40. Bag 3: 35, 32, 31. Bag 4: 51 x 2. Bag 5: 34 x 2. Bag 6: 51, 47. Bag 7: 34, 27. Bag 8: 24, 23.
40	85	central fill of pit 26	3	1 complete; 1 shank fragment	65; 38
64	86	central fill of pit 26	3	complete, bent	31
63	8	upper fill of pit 26	4	clenched, tip missing, small head	17
17	22	upper fill of pit 26	4	incomplete	33
60	69	upper fill of pit 26	4	complete, small head	24
14	69	upper fill of pit 26	4	complete	37
13	87	central fill of pit 26	3	1 complete, 1 incomplete, 1 shank fragment	49, 53, 38
23b	101	main fill of pit 99	3	shank fragment	40
67	101	main fill of pit 99	3	tip missing	27
69	115	lower fill pit 116	3	complete; tip missing	59, 45
66	62	upper fill of plaster-lined pit	3/4	complete	41
19	9	fill of pit 25	4	2 shank fragments	78, 47
7	9	fill of pit 25	4	Bag 1: 1 complete, 1 incomplete, 1 ?shank fragment. Bag 2: 1 incomplete	Bag 1: 43 x 2, 37. Bag 2: 62
38	92	lower fill pit 148	4	complete	65
39	2	upper backfill of cellar 248	6	incomplete	28
18	4	central backfill of cellar 248	6	complete	60

Table 14: Iron nails

Abbreviation and References

Biddle, M. & Elmhirst, L.	1990	'Sewing equipment' in M. Biddle, *Object and economy in medieval Winchester*, Winchester Studies 7ii (Oxford), 804-17
Brownsword, R.	1985	*English latten domestic candlesticks 1400-1700*, Finds Research Group 700-1700 Datasheet 1
Crummy, N.	1988	*The post-Roman small finds from excavations in Colchester 1971-85*, Colchester Archaeological Report 5 (Colchester)
Crummy, N.	2004	'Iron and copper alloy objects' in H. Dalwood & R. Edwards, *Excavations at Deansway, Worcester, 1988-89: Romano-British small town to late medieval city*, CBS Res. Rep. 139 (York), 386-435
Egan, G.	1998	*The medieval household*, Medieval Finds from Excavations in London 6 (London)
Garrard, I. P.	1995	'Objects of copper alloy and silver' in K. Blockley, M. Blockley, P. Blockley, S. S. Frere & S. Stow, *Excavations in the Marlowe car park and surrounding areas*, The Archaeology of Canterbury V (Canterbury), 1005-99
Harvey, Y.	1975	'The small finds: catalogue' in *Excavations in medieval Southampton 1953-69* by C Platt & R Coleman-Smith (Leicester), 254-92
Margeson, S.	1993	*Norwich Households: the medieval and post-medieval finds from Norwich Survey excavations 1971-8*, East Anglian Archaeology 58 (Norwich)
Ottaway, P. & Rogers, N.	2002	*Craft, industry and everyday life: finds from medieval York*, The Archaeology of York 17/15 (York)
Rahtz, P.	1969	*Excavations at King John's hunting lodge, Writtle, Essex*, Society for Medieval Archaeology Monograph 3 (London)
Taylor, G.	2004	'Bronzeworking moulds' in H. Dalwood & R. Edwards, *Excavations at Deansway, Worcester, 1988-89: Romano-British small town to late medieval city*, CBS Res. Rep. 139 (York), 381-4
North	North, J. J., 1991	*English Hammered Coinage II* (London)

Appendix 6: Faunal Remains

by Chris Faine

Summary and Objectives

The excavations at New Inn Yard, Wisbech, produced 653 fragments of animal bone, with 331 identifiable to species (51% of the sample). The majority of the material came from large pits, containing domestic and industrial dumping occupation and redeposited flood deposits. Cattle and sheep/goat remains dominate the assemblage, along with much smaller amounts of pig and horse. Butchery marks on these remains suggest butchery for meat and to a lesser extent tanning. The bottom layer of pit (26) contained a large number of limed horn cores, along with sheep caudal vertebrae.

Bird and pig bone within some contexts suggest meal remains. A variety of both freshwater and marine fish were also recovered, including plaice, dab, thornback ray, pike and eel. It appears that fishing was carried out from the beach or inshore throughout the year, along with exploitation of the surrounding fens for freshwater fish and birds. Bird remains include domestic fowl and water birds such as teal, mallard, swan and coot.

1 Methodology

1.1 Excavation, Sampling and Recovery

A total of 481 “countable” bones were recovered from the New Inn Yard excavations, with a further 322 fragments not identifiable to species. The assemblage primarily derives from a series of large pits. All bones were collected by hand apart from aside 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.

1.2 Identification and Recording

All data was initially recorded using a specially written MS Access database. All elements identifiable to species and over 25% complete were included in the database. Loose teeth, caudal vertebra and ribs without proximal epiphyses were noted but not included in any quantification. Elements not identifiable to species were classed as “large/medium/small mammal” but again not included in any quantification. 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). Fish remains, with the exception of ribs and fin spines, were examined to produce a basic fragment count (NISP) and quantified accordingly (see below).

1.3 Quantification

Initially the whole identifiable assemblage was quantified in terms of number of individual fragments (NISP) and minimum numbers of individuals MNI (see table 14). Any further analysis relevant to individual taxa and/or features will be covered in the relevant sections. An MNI for fish remains was derived by recording the frequency of the most numerous element and dividing it by the number of times it occurs in the skeleton.

Species	NISP	NISP%	MNI	MNI%
Domestic Mammals				
Cattle (*Bos taurus*)	182	38%	74	48%
Sheep/Goat (*Ovis/Capra*)	182	38%	46	30%
Pig (*Sus scrofa*)	19	3.90%	4	2.50%
Horse (*Equs caballus)*	7	1.40%	1	0.60%
Dog (*Canis familiaris*)	2	0.40%	1	0.60%
Cat (Felis domesticus)	2	0.40%	1	0.60%
Wild Mammals				
Rabbit (*Oryctolagus cuniculus*)	1	0.20%	1	0.60%
Hare (*Lepus sp.*)	1	0.20%	1	0.60%
Bank vole (*Clethrionomys glareolus)*	1	0.20%	1	0.60%
Birds				
Domestic chicken (*Gallus sp.*)	15	3.10%	6	3.80%
Mallard (*Anas platyrynchos*)	11	2.20%	3	1.90%
Coot *(Fulica atra*)	7	1.40%	3	1.90%
Domestic Goose (*Anser sp.*)	6	1.20%	2	1.20%
Swan (*Cygnus sp.*)	2	0.40%	1	0.70%
Teal (*Anas crecca*)	2	0.40%	1	0.70%
Fish				
Dab (*Limanda limanda*)	14	2.90%	2	1.20%
Thornback Ray (*Raja clavata*)	10	2%	1	0.%7
Cod (*Gadus morhua*)	8	1.60%	2	1.20%
Perch (*Perca fluviatilis*)	5	1%	1	0.70%
Plaice (*Pleuronectes platessa*)	2	0.40%	1	0.70%
Pike (*Esox lucius*)	1	0.20%	1	0.70%
Eel (*Anguilla anguilla*)	1	0.20%	1	0.70%
TOTAL:	**481**	**100%**	**155**	**100%**

Table 15: Faunal assemblage – NISP and MNI

1.4 Ageing and Sexing

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 for horse teeth were estimated according to Levine (1982). As mentioned above, the states of epiphyseal fusion for all

relevant bones were recorded to give a broad age range for the major domesticates (after Getty, 1975).

Sexing information for sheep/goat was attempted via metrical analyses of the metacarpus (Crabtree, 1990, p.51). Cattle horn cores were classified broadly to gender again using metrical analysis (after Armitage and Clutton-Brock, 1982). Unfortunately due to the fragmentary nature of much of the assemblage the sexing of pig remains was not possible in this instance.

1.5 Measurements

As mentioned above a variety of metrical analyses were carried out on the assemblage. All measurements were carried out according to the conventions of von den Driesch (1976). Horse withers heights were calculated using Kiesewalter (in Driesch & Boessneck, 1974). Measurements were either carried out using a 150mm sliding calliper or an osteometric board in the case of larger bones.

1.6 Gnawing, Butchery and Burning

Any instances of butchery were noted and recorded using a separate table from the main database. The type of lesion, its position, severity and direction were all noted. The presence of any further taphonomy, i.e. burning, gnawing etc was also noted. A separate table for any pathology, giving the position and type of lesion was also used.

1.7 Storage

The assemblage is stored at the offices of the Archaeological Field Unit.

2 Preservation

Preservation of the assemblage was on the whole extremely good, albeit fragmented in many cases due to butchery/processing. However, horn cores found in context 84 were largely in poor condition and appeared to have been limed.

3 The Composition of the Assemblage

3.1 Overall distribution

Table 15 shows the overall species distribution for the entire assemblage. As one can see domestic mammals dominate, with cattle making up the largest portion of the assemblage (182 identifiable fragments), along with sheep/goat.

3.2 Distribution by phasing

The site as a whole was divided into 6 phases:

Phase 1: 1200-1400
Phase 2: 1300-1550
Phase 3: 1500-1600
Phase 4: 1500-1700
Phase 5: 1700-1800
Phase 6: 1800-1900

For the purposes of this report the phases have been grouped into three, i.e. Phases 1&2, 3&4, 5&6. Table 16 shows the distribution of the major domestic mammals by site phase.

Species	Phases 1&2	Phases 3&4	Phases 5&6
Cattle	2	178	1
Sheep/Goat	6	173	1
Pig	0	19	0

Table 16: Main domesticates by site phase

Clearly the majority of faunal remains in this assemblage date from the middle phases (1500-1700). Fragments from domestic mammals are few from Phases 1 & 2, with contexts 104 and 168 containing 1 butchered cattle vertebra each. Contexts 56 and 169 contained 2 intact sheep/goat metapodia. Of most interest from this phase is context 151, an in-situ flood deposit containing a variety of marine fishes, including 7 fragments of thornback ray and 6 of dab, along with some eel. This context is discussed in more detail in section 7 below.

As mentioned above, the vast majority of the faunal remains from this site derive from phases 3&4 (1500-1700). The majority of these contexts comprise the fills of two large pits; the lower and basal fills of pit 26 and the basal fill of pit 116.

Pit 26

The basal layer (24) contained 144 identifiable fragments; 71 cattle horncores and sixty sheep/goat caudal vertebrae, with seven sheep metatarsals and three elements of horse. These appear to have been limed and the entire assemblage was packed down to form a layer covering the base of the pit.

The layer above (12/43/84) contained 64 identifiable fragments including 47 of domestic mammals and 17 of bird (chicken, mallard, goose, swan and teal. This context was sealed by a variety of redeposited flood silts and domestic dumping layers, containing a variety of butchered material, much of it undiagnostic. Identifiable elements from the occupational layers suggest meal remains, with

contexts 59, 60 & 61 containing butchered sheep, pig and fowl remains.

Pit 116

Context 115, the basal fill of a deep, narrow pit (116) contained 30-sheep/goat metapodia (15 each of metacarpals and metatarsals), and 63 phalanges.

Very little material was recovered from the latest two phases (5&6), with context 18 containing a butchered cattle rib and sheep tibia.

4 The Main Domesticates

4.1 Cattle

4.1.1 Anatomical Distribution

As one can see from Graph 6, the presence of the large horn core assemblage has the effect of artificially skewing the body distribution of cattle body parts. If we disregard the horn cores however, one can see that the distribution is fairly broad, with no element being particularly numerous in proportion to the others.

4.1.2 Ageing Data

Unfortunately no intact cattle mandibles were recovered from the assemblage, so information on the age range of the skeletal population in this instance is reliant on the levels of epiphyseal fusion within the assemblage. This data can be seen in Graph 7. Despite the fragmentary nature of much of the assemblage, it appears that the cattle population was generally mature. There appears to have been no specific age at which cattle were generally killed, instead animals are being slaughtered around the ages of 1 ½ and 3 years of age, with a significant number surviving to adulthood. However, it must be reiterated that without any tooth wear data the ages of cattle once they have reached physical maturity cannot be ascertained using epiphyseal fusion alone. Despite this, the ageing data is still useful in examining the use of cattle at this site (see *Discussion*).

4.1.3 Size, Shape and Sex

One of the most effective ways to gauge to size, shape and sex in cattle in particular is metrical analysis, particularly of the astragalus and distal metacarpus. Unfortunately due to the extensive butchery of much of the cattle remains (see below), such analysis was not possible in this instance. However, the large number of horn cores recovered

from context 24 can answer questions of breed and to lesser extent, gender. Four separate measurements were taken from each intact element according to Driesch (1976). These were:

44: Horn core basal circumference
45: Greatest diameter of horn core base
46: Least diameter of horn core base
47: Length of outer curve of horn core

These measurements were collected and interpreted using Armitage (1982). Estimations of sex and breed were only suggested where a particular set of measurements fell squarely within a grouping. These can be seen in table 17 & Graph 8. This analysis suggest a mixed population of mostly “short horned“ cattle, with some “medium horned” and larger individuals.

Number	Context	44	45	46	47	Comments
144	84	150	57	37	80.5	short horn bull
145	84	140	43	35	122	short horn bull
164	84	137	143	48		
165	84	44	47			
214	70	112		39	117	
268	22	172	60.5		132	
332	84	107.5	39.5	32.5	102	short horn bull
333	84	119	38	30	135	short horn female
336	84	143	49	40	160	short horn female
337	84	136	44	36	135	short horn female
338	84	132	405	36		
339	84	175	54	46		
340	84	126	39	31		
341	24	128	40	38		
342	24	150	49	41		
343	24	121	37.5	29	119	short horn bull
345	24	155	51	44		
346	24	154	52	36.5	119	short horn
347	24	113	45	33	106	short horn bull
348	24	119	38	30.5		
349	24	111	37	29	95	short horn bull
350	84	150	47	40	165	short horn female
351	84	109	38	30.5	130	short horn bull
352	84	112	37	30.5	145	short horn bull
353	84	127	41.5	35	150	short horn
354	84	157	50	31	135	short horn bull
355	84	121	36	31	112	short horn bull
356	84	98	33	25	105	
357	84	165	50	44		
358	84	147	45	42		
359	84	138	45.5	41	156	short horn female
360	84	156	47	42		
361	84	143	43	42	163	short horn female
362	84	121	35	31	125	short horn bull
363	84	122	41	32	125	short horn bull
364	84	181	58	52	161	medium horn
365	84	122	43	36	155	short horn female
366	84	126	44	36	135	short horn female
367	84	120	41	34	158	short horn bull
368	84	120	41	34	158	short horn bull
369	84	113	36	35	120	short horn bull
371	84	130	41.5	36	130	short horn bull
372	84	146	49	41	112	short horn bull
373	84	110	35	32	112	short horn bull
374	84	114	36	32	114	short horn bull

375	84	130	35	31.5		
376	84	132	42	38	158	short horn female

Number	Context	45	46	47	48	Comments
378	84	146	45	40	176	medium horn
379	84	142	46	41	165	medium horn
380	84	126	40	37		
381	84	130	46	33	146	short horn bull
382	84	130	46	38	160	short horn female
383	84	120	41	34	140	short horn female
384	84	144	46	41	144	short horn female
385	84	120	39	30	131	short horn bull
386	84	120	36	29	120	short horn bull (?)
387	84	190	63	56	196	medium horn
388	84	138	44	32	155	short horn female
389	84	180	58	51	161	medium horn
390	84	146	46	44	147	
391	84	136	47	36	168	short horn bull
392	84	146	46			
393	24	126	40	34	162	
394	24	130	46	36	131	
395	24	160	43	34	165	short horn female
396	24	117	40	31	126	short horn bull

Table 17: Horncore metric data

4.1.4 Non-Metric Traits, Abnormalities and Pathologies

Little evidence for pathology was found on cattle remains in the assemblage, apart from four instances of extra bone growth on the plantar surface of 1st phalanges. This need not be indicative of any disease or special use (i.e. draft animals) and is most likely the result of the everyday "wear and tear" one would expect in mature animals. However, on one specimen these lesions continued onto the proximal articular surface, a condition that has been linked with draft animals.

4.1.5 Butchery and Boneworking

As mentioned at the outset of this report a good proportion of elements in this assemblage show some evidence of butchery (53% of the identifiable assemblage). In the case of the cattle remains this proportion is even higher, with 81.3% of the identifiable assemblage showing evidence of butchery. Several trends appear when examining the pattern and nature of these lesions. For example, the vast majority of butchery marks are severe, indicating heavy blows with a large knife or cleaver. The majority of marks seen on long bones are mid-shaft rather than at the joints, possibly indicating marrow extraction or other uses rather than solely butchery for meat. A similar conclusion could be drawn from examining the cranial bones and mandibles, with the horn cores being removed at their bases and mandibles being crudely split at the ascending ramus.

Vertebrae in the assemblage are almost entirely split vertically, perhaps to access the spinal cord. Ribs are commonly split just below the proximal epiphyses. These observations, combined with the range of body parts recovered (see Graph 6), suggest the cattle assemblage is the result of several types of animal exploitation. Apart from context

24 (where the variety of horn cores and caudal vertebra suggest industrial processing waste), butchery marks on elements from the other contexts suggest a combination of butchery for meat and other industries such as tanning, bone working etc. No specific evidence for bone working was found in this assemblage.

4.2 Sheep/Goat

4.2.1 Sheep or Goat?

Unfortunately due to the lack of cranial elements identifying elements as either sheep or goat was not possible using cranial morphology. However, measurements were taken of the metapodia using Boessneck (1969), and Payne (1969). The distribution can be seen in graph 9. As one can see the population is extremely homogenous, with two groupings representing the metacarpals and tarsals respectively, and it has been assumed for the purposes of this report that the overwhelming majority of elements are those of sheep.

4.2.2 Anatomical Distribution

Graph 10 shows the anatomical distribution of sheep remains in the assemblage. Like the cattle remains, the distribution of elements is clearly skewed by the presence of large numbers of particular element (in this case metapodia). This not withstanding, the distribution of elements is clear, with cranial and front limbs being most common. This broad distribution could again indicate evidence of both butchery and tanning. Of course it must be noted that heavily butchered elements would artificially inflate a count such as this (i.e. based on NISP).

4.2.3 Ageing Data

Three intact sheep mandibles were recovered from the assemblage. Tooth wear analysis showed all three to be from mature individuals i.e. over 2 ½ years old. Analysis of epiphyseal fusion data also confirms that the vast majority of individuals were at least adults, with no specific kill off patterns (see Graph 11).

4.2.4 Size, Shape and Sex

Withers heights for the sheep population can be seen in table 18, compared with those form two other contemporary sites from Castle Mall, Norwich and the Tower of London. As one can see the average size of the individuals from this assemblage is significantly smaller than those from either of the latter two sites. However, the exact reason for this remains unclear. In terms of sexing the population, this is unfortunately not possible using morphological traits in sheep. However, the close groupings of measurements in Graph 9 suggest again a homogenous population, this time in terms of gender.

Site	Mean	Min	Max	Range	Withers Height (Mean)
New Inn Yard	110	109.5	135	25	536mm
Castle Mall, Norwich	180	160	196	36	880mm
Tower of London	136.5	N/A	N/A	N/A	617mm

Table 18: Sheep withers heights

4.2.5 Non-Metric Traits, Abnormalities and Pathologies

Only one instance of possible pathology was seen amongst the sheep remains, with a possible abscess noted on a distal metatarsal.

4.2.6 Butchery and Boneworking

80% of sheep/goat remains from the assemblage show evidence of butchery. As with cattle remains, the majority of butchery on the vertebrae and long bones is severe (most likely made with a large knife or cleaver), with long bones being most often split horizontally mid-shaft. Vertebrae are almost entirely split vertically through the vertebral body. More interesting is the lack of butchery seen on the intact metapodia, particularly from context 115. If removed intact, one would expect to see a series of light cut marks at the epiphyses; only two elements show such marks. Removal in such a fashion can be indicative of the lower legs being left on hides to be tanned; the lack of such butchery need not rule this out, but is nonetheless unusual. No evidence of bone working was found.

4.3 Pig

4.3.1 Anatomical Distribution

Compared to cattle and sheep, very few pig remains were recovered (19 identifiable fragments). The majority of these comprise cranial bones, scapulae and femora. However, the sample size is too small for any further analysis.

4.3.2 Ageing Data

Only one mandible in the pig assemblage was from a non-adult individual. Unfortunately, any epiphyseal fusion data from such a small assemblage would provide little information. However the predominance of adults would indicate a meat-based husbandry strategy rather than breeding.

4.3.3 Size, Shape and Sex

Unfortunately due to the small and fragmented nature of the pig remains metrical analysis was not possible in this instance. As result characteristics such as stature could not be ascertained. The sex profile of the population also remains unclear due to the lack of canine teeth present in the mandibles.

4.3.4 Non-Metric Traits, Abnormalities and Pathologies

No evidence for these was found in the assemblage.

4.3.5 Butchery and Boneworking

Seventy five percent of pig remains showed evidence of butchery. Like the other domestic mammals the majority of marks were severe, with long bones being chopped mid shaft and skulls being split along the metopic suture (perhaps to expose the brain). All mandibles recovered had been chopped roughly at the ascending ramus. A number of scapulae were shattered just above the neck. As with the other domestic mammals these patterns are consistent with both butchery and possible tanning (in particular the splitting of the crania). However, unlike the other domestic animals pigs' heads were commonly eaten and so such marks on the crania need not represent tanning waste in this case.

5 Other Mammals

5.1 Equids

Six horse fragments were recovered from variety of contexts. Two femurs from 104 and 154 showed signs of butchery, represented by severe chop marks mid-shaft. Context 24 yielded a butchered humerus, an intact fibula and a metapodial from an individual with a withers height of around 1.37m. While it is likely that horses were exploited for both meat and skins, the assemblage is too small to draw any further conclusions from.

5.2 Smaller mammals

In addition, several fragments of smaller mammal remains were recovered. Context 9 contained 1 fragment identified as bank vole (*Clethrionomys glareolus*), a species more often associated with more open areas rather than towns. Contexts 9 & 10 contained two fragments of dog and cat each (no evidence of butchery was seen). Both contexts are later fills of the larger pit (26).

6 Birds

6.1 Domestic Fowl

Fifteen fragments were identified as domestic fowl (Gallus sp.), primarily from habitation layers, from minimum of 5 individuals. A range of elements was recovered, not indicative of any specific butchery practice. Only two elements showed signs of butchery. However, when dealing with birds of this size little work is needed to process a carcass, hence few butchery marks are to be expected.

6.2 Other Domestic Birds

Aside from domestic fowl 6 fragments of goose (Anser sp.) were recovered. Unfortunately these were heavily butchered so an exact identification of species was not possible.

6.3 Wild Birds

Twenty-two fragments of wild bird remains were identified. Duck remains were most prevalent, with both mallard (*Anas platyrhynchos*) and the smaller teal (*Anas crecca*), being identified. The larger amount of duck than goose is unusual for this period as ducks were seen as a low status food and rather unhealthy. However, as geese at this time were commonly raised out of urban areas and driven into town for sale this need not be significant. All bird remains were recovered from various fills of the large pit (26), and most likely represent individual meal remains rather than any more widespread activity.

7 Fish

A wide variety of fish remains were recovered from both freshwater and marine species (see Table 14). Marine taxa dominate, comprising 85% of identifiable fragments. Flatfish (dab and plaice) are most prevalent along with lesser proportions of cod and thornback ray. The freshwater species present were pike, eel and perch.

Dab (*Limand limanda*) and plaice (*Pleuronectes platessa*) are both found in relatively shallow water and would have been easily caught around the shore. Fourteen fragments of dab, including vertebra and cleithra, were identified along with 2 plaice vertebrae. Cod (*Gadus morhua*), in contrast is only found in exploitable numbers inshore in this area during the winter months. The 8 cod remains identified are almost entirely those of smaller specimens, with the exception of one vertebra and cleithrum of an extremely large individual that one would expect to inhabit much deeper water.

Ten fragments (all dermal denticles, 7 with spines) were identified as Thornback ray, or roker (*Raja clavata*). Like the plaice and dab, it is common in inshore waters throughout the year and can be caught either from the shore or often in traps. In terms of fishing practices the species found in this assemblage can all be caught close to shore at differing stages of the year, with little evidence of deep-sea fishing. The large cod remains are very distinct from the other species in the assemblage, and could have been imported (possibly dried) from elsewhere. Around 70% of the smaller cod bones were crushed transversely, with two showing evidence of burning.

Around 50% of marine fish remains were recovered from pits and habitation layers, with the rest coming from flood layers. Context 151 in particular contains dab and thornback ray remains, (both species being

present inshore in greatest numbers during spring). This could indicate periods of flooding due to spring tides.

As mentioned above the freshwater species recovered from the assemblage were pike, perch and eel. One fragment of pike (*Esox lucius*) and 5 of perch (*Perca fluvialitis*), were recovered. Both are common in British lakes and rivers and until relatively recently were commonly eaten.

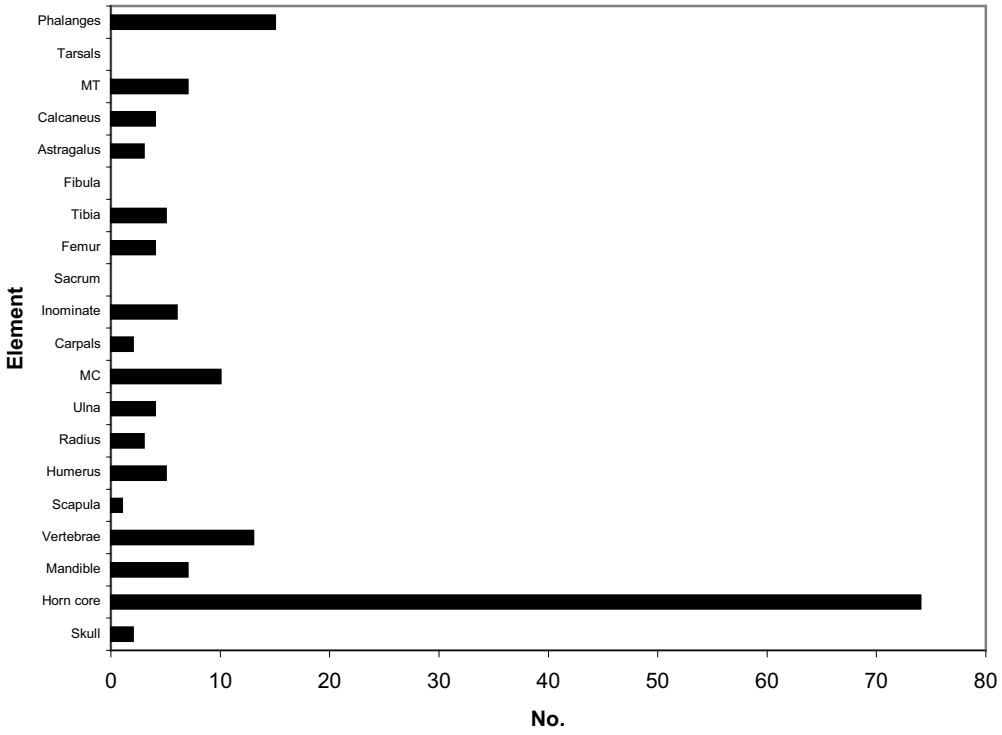
8 Discussion/Conclusions

The assemblage evidently represents a variety of animal use strategies. Whilst it is clear that context 24 represents tannery waste from cattle, sheep and possibly horse, the manner of their deposition does not indicate that the pit itself was a tanning pit. The butchery patterns on post-cranial cattle bones suggest butchery for meat and almost certainly marrow, albeit with the majority of the processing carried out elsewhere. Analysis of the sheep/goat remains suggests much the same strategy, with large amounts of waste elements (in this case phalanges and caudal vertebrae) along with meat bearings elements being recovered. This idea is reinforced if one examines the age at death of the skeletal population. If meat and skins were indeed the main products represented by the assemblage, one would expect animals to be slaughtered when fully grown to maximise productivity of both. The presence of butchered horse remains could also represent similar use, but are too few to make any further analysis. Pig remains are again few, but most likely represent a small snapshot of butchery for meat largely taking place elsewhere.

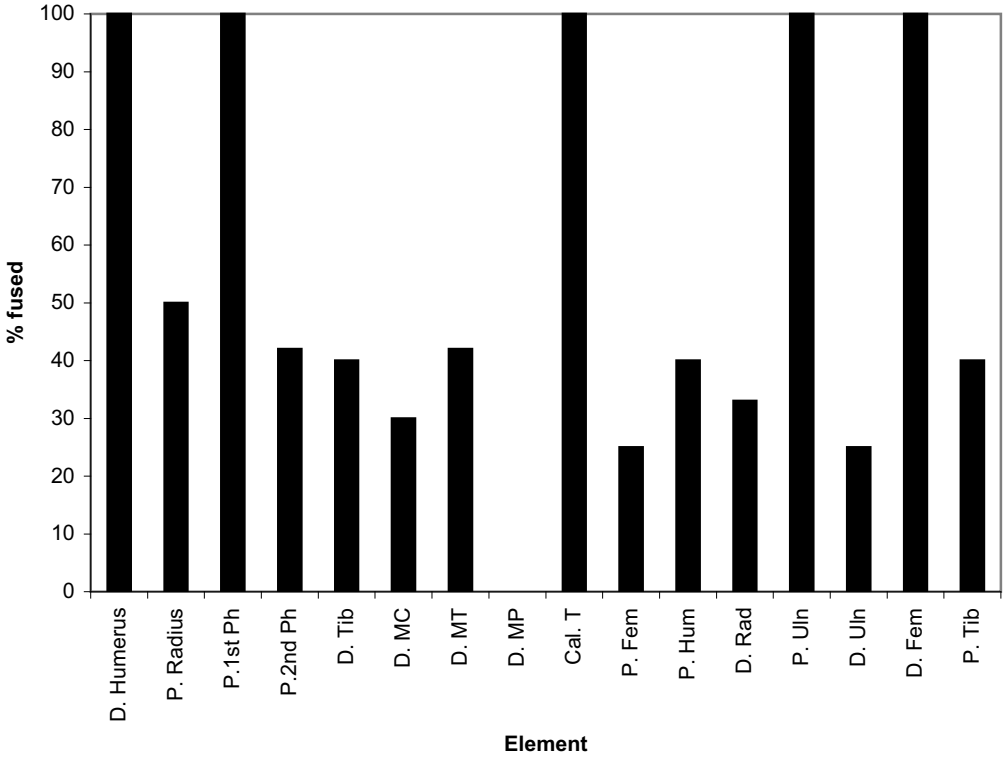
The bird remains appear to be those of individual meals deposited randomly, hence their presence in many contexts: from occupation layers to large pits. Aside from domestic fowl, the presence of significant amounts of duck and goose (in addition to coot) could show evidence of exploitation of the surrounding waterways (although there is no way of determining if the ducks and geese in question were domesticated or hunted).

The fish remains present show exploitation of both freshwater and marine species. The seasonality of the species in question suggests that fishing was carried out either from shore or close to it throughout the year. Evidence of crushing and burning again suggests meal remains when found in occupational contexts. As mentioned above, the presence of marine fish remains in layered deposits could also represent episodic seasonal flooding.

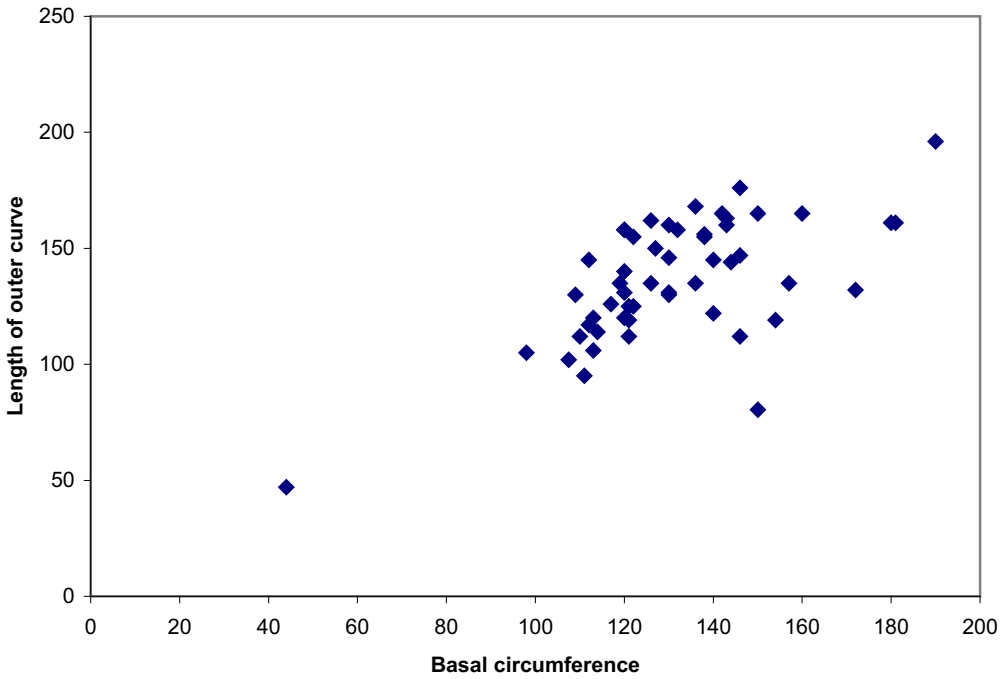
Graph 6: Cattle body part distribution



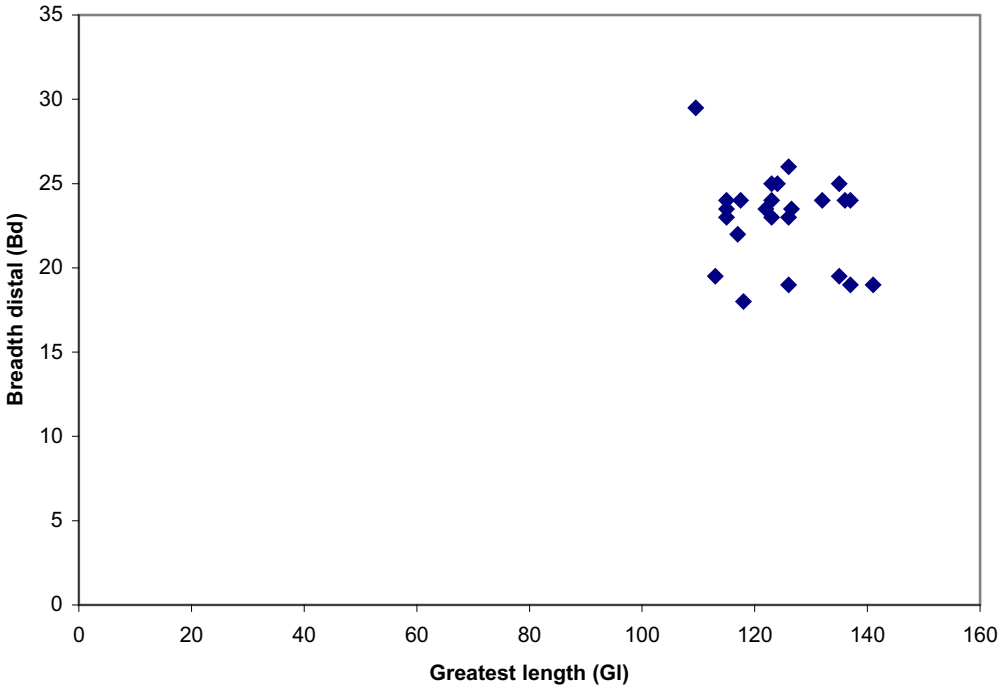
Graph 7: Cattle epiphyseal fusion data



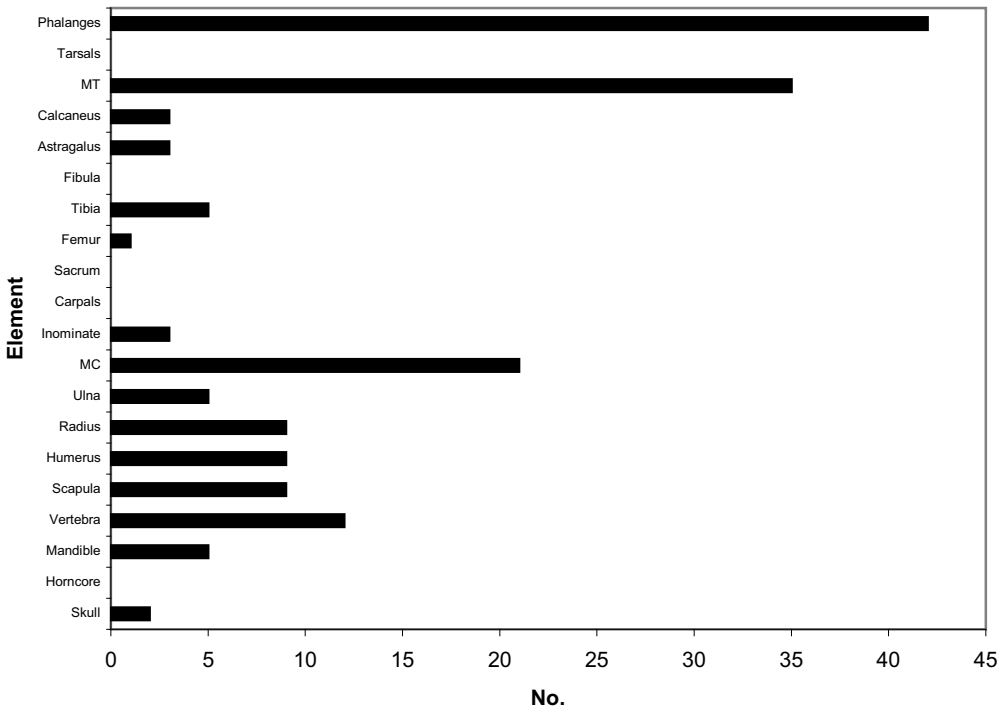
Graph 8: Horncore Metrical Analysis



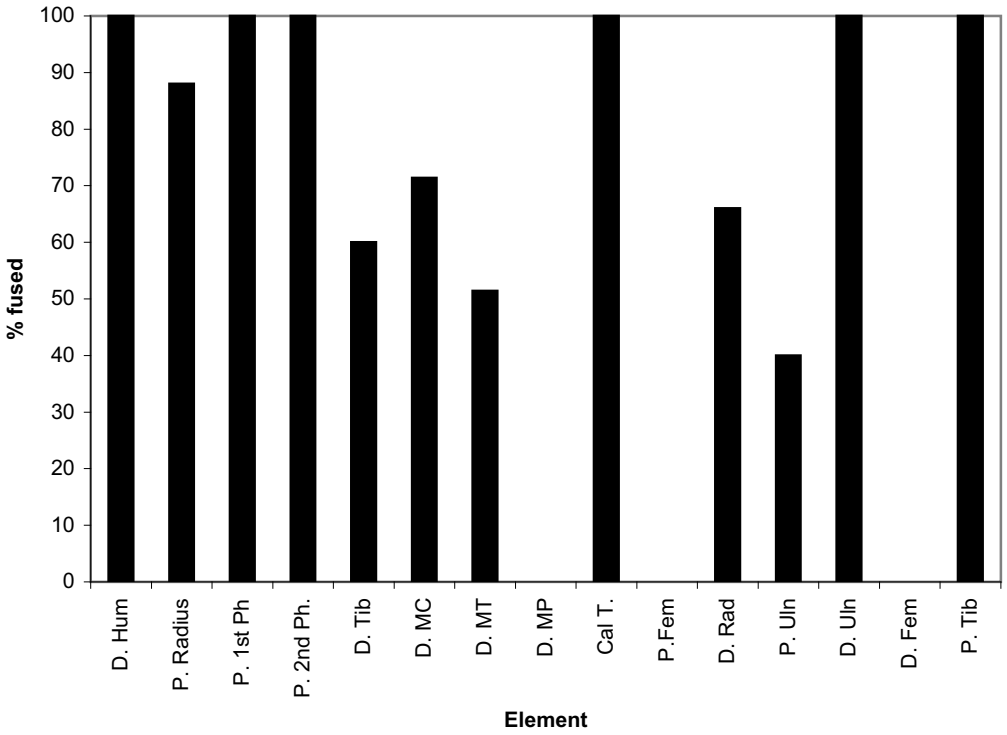
Graph 9: Sheep/Goat metrical analysis



Graph 10: Sheep/Goat body part distribution



Graph 11: Sheep epiphyseal fusion data



Context	Cut	Phase	Context type	Shell type	Weight in kg	Comments
57	layer	**2**	flood deposit	Oyster	0.00	
91	layer	**2**	flood deposit	Oyster	0.01	
12	26	**3**	lower fill large pit	Oyster & Cockle	0.39	<1g mussel, 40g cockle
43	26	**3**	lower fill large pit	Oyster	0.03	
84	26	**3**	lower fill large pit	Oyster & Cockle	0.45	2g cockle
84	26	**3**	lower fill large pit	Oyster	0.10	
85	26	**3**	mid fill large pit	Oyster	0.01	
87	26	**3**	mid fill large pit	Oyster	0.01	
47	255	**3**	main fill large shallow pit	Oyster	0.04	
101	99	**3**	main fill large pit	Oyster & Cockle	0.04	<1g cockle
115	116	**3**	lower fill large ph	Oyster	0.08	
9	25	**4**	pit fill	Oyster & Cockle	0.39	10g cockle
8	26	**4**	upper fill large pit	Oyster	0.63	1g cockle
10	26	**4**	upper fill large pit	Oyster & Cockle	0.36	5g cockle
11	26	**4**	upper fill large pit	Oyster	0.33	
19	26	**4**	upper fill large pit	Oyster & Cockle	0.27	25g cockle,
21	26	**4**	upper fill large pit	Cockle	0.00	
67	26	**4**	upper fill large pit	Oyster & Cockle	0.55	78g cockle
69	26	**4**	upper fill large pit	Oyster	0.01	
70	26	**4**	upper fill large pit	Cockle	0.03	
27	layer	**4**		Oyster	0.02	

Table 19: Shellfish

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Appendix 7: Charred plant macrofossils and other remains

By Val Fryer

1 Introduction

Excavations revealed at least two large, deep pits of sixteenth to seventeenth century date. Other features of thirteenth/fourteenth to seventeenth century date were also recorded including post-holes, layers of organic material interleaved with water-lain silt deposits and discrete lenses of material. Samples for the extraction of the plant macrofossil assemblages were taken from all these features, and twelve were submitted for assessment. Although none contained sufficient material for quantification, the results have been summarised here as they may illustrate particular aspects of the sites use and development.

2 Methods

The samples were bulk floated by CAM ARC, and the flots were collected in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Tables 1 and 2. Nomenclature within the tables follows Stace (1997) for the plant macrofossils and Kerney and Cameron (1979) and Macan (1977) for the molluscs. Charred, waterlogged and mineral replaced plant remains were recorded, and identifications were made by comparison with modern reference specimens. The density of material within each assemblage is expressed in the tables as follows: x = 1 – 10 specimens, xx = 10 – 100 specimens and xxx = 100+ specimens, and plant remains have been categorised as cereals and other food plants, herbs, wetland plants and other plant macrofossils. The presence of molluscs, animal macrofossils and other material types has also been recorded.

3 Results

3.1 Plant macrofossils

Cereal grains and/or seeds of common weeds or wetland plants were recorded at varying densities from all but two samples. Preservation was moderately good, although some grains were extremely puffed and distorted, probably as a result of combustion at very high temperatures.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded, although rarely at a high density. Chaff was rare; bread wheat (*T. aestivum/compactum*) type rachis nodes, with diagnostic

crescentic glume inserts, were present in sample 11 (layer 151, Phase 2), and a rivet wheat (*T. turgidum*) type node, with persistent glume bases and rounded glume inserts, was recovered from sample 6 (upper fill pit 26, Phase 4). The latter sample also produced cotyledon fragments of an indeterminate large pulse (Fabaceae), and large, angular field bean (*Vicia faba*) seeds were noted in sample 7 (lower fill pit 148, Phase4).

Charred weed seeds were comparatively rare. Grassland herbs, including small legumes (Fabaceae), ribwort plantain (*Plantago lanceolata*), indeterminate grasses (Poaceae), black medick (*Medicago lupulina*) and vetch/vetchling (*Vicia/Lathyrus* sp.), occurred most frequently. Mineral replaced and de-watered seeds were noted within sample 7 (pit 148) and included orache (*Atriplex* sp.), corn gromwell (*Lithospermum arvense*), buttercup (*Ranunculus* sp.), campion (*Silene* sp.) and vervain (*Verbena* sp.).

Seeds/fruits of wetland plants were recorded within four of the assemblages. Sedge (*Carex* sp.) fruits occurred most frequently, but saw-sedge (*Cladium mariscus*) nutlets were present in sample 5 (central fill pit 26, Phase 3) and a single club-rush (*Schoenoplectus* sp.) fruit was recovered from sample 13 (upper fill pit 188, Phase 3).

Charcoal fragments and pieces of charred root/stem were present or common in all twelve samples. Charred culm nodes were also present in all but three samples.

3.2 Molluscs

Mollusc shells were exceedingly rare, but did occur within the fills of two of the large pits (features [26] and [99]). Freshwater obligate taxa (namely *Armiger crista, Lymnaea peregra* and *Planorbis planorbis*) were recorded within pit [26], along with the marsh species *Vertigo angustior* and *V. antivertigo* and a single specimen of *Pupilla muscorum*, a mollusc commonly found on open, dry, short turfed grassland. A burnt specimen of *Carychium* sp. was recorded within sample 9 (lower fill pit 99, Phase 3).

3.3 Animal macrofossils

Fragments of bone, eggshell or fish bone, most of which were probably derived from culinary refuse, were noted at a low to moderate density in all but one sample. Other animal macrofossils were rare, but sample 7 (pit 148) contained mineralised faecal concretions, and occasional small mammal or amphibian bones were also recorded.

3.4 Other materials

Fragments of black porous and tarry material were abundant within most of the assemblages studied. Although a proportion of this material may be derived from the combustion of organic remains at

very high temperatures, some pieces had the appearance of fuel/fuel residues including clinker and/or coke. The siliceous globules and vitrified concretions may also be derived from the high temperature combustion of organic materials including straw/grass. The abundance of soft white tufaceous concretions within sample 2 (basal fill pit 26, Phase 3) may indicate that water was either stored or heated within pit [26].

4 Discussion

Pit [26] was one of at least two large, deep pits of unknown function, which were recorded during excavation. Of the five samples taken from fills within the pit, at least three - samples 1 (upper fill, Phase 4), 5 and 6 - appear to be derived from material which was subsequently dumped within the feature. The assemblages contain cereals, weed seeds and large quantities of charcoal, and 1 is primarily composed of large quantities of black porous and tarry concretions. It would appear most likely that all are derived from hearth refuse. Samples 2 and 3, from the basal and lower fills of the pit (Phase 3), contain the only assemblages that may be related to the original feature. Tufaceous concretions which, as stated above, may be related to either the storage or heating of water, are common within sample 2, and both samples also contain small numbers of freshwater obligate and marshland mollusc shells. However, there is insufficient material to indicate whether the pit was designed as a water containment feature for some industrial process, or whether the water was naturally present at the base of a deep feature.

Pit [148] (sample 7) was of similar dimensions to pit [26], and appears also to have been used for the subsequent dumping of both burnt refuse and sewage waste. However, the assemblage from sample 7 also contains a small number of de-watered macrofossils, which are almost certainly derived from plants growing in the near vicinity of the feature. Sedge fruits are abundant, probably indicating that this feature also contained some standing water, but of the other de-watered seeds, most are of grassland species, possibly suggesting the pit was situated within a meadow or similar grassed area.

Sample 11 (layer 151) is from a lens of charred material of thirteenth to fourteenth century date, which was interleaved with deposits of water lain silt. Although the assemblage is small (0.1 litres in volume), the abundance of cereals and charcoal possibly indicates that the material has a domestic origin.

The remaining assemblages contain insufficient material for accurate interpretation, although it is assumed that most may include small quantities of domestic/hearth waste.

5 Conclusions

In summary, a number of large, deep pits were dug into what may have been a meadow or similar grassed area. The pits were either sufficiently deep to contain ground water, or had water introduced into them from elsewhere. Both appear to have been subsequently filled with refuse when their original use had ceased, but there is no remaining indication of what this original function may have been.

References

Kerney, M.P. and Cameron, R.A.D. 197 9 *A Field Guide to the Land Snails of Britain and North-west Europe.* Collins, London

Macan, T.T. 197 7 British Fresh- and Brackish-Water Gastropods *Freshwater Biological Association Scientific Publication* **13**

Stace, C. 199 7 *New Flora of the British Isles*. Second edition. Cambridge University Press

Key to Tables

x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
b = burnt C. = century w = de-watered m = mineral replaced ph = post-hole

Sample No.		1	2	3	5	6
Context No.		**8**	**24**	**12**	**86**	**69**
Feature No.		**26**	**26**	**26**	**26**	**26**
Feature type		**Pit**	**Pit**	**Pit**	**Pit**	**Pit**
Phase		**4**	**3**	**3**	**3**	**4**
Cereals and other food plants	**Common name**					
Avena sp. (grains)	Oat					x
Large Fabaceae indet.	Large pulse					x
Hordeum sp. (grains)	Barley				x	x
Triticum sp. (grains)	Wheat	x			x	x
T. turgidum type (rachis nodes)	Rivet wheat type					x
Cereal indet. (grains)		x			x	x
(silica skeletons)						x
(basal rachis nodes)						x
Herbs						
Anisantha sterilis (L.)Nevski	Barren brome				xcf	
Brassicaceae indet.						x
Fabaceae indet.					x	
Medicago/Trifolium/Lotus sp.	Medick/clover/trefoil	x		xcf		x
M. lupulina L.	Black medick					x
Small Poaceae indet.	Grasses	x				
Large Poaceae indet.				x	x	
Rumex sp.	Dock			xcf		
Wetland plants						
Carex sp.	Sedge					x
Cladium mariscus (L.)Pohl	Saw-sedge				x	
Other plant macrofossils						
Charcoal <2mm		xxx	xx	xxx	xxx	xx
Charcoal >2mm		xx	xx	x	xx	
Charred root/stem		x	x	x	x	xxx
Indet.culm nodes			x	x	x	xx
Indet.seeds			x			x
Molluscs:Freshwater obligate species						
Armiger crista			x			
Lymneaea peregra						x
Planorbis planorbis				x		
Open country species						

Pupilla muscorum				x		
Marsh species						
Vertigo angustior				xcf		
V. antivertigo						xb
Animal macrofossils						
Bone		xb	xx			
Eggshell		x				
Fish bone		x	x	xx	x	x
Marine mollusc shell		x				
Small mammal/amphibian bone		x			x	x
Other materials						
Black porous 'cokey' material		xxx	xxx	xx	x	
Black tarry material		xxx	xx	xxx	x	x
Siliceous globules			x	x	xx	xx
Small coal frags.		x	x		x	
Tufaceous concretions			xxx			
Vitrified material					x	
Volume of flot (litres)		**0.6**	**0.1**	**0.4**	**0.1**	**0.4**
% flot sorted		**12.50%**	**100%**	**25%**	**100%**	**25%**

Table 20:

Sample No.		**11**	**4**	**8**	**9**	**10**	**13**	**7**
Context No.		**151**	**47**	**101**	**102**	**115**	**62**	**93**
Feature No.			**255**	**99**	**99**	**116**	**188**	**148**
Feature type		**Layer**	**Pit**	**Pit**	**Pit**	**Pit/ph**	**pit**	**Pit**
Phase		**2**	**3**	**3**	**3**	**3**	**3**	**4**
Cereals and other food plants	**Common name**							
Avena sp. (grains)	Oat	xx				x	x	
Large Fabaceae indet.	Large pulse	x				xx		
Hordeum sp. (grains)	Barley	x		x				x
(rachis node)		x						
Triticum sp. (grains)	Wheat	xx		x	xcf			x
T. aestivum/compactum type (rachis nodes)	Bread wheat type	x						
Vicia faba L.	Field bean							x
Cereal indet. (grains)		xx				x	x	x
Herbs								
Apiaceae indet.					x			
Atriplex sp.	Orache							xw
Brassicaceae indet.		x						xm
Chenopodiaceae indet.		x						
Conium maculatum L.	Hemlock				xcf			
Fabaceae indet.						x		x
Galium aparine L.	Goosegrass					x		
Lithospermum arvense L.	Corm gromwell	xm						xm
Papaver sp.	Poppy							xw
Persicaria maculosa/lapathifolia	Persicaria	x						
Plantago lanceolata L.	Ribwort plantain			x	x			
Small Poaceae indet.	Grasses				x			
Large Poaceae indet.					x			xw
Ranunculus sp.	Buttercup							xw
Scandix pecten-veneris L.	Shepherd's needle							xcf
Silene sp.	Campion							xw
Stellaria sp.	Chickweed							
Verbena sp.	Vervain							xw
Vicia/Lathyrus sp.	Vetch/vetchling	x					x	x
Wetland plants								
Carex sp.	Sedge						x	xxw xxm

Schoenoplectus sp.	Club-rush						x	
Other plant macrofossils								
Charcoal <2mm		xxx	xx	xxx	xx	xxx	xxx	xxx
Charcoal >2mm		x	xx		x	xxx	xxx	x
Charred root/stem		xx	x	x	x	xxx	x	x
Mineral replaced root/stem								x
Indet.culm nodes		x		x		xx	x	x
Indet.inflorescence frags.		xx						
Indet.seeds		x xm		x	x		x	xm
Molluscs: Woodland/shade species								
Carychium sp.					xb			
Animal macrofossils								
Bone			x					
Eggshell		x			x	x		
Fish bone		xx	x		x xb		x	x
Mineralised arthropods								x
Mineralised /faecal concretions								xx
Small mammal/amphibian bone				x	x			
Other materials								
Black porous 'cokey' material		x	xxx	xxx	xxx	xx	x	xx
Black tarry material		x	xxx	xxx	xxx	xx	x	xx
Brick/tile						x		
Burnt/fired clay		x	x					
Ferrous glbules								x
Mineralised concretions					xx			
Siliceous globules						x	x	x
Small coal frags.		x	x	x				
Textile/fibre					x			
Vitrified material								x
Volume of flot (litres)		**0.1**	**0.7**	**0.7**	**0.2**	**0.5**	**0.2**	**0.1**
% flot sorted		**100%**	**12.50%**	**12.50%**	**50%**	**25%**	**50%**	**100%**

Table 21:

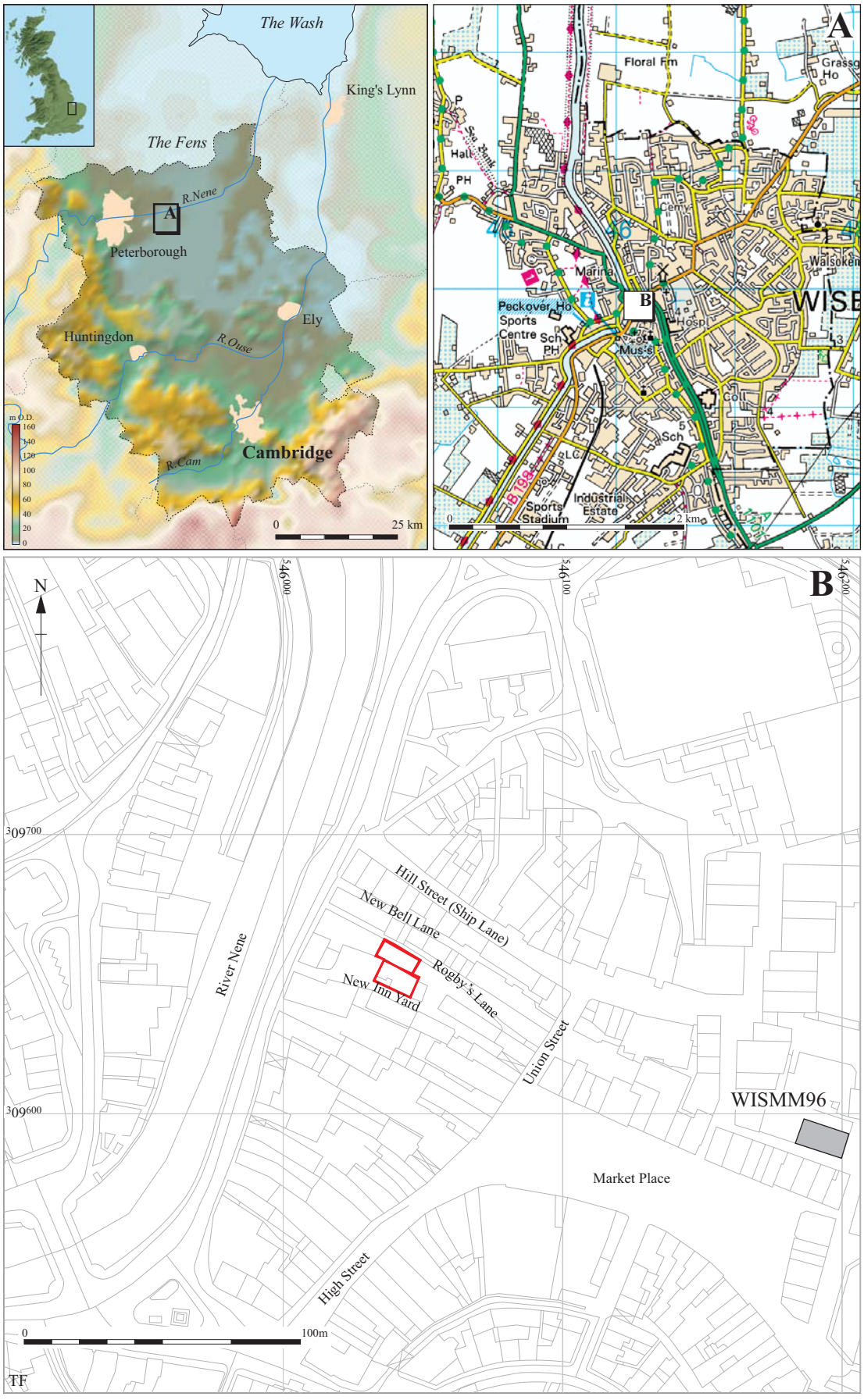


Figure 1: Location of trench with the development area outlined (red)

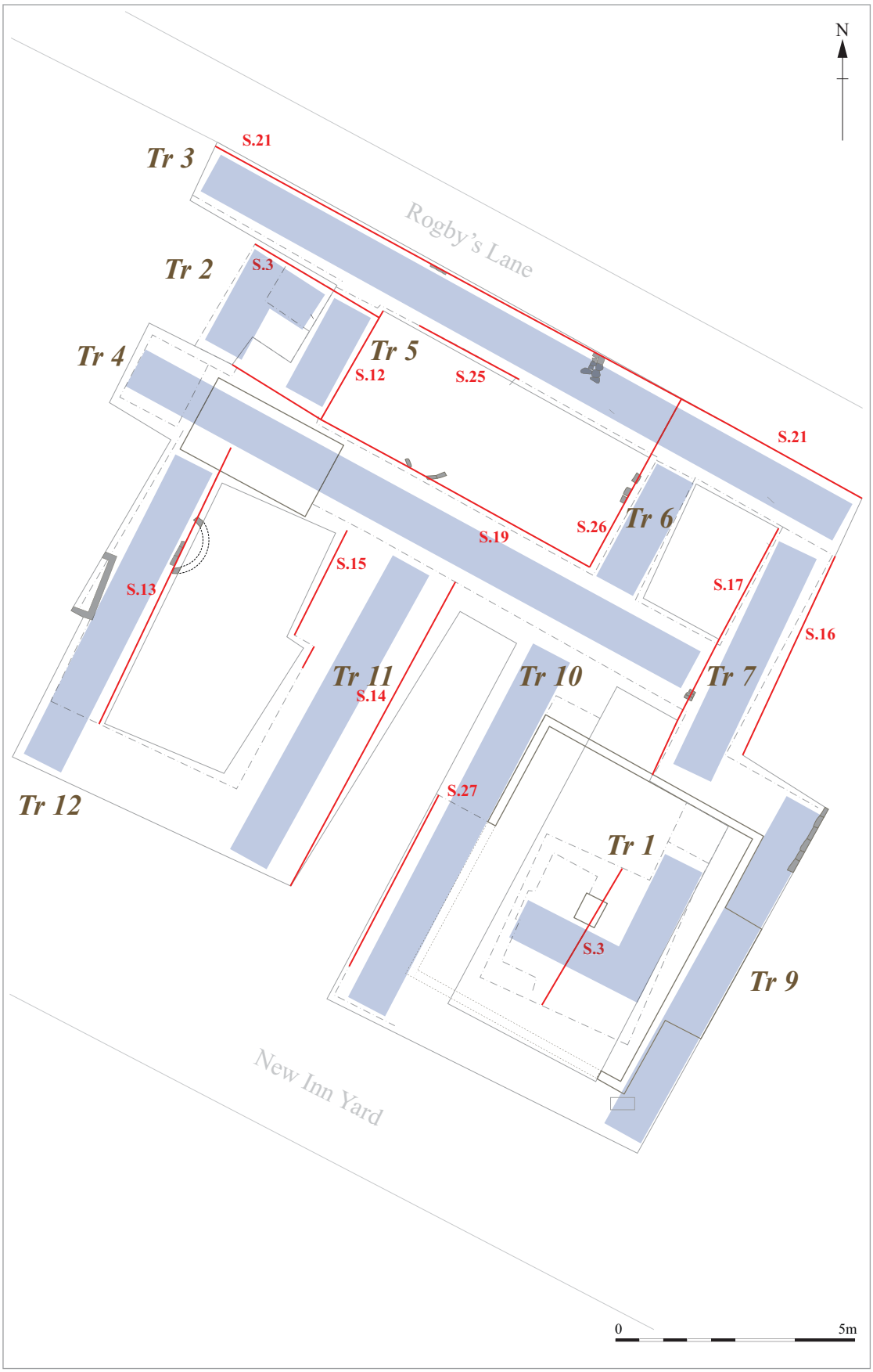


Figure 2: Trench and section location

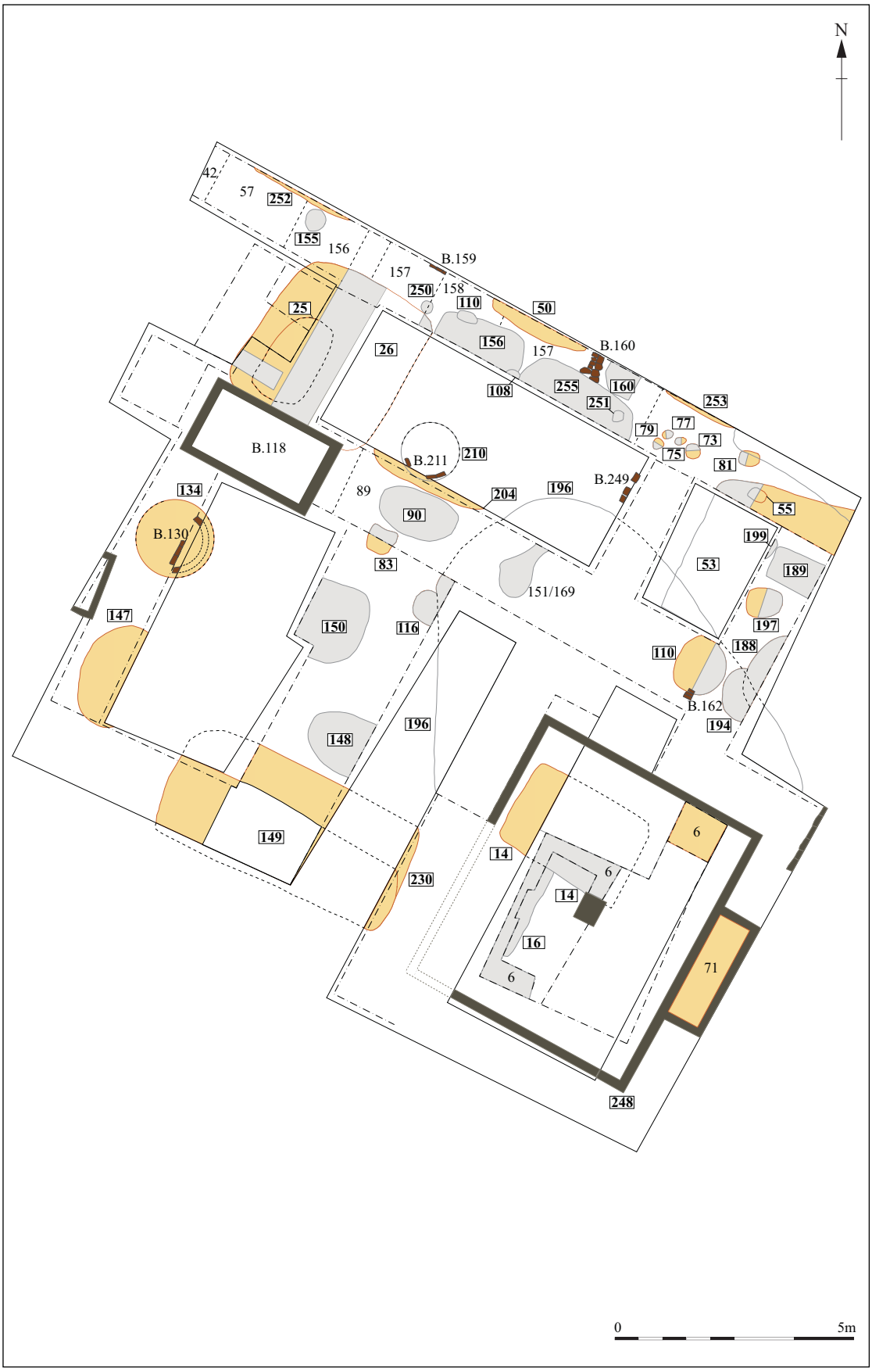


Figure 3: Plan of all archaeology

Figure 4: Plan phases 1 and 2

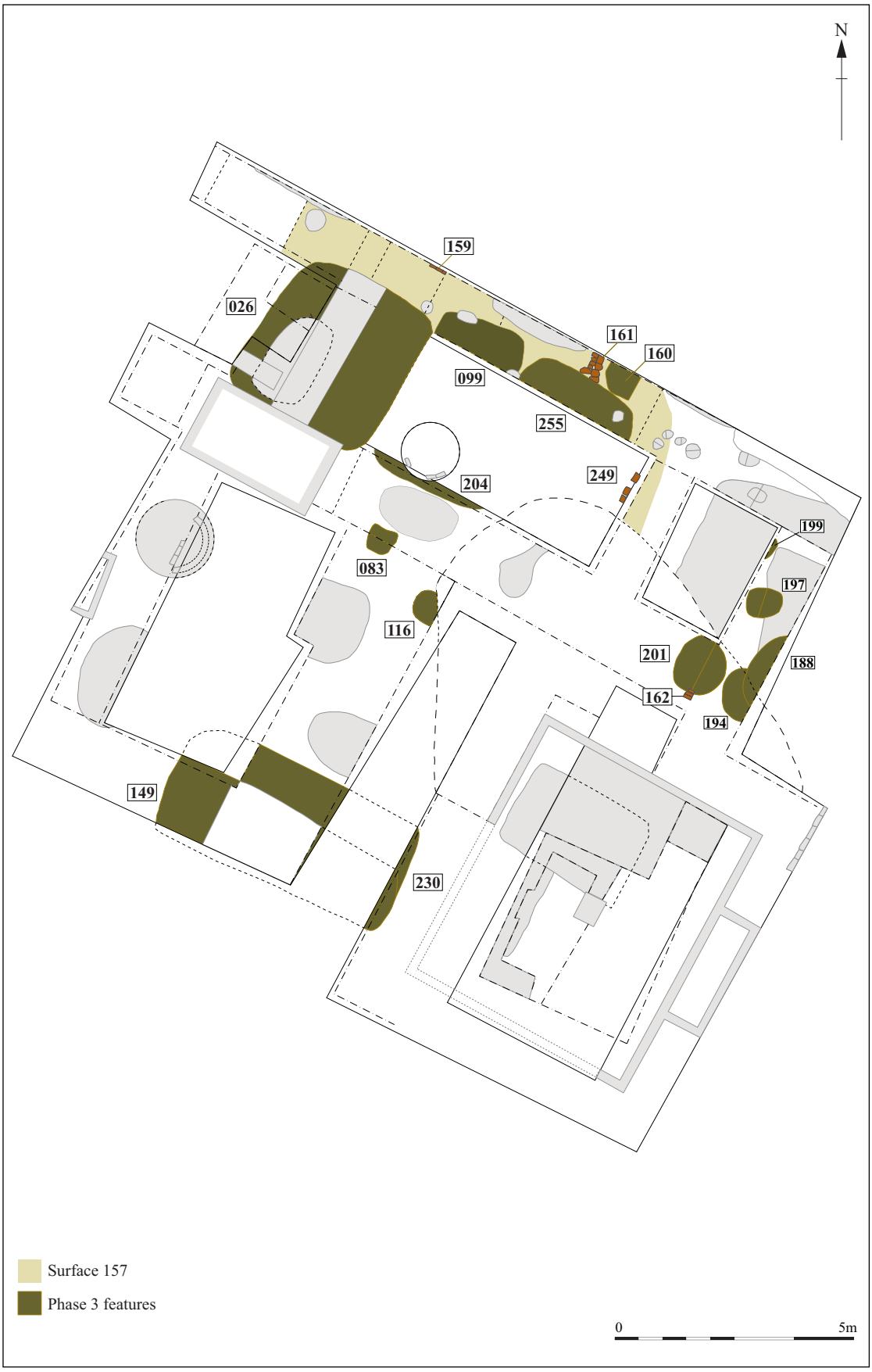


Figure 5: Plan phase 3

Figure 6: Plan phase 4

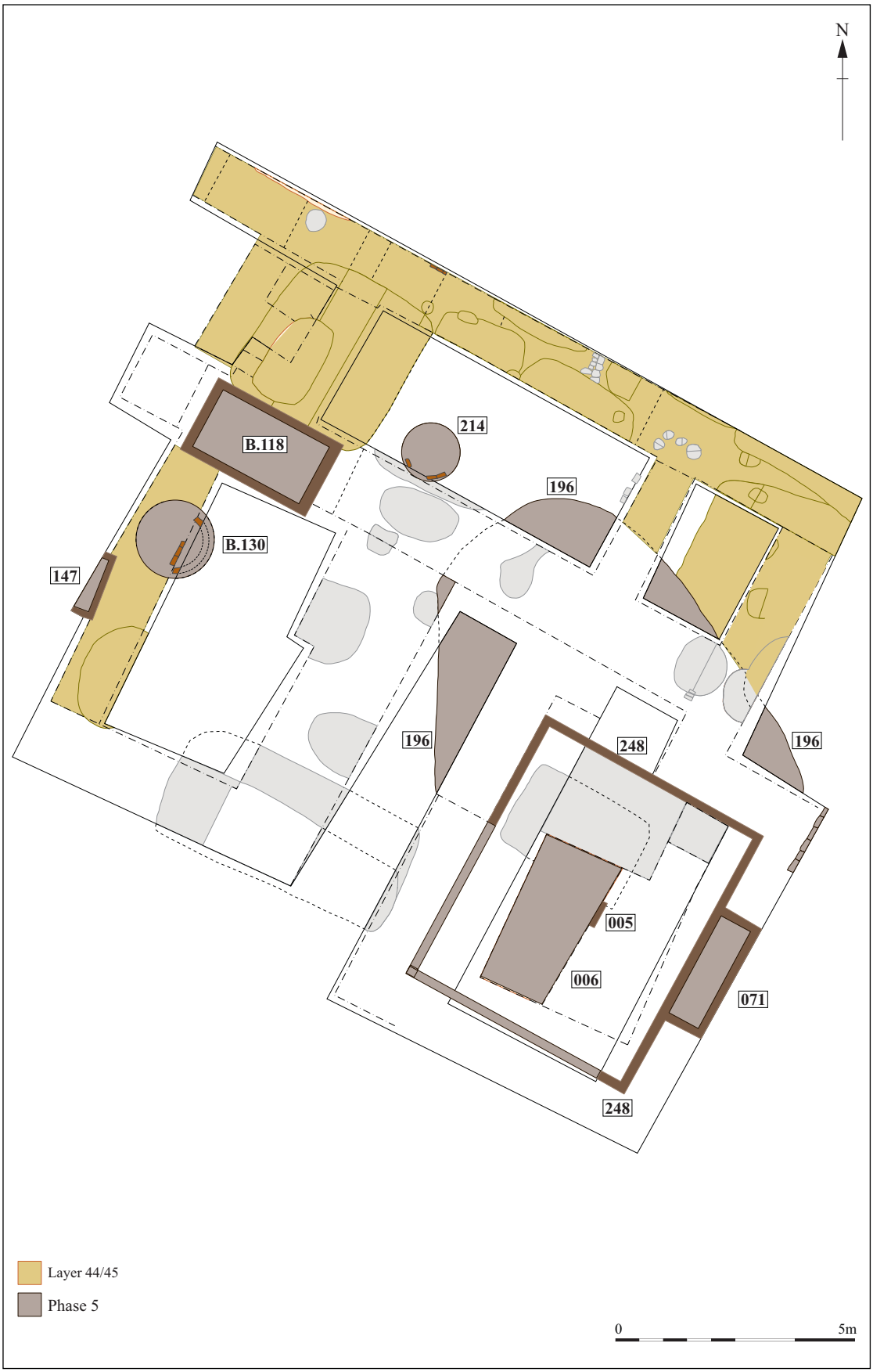


Figure 7: Plan phase 5

Figure 8: Plan phase 6

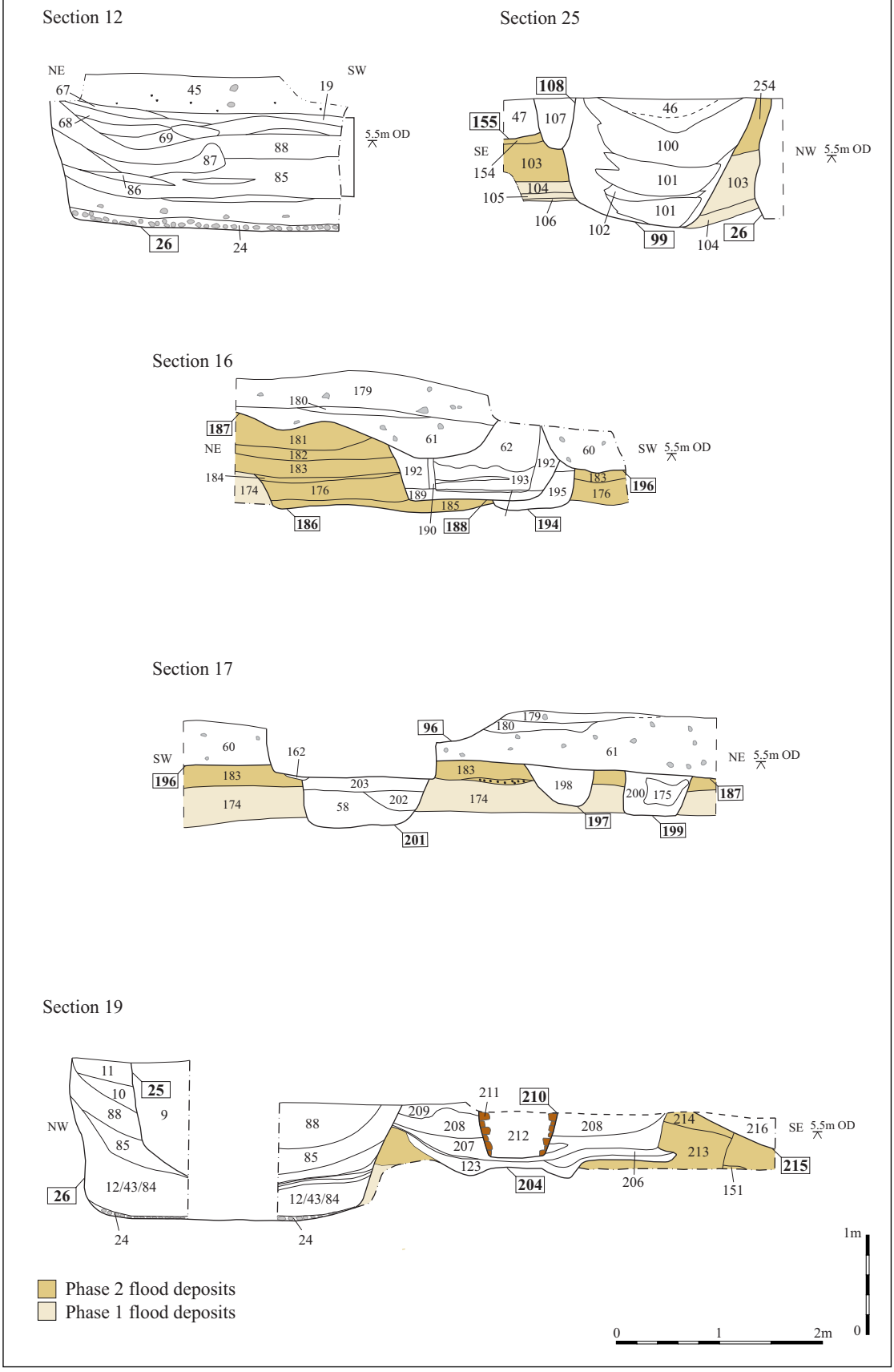
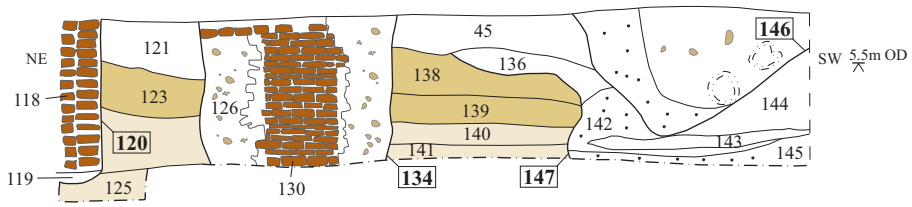
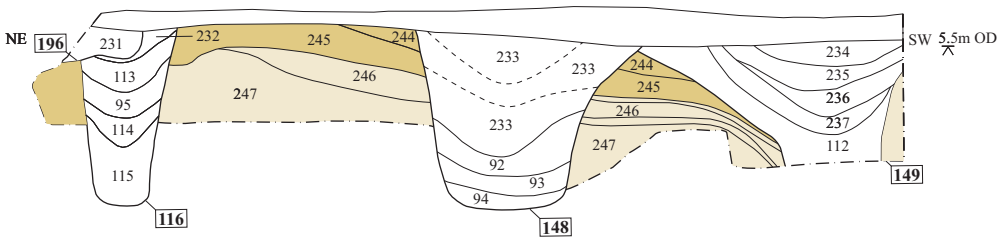


Figure 9: Sections

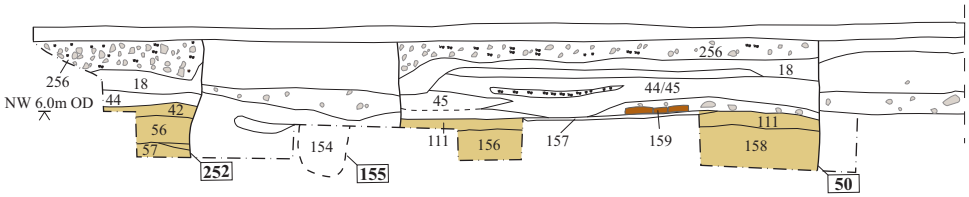
Section 13



Section 14



Section 21a



Section 21b

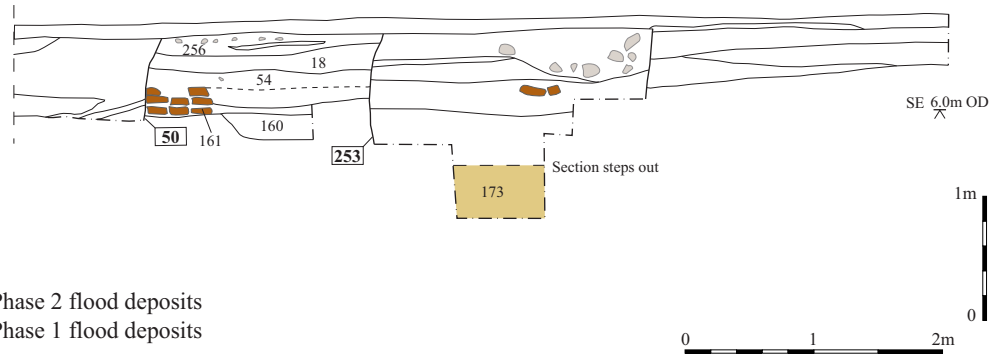


Figure 10: Sections

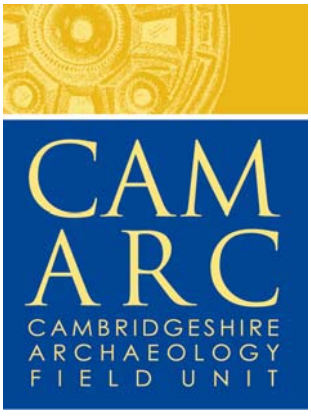
Plate 1: Pit 26, section 19, with section 21a behind showing cuts 252 and 50

Plate 2: Pit 26, horncore layer 24 at base

Plate 3: Pit 116, section 14

Plate 4: Section 14, pit 148 (excavated) and pit 149 (with concrete foundation poured)

Plate 5: Surface 157 cut by pit 26 (section 12)



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