

ARCHAEOLOGICAL EVALUATION REPORT:

**TRIAL TRENCHING OF
LAND AT LYNN SERVICE STATION
KING'S LYNN
NORFOLK**

Planning Reference: 07/01422/FM

NGR: TF 6230 2033

AAA Site Code: KLLS 08

NHER Number: 51375



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Zog Group

Allen Archaeological Associates
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Summary

- An archaeological evaluation was undertaken in advance of a residential development on land off Littleport Street in King's Lynn, close to the medieval east gate of the town.
- Three 3m by 3m trenches were excavated in the development area. The presence of live services on the site meant that it was not possible to adequately shore Trenches 1 and 2. In Trenches 2 and 3 modern deposits showed that removal of the tanks and pipes associated with the petrol station that previously existed on the site has removed over 3m of deposits.
- The sequence exposed in Trench 1 showed consolidation of marshy ground with wood chippings and bark, probably during the 13th century, with a ditch or pit and wooden post probably fairly contemporary with this activity. A series of flooding events then deposited alluvial silts over the site, before a large ditch or pit was excavated during the 13th to 14th century. This silted naturally, with some dumping of domestic refuse. A later cut feature showed some activity on the site in the 16th century.



Figure 1: Site location in red at scale 1:25,000

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1.0 Introduction

- 1.1 Allen Archaeological Associates (hereafter AAA) was commissioned by the Zog Group to carry out an archaeological evaluation by trial excavation on land to the south of Littleport Street in King's Lynn, Norfolk, in advance of a residential development.
- 1.2 The excavation, recording and reporting conforms to current national guidelines, as set out in the Institute for Field Archaeologists '*Standards and guidance for archaeological field evaluations*' (IFA 1999), local guidelines set out in '*Standards for field archaeology in the East of England*' (Gurney 2003), the '*County Standards for field archaeology in Norfolk*' (NLA 1998), and a specification prepared by this company (AAA 2008).
- 1.3 The archive will be submitted to The Norfolk Museum Service within six months of the completion of the report, and will be accessible through the Norfolk Historic Environment Record (NHER) Number 51375.

2.0 Site location and description

- 2.1 The proposed development area comprises a broadly rectangular block of land of c.1048m², which was formerly used as a petrol station. It is located within the historic core of the town, on the south side of Littleport Street. The site is bounded to the east by Littleport Terrace, with residential dwellings and the grounds of Eastgate Primary School to the south. The site centres on NGR TF 6230 2033. The site is within the King's Lynn conservation area.
- 2.2 The site is flat, lying at approximately 5m OD, and is currently unoccupied. The petrol station infrastructure including diesel tanks, pumps, pipes and the canopy have been removed and the site reinstated.
- 2.3 The local geology comprises drift deposits of Marine Alluvium, sealing solid geology of Lower Lias clay shale and rare limestone (Soil Map of England and Wales 1983, Sheet 4).

3.0 Planning background

- 3.1 A planning application was submitted for the erection of sixteen self-contained flats on the site of the former petrol station (Planning Application Reference 07/01422/FM). The planning application was granted in September 2007 subject to a number of conditions, one of which required the undertaking of a programme of archaeological trial excavation to fully characterise the archaeological resource on the site, and the likely impact of the development on the archaeology.

4.0 Archaeological and historical background

- 4.1 The archaeological and historical background was compiled from a search of the Norfolk Historic Environment Record, based on a 250m radius around the site, and a range of published and unpublished reference material and internet searches (e.g. Archaeology Data Service).
- 4.2 There is very little evidence of prehistoric activity in the vicinity of the site, although small quantities of residual worked lithic material was found during the excavation of a medieval structure off Hextable Road, approximately 300m to the north-west of the site (NHER Number 49124) A prehistoric barbed and tanged flint arrowhead was also found at Bentinck Dock, c.800m north-west of the proposed development area (NHER Number 5495).

- 4.3 The place-name Lynn is first mentioned in the Domesday Survey of 1086 as *Lena* or *Lun*, from the Celtic *līnn* meaning ‘The Pool’ (Mills 1991). At this time the area was subdivided into three parishes, West Lynn, on the west side of the river, and North and South Lynn. There were four landowners listed at the time; the Abbot of St Edmund, Ralph de Tosny, Hermer de Ferrers and Reginald FitzIvo, whose estates included a total of eight salt pans (Williams and Morris 2002), emphasising the importance of the wetland resources surrounding the town. From the late 11th century, the settlement was called Bishop’s Lynn due to the influence of Herbert de Losinga, the Bishop of Norfolk who refounded the town in 1095 (Hall 2003). The prefix ‘King’s’ was added following the dissolution of the monasteries in the 16th century, when the town and manor became royal property.
- 4.4 Although the documentary evidence suggests some form of settlement activity in the Anglo-Saxon period, there is little evidence in the vicinity of the proposed development area. Late Saxon pottery was recovered during excavations on Norfolk Street, 100m west of the site (NHER Number 31393) and a single sherd of Late Saxon pottery was recovered during the excavation of sewer trenches approximately 100m to the south of the site (NHER Number 25906). It seems likely that at this time the landscape was still dominated by seasonally flooded marshes and pools, and was unsuitable for permanent habitation.
- 4.5 The town became an important trading port in the medieval period, ideally located on the banks of the River Ouse, allowing access to national and international trade routes. The exploitation of wetland resources continued to be an important source of income for the town however. Evidence for this was found during excavations on Norfolk Street, approximately 100m to the west of the current site, which exposed elements of an internationally significant fishhook manufacturing industry, operating c.1250 – 1350. The excavations suggested that this part of the town may have been an industrial quarter during the medieval period, with evidence of horn working, wood working, bone working, copper working, a blacksmith’s shop and a brewery (NHER Number 31393).
- 4.6 The reclamation of the former marshland to allow the medieval expansion of Bishop’s Lynn, resulted in the development of an area known as New Land in the vicinity of the site, and the defensive line that is recorded to the east of the site is known to have followed a former sea bank. Stone walls were built on the sea bank in the late 13th and early 14th centuries, and were re-strengthened in the 16th century, including the construction of St. Anne’s Fort to the north of the site in 1570. Later, during the Civil War, further defences were planned; although these works stalled due to the town being besieged by Parliamentary forces (NHER Number 5486). Evaluation trenching on the site of Morrison’s supermarket, to the south of the site, identified a substantial ditch interpreted as a defensive moat formed by the diversion of the New Gaywood River during the Civil War (NHER Numbers 5486, 28800).
- 4.7 The site is situated within the medieval town defences, adjacent to Littleport Street; one of the main medieval and later thoroughfares of King’s Lynn, and is less than 50m to the west of the medieval East Gate of King’s Lynn and a surviving section of the town wall. The section of town wall has been incorporated into a 19th century public house on the corner of Littleport Street and Littleport Terrace (NHER Number 47062). The site is also positioned to the east of the location of the Bishop’s Bridge, which is believed to denote the line of an earlier boundary between the borough of Bishop’s Lynn, and the Episcopal manor of Gaywood. Clark and Carter’s (1977) reconstruction plan of medieval King’s Lynn shows the area of the development site between Bishop’s Bridge and the east gate of the town, in a plot of land enclosed by watercourses on all four sides. A survey of late 13th century date records twenty tenements in this area, which had been rebuilt after their deliberate destruction during the insurrection against King Henry III in 1216 – 1217 (*ibid.*).

- 4.8 To the east of the medieval town wall and approximately 50m to the east-north-east of the site is Littleport Street Bridge. The structure is of 16th century date, and was extended in the 20th century, although some elements of the surviving structure may be as early as the 14th century (NHER Number 5485).
- 4.9 Numerous archaeological interventions have been undertaken in the vicinity of the site, identifying a significant archaeological potential for the medieval and later periods, and suggesting domestic and industrial activity throughout the medieval and post-medieval periods. Monitoring of drainage trenches in advance of a new building less than 50m to the north of the site recovered large quantities of medieval and later building material and pottery (NHER Number 20583). Large quantities of medieval pottery were also recovered c.100m south of the site, along with a medieval pilgrim badge and a bronze knife handle and end cap (NHER Number 25906).
- 4.10 Perhaps the most significant programme of work in this area of the town was undertaken at 74 – 78 Norfolk Street (NHER Number 31393, see 4.4 above). As well as extensive evidence of a range of medieval industries, there was evidence for alluvial deposition in the medieval period, along with large quantities of medieval to post-medieval waste pits producing domestic and industrial waste. Some of this industrial activity continued into the post-medieval period, although post-medieval garden soils recorded on the site suggest that some areas of the site had been given over to small domestic garden plots (*ibid.*)
- 4.11 The Historic Environment Record also lists the discovery of numerous medieval and post-medieval scatters of pottery in the locality, including an assemblage discovered within the proposed development area in 1977 prior to the construction of the petrol station. The scatter comprised medieval Yorkshire and Grimston Ware jug fragments and 17th/18th century red wares (NHER Number 1153).

5.0 Methodology

- 5.1 Prior to the commencement of the fieldwork, the garages that occupied the site were demolished, and the petrol and diesel tanks and surrounding soil were removed.
- 5.2 The trial excavation methodology entailed the excavation of three 3m by 3m test pits in locations agreed with Mr Ken Hamilton, the Head of Archaeological Planning at Norfolk Landscape Archaeology (See Figure 3).
- 5.3 Machine excavation was carried out using an 8-tonne 360° tracked excavator fitted with a 1.2m wide toothless dykeing bucket. Modern overburden was removed in spits not exceeding 0.1m in depth, under close archaeological supervision, until the first archaeologically significant horizon was exposed. All further excavation was then carried out by hand after the installation of steel panel shoring in Trench 3. This was not possible in Trenches 1 and 2 due to the presence of live services.
- 5.4 Archaeological features were sample excavated in order to determine their depth, profile, orientation and where possible, date and function. Archaeological deposits were excavated and recorded using single context planning where applicable.
- 5.5 A full written record of all archaeological features and deposits was made on Allen Archaeological Associates context record sheets, accompanied by plan and section drawings at scales 1:50 and 1:20. A full colour photographic record was also maintained, and selected prints have been included as an appendix to this report. The fieldwork was carried out by a team of

three experienced field archaeologists, supervised by Philip Chavasse, between the 4th and 15th February 2008.

6.0 Results

6.1 Trench 1

- 6.1.1 The trench was machined to a depth of 1.2m below the existing ground surface. CAT scanning of the base of the machine cut showed that live services were present running parallel with the modern road. The presence of the service trench (cut [1003]) meant it was not possible to shore the excavation area; therefore a hand excavated 1m by 1m sondage was excavated in the centre of the trench.
- 6.1.2 The machined layers consisted of a thick layer of yellowish-brown sand, 1000, that overlay the trench, and was up to 0.76m thick. The sand was probably brought onto the site when the garage structures were demolished and the petrol and diesel tanks were removed. The sand layer 1000 sealed a modern service trench, [1007], and overlay demolition deposit 1001.
- 6.1.3 The north-west to south-east aligned service trench [1007] contained a ceramic pipe that was truncated by the later service trench [1003]. The cut had vertical sides and was 0.8m wide and 1.86m deep. The ceramic pipe sloped slightly from south-east to north-west, and served a demolished outbuilding to the south-east of Trench 1.
- 6.1.4 Layer 1001 was a mixed deposit up to 0.4m deep, comprising dark brownish-grey sandy silt with frequent rounded to sub-angular stones/flint and rare charcoal flecks, and contained nineteen sherds of pottery, two fragments of a single roof tile, two fragments of animal bone and four pieces of clay pipe. 1001 sealed 1002, a mid brownish-grey sandy silt with frequent small sub-rounded to sub-angular stone inclusions. A total of twenty-five sherds of 18th to 19th century pottery were recovered from the deposit, along with fifteen pieces of animal bone, including cattle and sheep bones. Layer 1002 was found to overlie a demolition deposit 1010 in the base of the machine-excavated trench.
- 6.1.5 Demolition deposit 1010 comprised a clayey silt with frequent stony pale grey mortar, two pieces of broken medieval roof tile, five sherds of pottery and fifteen pieces of animal bone, including cattle, sheep and a goose bone. On the basis of the pottery and tile evidence it would appear that the layer formed in the 16th to 17th century AD.
- 6.1.6 Demolition deposit 1010 overlay deposit 1026, a loose dark brownish-grey coarse gritty silt containing pale grey mortar flecks and rare charcoal flecks. This urban build up horizon was devoid of finds, and sealed feature [1012].
- 6.1.7 Linear feature [1012] ran north-west to south-east, and had a vertical north-east edge and irregular base. The cut was over 0.4m wide, and was backfilled with 1011, a light brownish-grey mortar rich deposit containing seventeen medieval tile fragments, five sherds of pottery, and three fragments of animal bone, indicating the feature was probably backfilled in the 16th century. Gully/shallow ditch [1012] was found to truncate the upper fill of an earlier feature, [1017].
- 6.1.8 Feature [1017] was orientated broadly north-west to south-east and had a steep south-western side and a flat base. The initial fill, 1020 was brown/grey clayey silt containing two pieces of pottery and eight fragments of ceramic building material (hereafter CBM). A sample from the deposit (Sample No. 1) was found to contain little charred or waterlogged material, and only a small assemblage of 'cokey' material, charcoal and coal was present. A radially-split oak 'off-

cut' was however recovered from the fill (Appendix 4). This period of natural silting with some dumping of refuse, probably in the 13th to 14th century, was overlain by a series of other similar deposits (fills 1019, 1018, 1014, 1015, 1009 and 1013) suggesting natural silting with periodic inwashing events. The occasional discarding of pottery and tile within the ditch fills suggest that this occurred during the 13th and 14th centuries. The uppermost silting episode, 1013, contained a mixed pottery and CBM assemblage that suggests the ditch was completely infilled in the 16th to early 17th century. A fish bone was recovered from fill 1014.

- 6.1.9 Ditch [1017] was found to truncate layer 1016; a firm but sticky blue/grey clayey silt that contained six sherds of pottery and three pieces of roof tile. The layer is interpreted as a naturally formed alluvial horizon with occasional discarding of refuse, probably also in the 13th to 14th century AD. A soil sample (Sample No 2) from the deposit contained a single charred barley grain, and small amounts of charcoal, 'cokey' material, fish bone and marine mollusc shell.
- 6.1.10 Beneath 1016 was 1005, a mid brown/blue clayey silt that was devoid of finds. This was a naturally formed alluvial horizon which did not contain any artefacts and was found to seal 1006.
- 6.1.11 Layer 1006 was a brownish-grey organic waterlogged organic spread with some small stones, charcoal and shell fragments. Six sherds of 13th to 14th century pottery were recovered from the deposit, along with a rand or welt from a leather shoe and ten pieces of animal bone, the majority being bird and large mammal bones. An environmental sample from the deposit (Sample No. 3) was found to contain an abundance of cereal crop weeds, although little evidence for cereal grains has led the specialist to interpret the deposit as probably being associated with farmyard waste. The presence of brassica and corn cockle testa fragments suggests the possibility that human and animal faeces were also present.
- 6.1.12 Beneath 1006 was layer 1022, a dark reddish-brown organic waterlogged layer that was found to contain a single sherd of 13th to 15th century pottery. Dating the deposit through the single piece of pottery is tenuous however, as it is entirely possible that the sherd is intrusive, having sunk down from the soft layer (1006) above. The environmental evidence from the deposit (Sample No. 4) was very different to that from 1006 above (See 6.1.12 above). The material included a sedge nutlet and material suggestive of an accumulation of roots, wood fragments and bark, possibly over a short period of time.
- 6.1.13 Layer 1024 was the base of the exposed sequence, lying beneath 1022. The layer comprised brown/grey clayey silt with some gravels, and was devoid of any artefactual material or charcoal flecking. This horizon appears to have formed through natural silting processes, although the presence of the gravels may be indicative of interspersed periods of higher energy flood events.
- 6.1.14 Below ditch [1017] was an earlier cut feature, [1027]. Due to the depth of the excavations and height of the watertable it was not possible to fully excavate the feature, however it appeared to have a vertical south-west edge, and was filled with light brownish-grey clayey silt 1025, that was devoid of finds.
- 6.1.15 The edge of the ditch or pit [1027] appeared to coincide with a cut timber post, 1023, that was exposed at the base of the sondage. This post, which was only partially exposed and seemed to have a diameter of 0.14m, may have formed a revetment to feature [1027]. No tool marks were present, although site observations suggested it may have been radially-split, and there was no evidence for bark or sapwood. The top of the stake was uneven, and it may have been broken in antiquity, perhaps when ditch [1017] was dug.

6.2 Trench 2

- 6.2.1 Modern overburden of loose orange sand, 2000, up to a depth of 1.4m was removed by machine. The base of the trench was CAT scanned, revealing a live service trench running parallel with the road that bounds the site to the north. The presence of the live cable meant it was not possible to shore the trench. A hand-dug slot in the centre of the trench showed modern deposits containing concrete and plastic extending to at least a metre below the machined layers (See Appendix 1: Plate7).

6.3 Trench 3

- 6.3.1 Trench 3 was shored following machine excavation of approximately 1m of loose clean sand, 3000. Steel sheet shoring braced by metal supports, or across, was then inserted around the edges of the trench to a depth of 3m. A hydraulic hoist was then used to remove spoil from the trench.
- 6.3.2 A further 1m of the sand 3000 was removed by hand within the shored test pit. The sand was a fine, friable mid brownish-yellow imported deposit that contained occasional modern bricks.
- 6.3.3 A sondage dug in the north-east corner of the test pit showed that the sand became saturated and unsafe to excavate at approximately 2.25m below the modern ground surface (See Appendix 1: Plate 8). Probing of this wet sand showed it extended to at least 1m below the safely excavated depth, suggesting a depth of at least 3.25m below the existing ground surface.

7.0 Discussion

- 7.1 Trench 1 was the only trench to contain a relatively undisturbed sequence of over 3m of deposits, indicating activity on the site from the 13th century onwards.
- 7.2 The earliest archaeological deposit identified was a layer of wood fragments and bark (layer 1022) at 2.02m OD that may have been laid on the surface of the saltmarsh silty clays to raise and consolidate the ground surface. A further layer of organic matter (layer 1006) sealing this surface comprised material in keeping with farmyard waste, possibly also including human and animal faeces. A single sherd of pottery of 13th to 15th century date from the lower of the two deposits does not provide firm dating evidence, as it may have sunk through the soft ground from above. However, the uppermost of these two layers contained six sherds of 13th to 14th century pottery, suggesting the possible farmyard waste was deposited at this time.
- 7.3 Cutting both layers 1006 and 1022 was feature [1027], a probable ditch or pit that was not fully excavated due to health and safety issues. Adjacent to the feature was a wooden post that was flush against the edge of the cut, possibly as a form of revetment. The exposed uppermost fill of the ditch or pit showed it had naturally silted up, and this silting event may be associated with a similar deposit that was found to seal layer 1006. Alluvium 1005 was devoid of finds, suggesting a lack of human activity in the area at the time. A further alluvial horizon above this, 1016, contained pottery and tile fragments of 13th to 14th century date, along with some charcoal.
- 7.4 The alluvial layers 1005 and 1016 were cut by a large feature, probably a ditch, [1017], that may be the recut of earlier feature [1027]. Ditch [1017] saw some initial dumping of material indicating it was open at some stage during the 13th to 14th century. It was then filled with a sequence of silty clays and more coarse material suggesting probable periods of standing or slow moving water in the feature, interspersed with periodic episodes of higher energy deposition, probably associated with flooding events. The ditch was perpendicular to Littleport Street, and may have functioned as a property boundary and drainage ditch.

- 7.5 Cutting the uppermost level of [1017] was linear [1012] that was backfilled with demolition material and pottery and CBM of 16th century date. The irregular form of this linear feature was unusual and its function remains uncertain.
- 7.6 This backfilled feature was sealed by an undated build up of soil, 1026, that in turn was overlain by demolition spread 1010, which contained material of 16th to 17th century date. Overlying spread 1010 was a further soil build up of 18th to 19th century date, 1002, that was further sealed by layer 1001. The uppermost deposit, 1000, was modern sand that had been imported onto the site following the removal of services and tanks associated with the petrol station that previously existed on the site. Several former service trenches were found to still exist on the site, although these probably pre-date the service station infrastructure.
- 7.7 Both Trenches 2 and 3 contained very modern deposits that are almost certainly associated with the re-instatement of the site following the removal of the fuel tanks and pipe work.

8.0 Conclusions

- 8.1 Although the trenching proved to be of only limited success, the results showed that, as expected, large parts of the site are likely to have been significantly disturbed by activity associated with the construction of the former petrol station, and the subsequent removal of the associated tanks and pipes.
- 8.2 Only in Trench 1 was there an undisturbed sequence of archaeological deposits which provide a chronological history of the site from the 13th century to the present day.
- 8.3 The earliest activities, comprising the consolidation of previously unused marginal ground, and the cutting of a pit or ditch, with a wooden post that may be part of an associated revetment, appears to have occurred in the 13th to 14th century. Later flooding of the site and silting of a subsequent ditch or pit was also dated to the 13th to 14th century, so the earlier consolidation activity, feature and wooden post may tentatively be assigned to the 13th century on the basis of the depth of deposits overlying them. There is some evidence to suggest that several floods occurred in the region during the 14th century, causing damage to timber structures and quays (Gadsby 2004). Such activity would explain the alluvial spreads sealing the former ground surface and early archaeological feature with associated wooden post.
- 8.4 The ceramic dating shows that there was a reasonable amount of activity during these two centuries on the site, which fits with a general expansion of the population followed by a decline in the 14th century that was partially due to the Black Death (Wade 1997). Contemporary with this period of activity was the consolidation of the earth bank defences with stone walls to the east. The later cutting of a linear feature and its backfilling with demolition material may also correspond with a period of re-strengthening of the town walls in the 16th century.
- 8.5 Following the 16th century there appears to have been little activity on the site, with only a build up of soil perhaps highlighting a period of refuse build up in the 18th and 19th centuries.

9.0 Effectiveness of Methodology

- 9.1 The trial trenching methodology was appropriate to the scale and nature of the development. It has highlighted the depth of modern disturbance within the majority of the site, in the area of the former petrol station. Trench 1 showed that undisturbed archaeological deposits do exist at the south-west end of the site.

10.0 Acknowledgements

- 10.1 Allen Archaeological Associates would like to thank the Zog Group for this commission. C A Ward Contractor are also thanked for providing the shoring at short notice following failure to deliver by another contractor.

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12.0 Site archive

- 12.1 The documentary and physical archive is currently in the possession of Allen Archaeological Associates. It will be submitted to Norfolk Museum Service within six months, where it will be stored under the unique Norfolk Historic Environment Record Number: NHER 51375.

Appendix 1: Colour plates



Plate 1: Site location shot, taken from south-west end of site looking north-east



Plate 2: Trench 1 following machine-excitation, looking south-west



Plate 3: Service trench [1007] in Trench 1, looking north-east



Plate 4: Feature [1017] in Trench 1, looking north-west



Plate 5: Slot in Trench 1 following removal of layers 1005 and 1016 to expose organic layers 1006 and 1022, looking north-west



Plate 6: Slot in Trench 1 following removal of organic layers 1006 and 1022, looking north-west. Note wooden post highlighted by a white arrow, adjacent to cut [1027]



Plate 7: Trench 2 following machine-excavation and hand-dug slot in centre of trench, looking south-west



Plate 8: Trench 3 following machine-excavation and shoring, and hand-dug slot, looking south

Appendix 2: Pottery, ceramic building material and other finds assessment

By Anne Boyle and Gary Taylor

INTRODUCTION

A large assemblage, mostly of ceramic material, was recovered from the site. Pottery is particularly numerous, with ceramic building materials also fairly abundant. A small group of clay pipe was also recovered but artefacts in other materials were very scarce, limited to just two items in metal and leather. This bias in the assemblage may reflect some particular functional aspect to the site. In date the material ranged from the medieval to early modern periods, though late medieval to early post-medieval items seem most common.

POST ROMAN POTTERY

By Anne Boyle

Introduction

All the material was recorded at archive level in accordance with the guidelines laid out in Slowikowski *et al.* 2001. The pottery codenames (Cname) are in accordance with the Post Roman pottery type series for Lincolnshire, which includes ware types from Norfolk and surrounding counties. Fabrics and forms were identified using Clarke and Carter (1977) and Jennings (1981). One hundred and five sherds from eighty-nine vessels, weighing 2,163 grams were recovered from the site.

Methodology

The material was laid out and viewed in context order. Sherds were counted and weighed by individual vessel within each context. The pottery was examined visually and using x20 magnification. This data was then added to an Access database. An archive list of the pottery is included in Archive Catalogue 1. The pottery ranges in date from the early medieval to the early modern periods.

Condition

The pottery was in fairly fresh condition, as indicated by an average sherd weight of twenty grams. However, the earlier pottery does show greater degrees of abrasion. Features such as soot, carbonised deposits, internal deposits and wear marks indicated that the pottery has been used, probably in relation to domestic activity.

A single cross-context vessel is present; a Glazed Red Earthenware bowl from contexts (1002) and (1010).

Results

Table 1, Summary of the Post Roman Pottery

Cname	Full name	Earliest date	Latest date	NoS	NoV	W (g)
BERTH	Brown glazed earthenware	1550	1800	3	2	87
BL	Black-glazed wares	1550	1750	5	4	165
BOUA	Bourne-type Fabrics A, B, C, E, F and G	1150	1400	1	1	10
ELY	Ely-type ware	1175	1350	6	4	114
EMHM	Early Medieval Handmade ware	1100	1250	12	9	65
ENPO	English Porcelain	1750	1900	1	1	13
GRE	Glazed Red Earthenware	1500	1650	28	25	772
GRIMT	Grimston-type ware	1200	1550	35	30	406
LMT	Late Medieval Transitional ware	1450	1600	1	1	55
LONS	London Stoneware	1670	1800	2	1	26
MEDLOC	Medieval local fabrics	1150	1450	1	1	5
PGE	Pale Glazed Earthenware	1600	1750	6	6	384
TGW	Tin-glazed ware	1600	1800	3	3	43
THETT	Thetford-type fabrics	1000	1150	1	1	18
TOTAL:				105	89	2163

Provenance

The ware types in the assemblage mainly come from local and regional sources. The majority of the medieval assemblage consists of Grimston-type wares which are the commonly found in assemblages from King's Lynn. The Grimston-type wares in the assemblage include later examples which may be classified as Late Medieval Types. Therefore, the assemblage contains both medieval and early post medieval examples.

Early Medieval Handmade wares are also common, and in Norfolk they continue in use until the 14th century (Jennings, 1981, 41-48). Medieval wares, produced in Ely and Bourne, are also present.

The majority of the post medieval pottery earthenwares are likely to be manufactured locally (Jennings, 1981, 72), although similar vessels are produced in surrounding counties and on the continent. The Tin glazed wares could be products of England or Holland and a single stoneware handle is likely to be a London product.

Linear [1012] included material of 16th century date as well as medieval material. The varied condition of the pottery suggests the earlier material is re-deposited. Linear cut [1017], which includes the fills (1013), (1014), (1015), (1018) and (1020), also produced a varied assemblage. These deposits contain pottery spanning the medieval to post medieval periods. Again, the mixed nature of the pottery from these contexts, and the size and condition of the sherds suggests that at least some disturbed medieval material is present.

Range

The medieval assemblage contains the expected range of forms (jugs, jars and bowls). Grimston-type jugs decorated with iron strips and pellets are present; these are thought to date to the 13th or 14th centuries (Jennings, 1981, 50). The later Grimston-type wares are of mid 15th to late 16th century date. Jars and bowls are more common in the coarser Early Medieval Handmade tradition, and these unglazed vessels were utilitarian products, as indicated by the presence of soot and carbonised deposits on many of these sherds.

As would be expected for an assemblage of this period, the post medieval vessels show a greater variety of form. The range of glazed earthenwares encompasses handled jars, bowls, pipkins and drinking vessels. The high number of Glazed Red Earthenware vessels and the presence of copper and iron bi-chrome suggest many of these vessels are of 16th to 17th century date.

Potential

The assemblage poses no problems for long term storage. A single vessel in context (1010) is suitable for illustration.

Summary

A mixed group of early medieval to early modern pottery was recovered from the site. The assemblage mainly consists of locally and regionally produced pottery, of types known from other sites in this area. It is recommended that the assemblage is retained and reassessed in light of further work at the site.

CERAMIC BUILDING MATERIAL

By Anne Boyle

Introduction

All the material was recorded at archive level in accordance with the guidelines laid out in the ACBMG guidelines (2001). Thirty-eight fragments of ceramic building material, weighing 2,855 grams were recovered from the site. The ceramic building material is medieval to post medieval in date.

Methodology

The material was laid out and viewed in context order. Fragments were counted and weighed within each context. The ceramic building material was examined visually and using x20 magnification. This data was then added to an Access database.

Condition

The material is in fairly fresh condition, as indicated by an average fragment weight of 75 grams. The roofing tile contains several highly fired examples, although this may reflect the nature of the raw materials used rather than production occurring in the vicinity.

Results

A full list of the ceramic building material is included in Archive Catalogue 2; a summary of the finds is included below in Table 2.

Table 2, Summary of the Ceramic Building Material

Cname	Full name	Earliest date	Latest date	NoF	W (g)
BRK	Brick	1300	1900	1	443
PEG	Peg tile	1150	1550	11	1272
PNR	Peg, nib or ridge tile	1150	1800	26	1140
TOTAL:				38	2855

Provenance

The majority of the ceramic building material comes from fills associated with ditch [1017] and linear feature [1012]. The condition of the material suggests it represents primary deposition and may be associated with demolition on the site.

Range

A single brick was recovered from context (1010). The surface of the brick is covered in fuel ash which suggests an association with high temperatures, possibly related to industrial activity. Thirty-seven flat roofing tiles are present; eleven of these are peg tiles. All of the roofing material is likely to date to the medieval period, although its production could conceivably extend into the late medieval/early post medieval period. The fabrics that are present in the assemblage are very similar to those defined at the Greyfriars site. Therefore, the fabrics established during that assessment have been used here (Boyle, 2007). A new type was identified in Littleport Street assemblage and has been added to the sequence (fabric 9). A summary description of the fabrics is included below:

Fabric 2 Medium sandy, oxidised fabric with a reduced core. Contains common calcareous inclusions, shale/clay pellets and light firing clay streaks.

Fabric 5 Light firing, fine sandy fabric containing common shale/clay pellets and iron.

Fabric 6 Oxidised fabric with a reduced core; fine to medium sandy fabric with laminated light firing streaks, shale/clay pellets, calcareous material and iron (Gault clay).

Fabric 7 Reduced fabric with red surfaces; medium to coarse sandy fabric containing polished quartz, small pebbles, flint, light firing clay streaks and iron.

Fabric 9 Oxidised fabric with a reduced core; medium sandy fabric containing small milky quartz pebbles; visible common quartz; occasional small rounded iron and large limestone fragments.

The flat roofing tiles (where it was possible to tell) were all peg tiles, with no nibs present. This may have dating implications, as at Lincoln where the styles of suspension of nib and peg tiles can have chronological significance.

Potential

The assemblage offers potential for further work. The roofing tile is suitable for inclusion in any programme of chemical analysis which aims to define tile fabrics in the town. The assemblage contains fragments which could be included in a tile type series for King's Lynn. The assemblage offers no problems for long term storage.

Summary

An assemblage containing roofing tile and brick was recovered from the site. It is recommended that the assemblage is retained and reassessed in light of further work at the site.

CLAY PIPE

By Gary Taylor

Introduction

Analysis of the clay pipes followed the guidance published by Davey (1981) and the material is detailed in the accompanying table. Identification of the pipe bowls was made with reference to local Norfolk typologies (Atkin 1985).

Condition

All of the clay pipe is in good condition and presents no long-term storage problems.

Results

Table 3, Clay pipe

Context no.	Bore diameter /64"					NoF	W(g)	Comments	Date
	8	7	6	5	4				
1001		4				4	40	2 stems; 1x Atkin's type 12 bowl c. 1650-70; 1x Atkin's type 5 bowl , slight angular (hex- or heptagonal), c. 1620-50	c. 1650-70
1002		2	1			3	30	1 stem; 1x bowl, similar to Atkin's type 45 c. 1650-80; 1x Atkin's type 13? bowl (incomplete) c..1650-70	c. 1650-80
Totals		6	1			7	70		

Provenance

All of the clay pipe was recovered from occupation layers (1001, 1002). It is probable that most, if not all, of the clay pipe was made locally in King's Lynn, where clay pipe manufacture is known from the 1650s (Atkin 1985, 148). The one exception might be the bowl form of c. 1620-50 from (1001), which could, perhaps, be a Dutch or London import (though the angular bore suggests that is of local Wash region manufacture – see below).

Range

All of the clay pipe is 17th century, and bowls are common. One of the bowls has a polygonal bore. Although stem bores were produced with wires of variable section, including angular ones, the wire was generally twisted on removal, producing a bore that is usually round. This unusual feature seems to be something of a regional tradition, as previous specimens have not been noted anywhere else across Britain, except for around the Wash, with examples found at Boston and previously at King's Lynn (Taylor 2003).

Potential

The main potential of the clay pipe lies in their provision of dating evidence.

OTHER FINDS

By Gary Taylor

Introduction

Two items, a piece of leather and an iron object, together weighing 13g, were recovered from 2 separate contexts.

Condition

Both of the other finds are in good condition. The leather could probably be slowly air-dried prior to archive storage (it is currently stored wet).

Results

Table 4, Other Materials

Cxt	Material	Description	NoF	W (g)	Date
1006	Leather	Rand or welt from a shoe, triangular section, no obvious stitching holes	1	1	Medieval?
1013	Iron	Nail, rectangular section	1	12	

The piece of leather from (1006) is a rand or welt, which is part of a shoe. Rands are strips of leather that were inserted between the sole and upper of a shoe to provide a stronger and more waterproof seam. These were used in turnshoes, that is, shoes made by affixing the sole to the

upper, then turning the whole inside out, and triangular sectioned examples, like this present specimen, are medieval in date. The very similar welt was introduced about 1500 and used for the same purpose in shoes made with an insole. This meant that the welt was outside the seam between insole and upper, and shoes did not need to be turned (Thomas 1980, 8).

Provenance

The other finds were recovered from a peat layer (1006) and a ditch/channel fill (1013).

Potential

In general, the other finds are of limited potential, though the piece of leather indicates that waterlogged conditions permitting the survival of organic remains exist on site, and this is high site-specific significance.

SPOT DATING

The dating in table 5 is based on the evidence provided by the finds detailed above.

Table 5, Spot dates

Tr	Cxt	Date	Comments
01	1001	18 th	
01	1002	18 th to 19 th	
01	1006	13 th to 14 th	
01	1010	16 th to 17 th	
01	1011	16 th	
01	1013	16 th to early 17 th	Mixed group of pottery – disturbed?
01	1014	13 th to 15 th	Date on a single sherd
01	1015	13 th to 14 th	
01	1016	13 th to 14 th	
01	1018	13 th to 14 th	
01	1020	13 th to 14 ^h	
01	1022	13 th to 15 th	Date on a single sherd

ABBREVIATIONS

ACBMG	Archaeological Ceramic Building Materials Group
BS	Body sherd
CBM	Ceramic Building Material
CXT	Context
LHJ	Lower Handle Join
NoF	Number of Fragments
NoS	Number of sherds
NoV	Number of vessels
TR	Trench
UHJ	Upper Handle Join
W (g)	Weight (grams)

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ARCHIVE CATALOGUES

Archive catalogue 1: Post Roman Pottery

Tr	Cxt	Cname	Fabric	Form	NoS	NoV	W (g)	Decoration	Part	Ref	Description	Date
01	1001	BERTH		Jar	1	1	60		BS		Internal glaze	
01	1001	BERTH		Jar/ pipkin	2	1	27					
01	1001	BL	GRE	Jug/ mug	1	1	12		Handle			Mid 16 th to mid 17 th
01	1001	GRE		Jar	1	1	30		Rim		Everted rim; internal glaze	
01	1001	GRE	Cu bichrome	Jar/ pipkin	1	1	33		BS		Stacking scar	
01	1001	GRE		?	1	1	6		BS			
01	1001	GRE		Jar?	1	1	5	Yellow slip bands	BS			
01	1001	GRE		?	1	1	6		BS			
01	1001	GRE	Cu bichrome	?	4	1	16		BS		Same vessel?	
01	1001	GRE		Jar/ pipkin	1	1	28		Base		Internal wear marks; soot; burnt; spalled	
01	1001	GRE		Jar/ pipkin	1	1	22	External rilling	BS			
01	1001	GRIMT		?	1	1	39		BS		Abraded	
01	1001	LONS		Jug/ mug	2	1	26		Ridged handle		Small strap handle	
01	1001	PGE		Jar	1	1	223		Base		Footring	
01	1002	BL	GRE	Jar/ pipkin	1	1	13		BS			Mid 16 th to mid 17 th
01	1002	BL	GRE	Cup/ mug	1	1	3		BS		White deposit/mortar over break	Mid 16 th to mid 17 th
01	1002	BL	GRE	Jar	2	1	137		Base		Abraded; white deposit	Mid 16 th to mid 17 th
01	1002	ENPO		Small ?	1	1	13		Base		Possible statuette base?	
01	1002	GRE		Small jug/ bottle	1	1	9		Neck			
01	1002	GRE		Large bowl	1	1	56		BS	V01	Spots of brown glaze; patchy internal deposit	
01	1002	GRE	Bichrome	Jar	1	1	5		BS		Ridged body	
01	1002	GRE	FE bichrome	Small jar	1	1	10	Incised horizontal lines	BS		Abraded	
01	1002	GRE		Large handled jar	1	1	206	Incised horizontal lines; pressing at LHJ	Base with handle		Side handle; worn basal angle	
01	1002	GRE		Jar/ bowl	1	1	10		BS			
01	1002	GRE		?	1	1	43		Base			
01	1002	GRE	Fe bichrome	Jar/ pipkin	1	1	26	External rilling	BS			
01	1002	GRE	Fe bichrome	Jar	1	1	42		Base			
01	1002	GRE	Bichrome	Pipkin?	1	1	25		Base		Reduced from use	
01	1002	GRE		Jar	1	1	61		Base			
01	1002	GRE		Jar	1	1	21		Rim		Everted rim	
01	1002	GRIMT		Jar	1	1	45		BS		Late – LMT type?	
01	1002	PGE	Cu glaze	Jar	1	1	54		Base		Footring; reduced fabric from use?; heavy sooting; internal glaze; abraded	

01	1002	PGE		Bowl	1	1	26		Rim		Complex rim; fe concretion; abraded	
01	1002	PGE	Cu glaze	Bowl	1	1	15		Rim		Worn rim edge	
01	1002	PGE		Jar/ pipkin	1	1	24		BS		Internal and external soot including over break; Internal deposit	
01	1002	TGW		Jar?	1	1	23	Multiple horizontal blue lines	Base			18 th +
01	1002	TGW		Jar?	1	1	17		Base		Fe concretion or degraded surface	18 th +
01	1002	TGW		?	1	1	3		BS		Lead backed; early	18 th +
01	1006	ELY		Jar	2	1	26		BS		?ID	
01	1006	GRIMT		Jug	1	1	62	Finger pressings at upper handle join	Rim with handle		Water lain	
01	1006	GRIMT		Jug	2	1	5	Applied notched vertical fe strip	BS			
01	1006	MEDLOC	OX/R/OX; Medium sandy	Jar/ pipkin	1	1	5		BS		Orange and green glaze over red slipped body; clean compact background with sparse sub round to round quartz 0.5 to 1mm (some cloudy) + sparse fe + rare quartzite; soot	
01	1010	GRE		Large bowl	1	1	64		BS	V01	Trimmed; spots of brown glaze; micaceous fabric; patchy internal deposit; ?ID	
01	1010	GRE		Bowl?	1	1	20		Base?		Worn footing	
01	1010	GRE		Jar/ pipkin	1	1	11		BS		External soot	
01	1010	GRIMT		Jar/ bowl	1	1	12		Base		Late – LMT type?	
01	1010	PGE	Cu bichrome	Jar	1	1	42	Friiled rim edged	Rim	Suitable for Illus.	Ridged body; possible LMT	
01	1011	BOUA	A/B	Jar/ bowl	1	1	10		BS		?ID	
01	1011	EMHM		Jar/ bowl	1	1	12		Base		Patchy soot	
01	1011	GRE		Jar/ pipkin	1	1	12		BS		Spots of glaze; fe slipped; patchy deposit; micaceous fabric; abraded; ?ID	
01	1011	GRIMT		Jug/ jar	1	1	7	Applied yellow clay smear	BS		Internal soot	
01	1011	LMT		Jug	1	1	55		BS		Reduced cu mottled glaze; white internal deposit; ?ID	
01	1013	EMHM		Jar?	1	1	12		BS		Patchy external soot	
01	1013	EMHM		Jar	1	1	2		BS		Carbonised deposit; internal deposit	
01	1013	GRE	Cu bichrome	Jar/ bowl	1	1	5		BS			
01	1013	GRIMT		Jug/ jar	1	1	15		BS		?ID as handmade and occasional fe; probably local product	
01	1013	GRIMT		Jug	1	1	21	Applied fe strips radiating	Neck			

								from neck cordon				
01	1013	GRIMT		Jug/ jar	1	1	5		BS		Burnt glaze; internal soot	
01	1013	GRIMT		Jug	1	1	5	Applied fe pellet	BS		Abraded	
01	1013	GRIMT		Jug	2	1	4	Applied fe pellets	BS			
01	1013	GRIMT		Jug	1	1	6	Multiple applied vertical fe strips	Neck		?ID but probably local product	
01	1013	THETT		Jar/ bowl	1	1	18		BS		Knife trimmed; patchy soot; ?ID	
01	1014	GRIMT		Jug	1	1	1		BS		Patchy greeny-yellow glaze	
01	1015	ELY		Jar	1	1	8	Applied strip	BS		Glaze spot	
01	1015	ELY		Jar	1	1	72		BS		Internal soot	
01	1015	EMHM		Jar	4	1	14		Base + BS		External carbonised deposit and soot; same vessel?	
01	1015	GRIMT		Jug	2	1	12	Applied vertical fe strips	BS		Abraded	
01	1015	GRIMT		?	2	1	9		Base		Same vessel?; ?ID or ELY-type	
01	1015	GRIMT		Jug	1	1	8	Applied vertical fe strips	BS		White internal deposit	
01	1015	GRIMT		Jar	1	1	13		BS		?ID	
01	1015	GRIMT		Ridged Jug	1	1	14		BS			
01	1015	GRIMT		Ridged Jug	1	1	9		BS		White internal deposit	
01	1015	GRIMT		Shouldere d jug/ jar	1	1	9		BS			
01	1015	GRIMT		Jug/ jar	1	1	7		BS			
01	1016	EMHM		Jar	1	1	3		BS		External carbonised deposit	
01	1016	EMHM		Jar	1	1	7		BS		External soot; internal deposit	
01	1016	EMHM		Jar?	1	1	3		BS			
01	1016	GRIMT		Jug	1	1	21	Finger pressing near base	BS			
01	1016	GRIMT		Small jug	1	1	9		Neck			
01	1016	GRIMT		Jar/ bowl	1	1	9		BS		White internal deposit; ?ID	
01	1018	ELY		Jar/ bowl	2	1	8		BS			
01	1018	EMHM		Bowl	1	1	8		Rim		Soot; wheel finished rim	
01	1018	GRIMT		Jug/ jar	1	1	11		BS		White internal deposit	
01	1018	GRIMT		Jug	1	1	10		Base		Splashed glaze; worn basal angle	
01	1018	GRIMT		Jug	2	1	3	Applied Fe spot	BS			
01	1018	GRIMT		?	1	1	1		BS		?ID	
01	1020	EMHM		Jar	1	1	4		Neck		Lid seated; soot	
01	1020	GRIMT		Jug	1	1	21	Applied vertical fe strips with pellet in- between	BS			
01	1022	GRIMT		Jug/ jar	1	1	13		Base		Abraded	

Archive catalogue 2: Ceramic Building Material

Tr	Cxt	Cname	Fabric	Sub form	NoF	W (g)	Description	Date
01	1001	PEG	Fabric 5	Oval peg	2	136	Flat roofer; same tile; upper left hand corner; sand bedded; strike marks; 15mm depth; fe skin	
01	1010	BRK	Vitrified calcareous		1	443	Corner; overhang from mould; slop moulded; sunken margin; fuel ash glaze; mortar; 40-45mm depth	17 th - 18 th ?
01	1010	PNR	Fabric 2?		1	285	Flat roofer; corner; mortar; bedded on cloth?; patchy soot; abraded; 15mm depth x 150mm+ length	
01	1011	PEG	Fabric 5	Oval peg	1	20	Flat roofer; 15mm depth	
01	1011	PEG	Fabric 6	Round peg; 10mm diam	1	530	Flat roofer; half tile; end; kiss marks; strike marks; mortar; 15mm x 145mm x 165mm+; bedded on fabric?; peg off centre	
01	1011	PEG	Fabric 6	Round peg	1	95	Flat roofer; coarsely bedded; 15mm depth	
01	1011	PEG	Fabric 7	Round peg	1	46	Flat roofer; strike marks; 15mm depth	
01	1011	PNR	Fabric 2		1	42	Flat roofer; mortar; 13mm depth	
01	1011	PNR	Fabric 7		1	19	Flat roofer; mortar including over break	
01	1011	PNR	Various		9	21	Flat roofer; flakes	
01	1013	PNR	Fabric 9		1	29	Flat roofer; mortar; corner; 13mm	
01	1013	PNR	Fabric 9		1	6	Flat roofer; flake	
01	1015	PEG	Fabric 6; vitrified	Round or oval peg	2	172	Flat roofer; same tile; strike marks; coarsely bedded; finger impressions on edge; mortar; upper left hand corner; 17mm depth	
01	1015	PNR	Fabric 7; vitrified		2	131	Flat roofer; same tile; strike marks; 15mm depth; corner	
01	1016	PNR	Fabric 7		1	35	Flat roofer; rounded corner	
01	1016	PNR	Fabric 7		1	10	Flat roofer; abraded	
01	1016	PNR	Fabric 7		1	81	Flat roofer; abraded; mortar; 10mm+ depth; strike marks; corner	
01	1018	PNR	Fabric 6		1	28	Flat Roofer; strike marks; sand bedded; 14mm depth	
01	1018	PNR	Fabric 7		1	19	Flat roofer; sand bedded; 13mm depth	
01	1020	PEG	Fabric 6; vitrified		1	109	Flat roofer; strike marks; bedded on sand and fabric; 12mm depth	
01	1020	PEG	Fabric 6; vitrified	Round peg	2	164	Flat roofer; finger impression on edge; strike marks; bedded on sand	
01	1020	PNR	Fabric 6; vitrified		3	318	Flat roofer; same tile; corner; strike marks; 12mm x 150mm x 117mm+; bedded on sand and fabric	
01	1020	PNR	Fabric 7; vitrified		2	116	Flat roofer; strike marks; bedded on sand and fabric	

Appendix 3: Wood assessment

By Maisie Taylor

Radially split piece of oak with slot, housing joint or broken mortice. Dimensions: 380 x 73 x 22/28mm

The piece is probably radially split rather than sawn as the faces of wood exactly follow the grain. The ends are square with a slot cut into one of the long sides: max.length 145mm; min. length 105mm. At some time in the past, the original plank or board has split along the grain and sheared through the slot (which may have originally been a mortice). The maximum thickness of the piece is 28mm and the minimum is 22mm. This taper is a function of the radial split and suggests that the piece was split out of a reasonably large tree or it would have been more wedge shaped. At some time it has also broken at one end. It must, therefore, originally have been longer and wider.

This oak 'off-cut' has no distinctive features and as it is also broken, no function can be suggested.

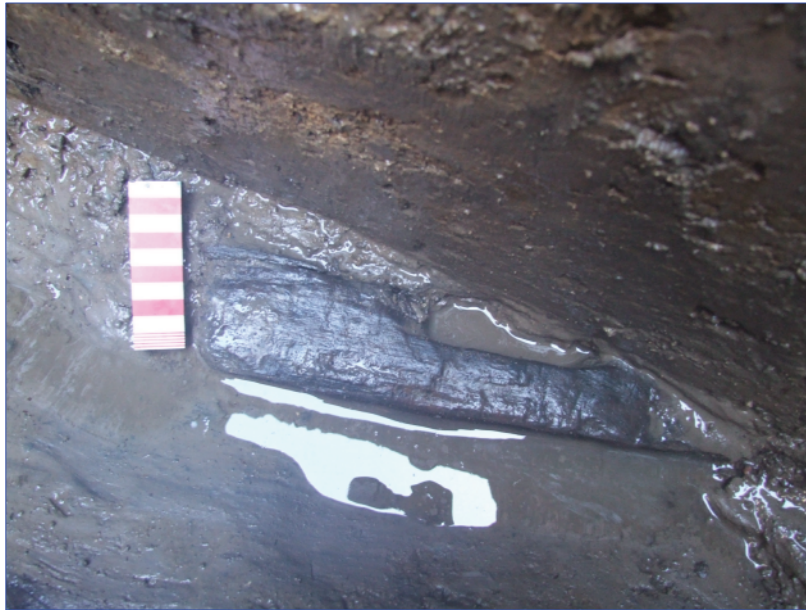


Plate 9: Oak 'off-cut' from initial fill 1020 of ditch/pit [1017]

Appendix 4: Animal bone assessment

By Jennifer Wood

Introduction

A total of 59 (978g) fragments of animal bone were recovered by hand during trial trench excavations undertaken by Allen Archaeological Associates.

The remains were recovered from solely from features and deposits from Trench 1, dated to from the 13th to the 19th centuries. These include occupation layers (1001), (1002), Layers (1006), (1010), (1014), demolition deposit (1011) and a possible ditch/channel [1017].

Results

The remains were generally of a good to moderate overall condition, averaging at grades 2 to 3 on the Lyman criteria (1996).

A total of 8 fragments of bone recovered from layers (1002), (1006), (1010) and demolition deposit (1011) displayed evidence of butchery, possibly associated with jointing/disarticulation of the carcass. A sheep/goat metacarpal recovered from occupation layer (1002) had been chopped at the distal end of the shaft to form a roughly tapered point. No evidence of further working was identified.

Four fragments of bone recovered from peat deposit (1006), layer (1010), Ditch/Channel deposit (1013) and flood deposit (1014) displayed evidence of burning. No burnt bone was noted within the environmental samples (Fryer, this volume).

No evidence of carnivore gnawing was noted on any of the remains, which may suggest they were rapidly buried after disposal limiting the access of scavengers.

Table 1, Summary of Identified Bone

Features/ Deposits	1001	1002	1006	1010	1012	1014	1017		Total
Taxon	18th Century	18th - 19th Century	13th - 14th Century	16th - 17th Century	16th Century	13th - 15th Century	13th - 14th Century	16th - early 17th Century	
Cattle	1	4	2	4	1				12
Sheep/Goat	1	6		5			2	1	15
Sheep		1		2					3
Pig							1		1
Goose			1	1					2
Goose Size			1						1
Fowl			2						2
Fish						1			1
Large Mammal		4	3	2	1	1	2	1	14
Medium Mammal			1	1	1			2	5
Unidentified						1	2		3
Grand Total	2	15	10	15	3	3	7	4	59

As can be seen from table 1, the majority of the remains were identified as sheep- sheep/goat. Closely followed by cattle; with small numbers of pig, goose fowl and fish identified within the assemblage.

The assemblage is too small to provide meaningful information on animal husbandry and utilisation on site, save the presence of the animals on site. The skeletal elements represented suggest the remains were probably from a mixture of food and butchery waste.

In the possible event of further archaeological works, the site would be liable to produce further remains of a similar condition and nature, with very good potential to provide further information on dietary economies and underlying husbandry practices for the site.

References

Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge

Ctxt No	Taxon	Element	Side	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Prox	Dist	Path	Butch	Burnt	Gnaw	Fresh Break	Assoc'd	Measured	Tooth Wear	Surface	Condition	No	(g)	Notes
1001	Cattle	Phalanx (l)	R	Y	Y	Y	Y	Y	Y	Y	Y	F	N	N	N	N	N	N	N	Y	N	X	2	1	32	
1001	Sheep/Goat	Mandible	R	N	N	Y	Y	N	N	N	N	X	N	N	N	N	N	N	N	N	Y	X	2	1	22	PM4=g, M1=h, M2=g
1002	Cattle	Phalanx (l)	L	Y	Y	Y	Y	Y	Y	Y	Y	F	N	N	N	N	N	N	N	Y	N	X	2	1	24	
1002	Sheep/Goat	Metacarpal	L	N	N	Y	Y	Y	Y	N	N	X	X	N	Y	N	N	N	N	N	N	X	2	1	15	Roughly chopped into a tapered point
1002	Sheep/Goat	Metatarsal	R	Y	Y	Y	Y	Y	Y	Y	N	F	F	N	N	N	N	N	N	Y	N	X	3	1	14	
1002	Sheep/Goat	Metacarpal	L	Y	Y	Y	Y	Y	Y	N	N	F	X	N	N	N	N	N	N	Y	N	X	2	1	17	
1002	Sheep	Metatarsal	L	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	Y	N	X	3	1	24	
1002	Cattle	Phalanx (l)	R	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	Y	N	X	2	1	20	
1002	Sheep/Goat	Metatarsal	R	N	N	N	N	Y	Y	N	N	X	X	N	N	N	N	N	N	N	N	X	3	1	12	
1002	Sheep/Goat	Tibia	R	N	N	Y	Y	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	2	1	12	
1002	Sheep/Goat	Skull-frontal	L	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	2	1	14	Juv
1002	Large Mammal	Rib	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	1	1	6	
1002	Large Mammal	Vertebra-thoracic	B	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	2	2	32	Spinous process
1002	Large Mammal	Rib	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	2	1	18	
1002	Cattle	Tooth	R	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	2	1	40	Upper M3
1002	Cattle	Phalanx (l)	L	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	Y	N	X	2	1	23	
1006	Large Mammal	Rib	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	X	4	1	5	
1006	Cattle	Radius	L	N	N	N	N	Y	Y	Y	Y	X	F	N	N	N	N	N	N	Y	N	X	2	1	100	snapped midshaft
1006	Cattle	Horncore	L	Y	Y	Y	Y	Y	Y	Y	N	X	X	N	N	N	N	N	N	N	N	X	3	1	67	tip broken/removed?

Appendix 5: Palaeoenvironmental assessment

By Val Fryer

Introduction and method statement

Excavations at Littleport Street, Kings Lynn, undertaken by Allen Archaeological Associates, revealed layers and other discrete features of thirteenth to fifteenth century date. Samples for the retrieval of the plant macrofossil assemblages were taken, and four were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 500 micron mesh sieve. Two samples (3 and 4) contained waterlogged plant remains, and these were stored in water prior to sorting. The remaining flots were air dried. Both dried flots and wet retents were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Table 1. The tabulated remains were waterlogged unless otherwise stated, and nomenclature within the table follows Stace (1997).

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. All artefacts/ecofacts were retained for further specialist analysis.

Results

With the exception of the waterlogged assemblage from sample 3, identifiable plant macrofossils were exceedingly scarce, comprising a single charred barley (*Hordeum* sp.) grain from sample 2 and a waterlogged sedge (*Carex* sp.) nutlet from sample 4.

Material within the assemblage from sample 3 was extremely well preserved. Seeds from a range of common segetal species were recorded, with taxa noted including cornflower (*Centaurea cyanus*), fat hen (*Chenopodium album*), corn marigold (*Chrysanthemum segetum*), poppy (*Papaver argemone*) and wild radish (*Raphanus raphanistrum*). The presence of corn cockle (*Agrostemma githago*) and brassica (cabbage/mustard) testa fragments may be indicative of the presence of small quantities of human sewage as, within medieval contexts, both are often seen as common contaminants of coarse-ground flour. Individual seeds of saw-sedge (*Cladium mariscus*) and marsh pennywort (*Hydrocotyle vulgaris*) were, with a small number of sedge nutlets, the only wetland plant remains recorded. Tree/shrub macrofossils were equally scarce, comprising a single small fragment of hazel (*Corylus avellana*) nutshell and a small number of sloe (*Prunus spinosa*) fruit stone fragments.

Charcoal/charred wood fragments were present, but only at a low to moderate density. Samples 3 and 4 were both largely composed of pieces of waterlogged root or stem, with wood fragments and moss fronds also occurring at a moderately high density. Both assemblages also contained high densities of densely compacted organic concretions, possibly including some animal dung and/or mats of compressed plant stems.

Conclusions and recommendations for further work

The composition of the assemblage from sample 3 may indicate that the recorded material is largely derived from farm yard waste. Although cereal grains are virtually absent, common cereal crop weeds predominate, and it is most likely that these are derived from a small quantity of cereal processing waste. It is possibly of note that many of these seeds are of a similar size to cereal grains. Because of this, they would not have been removed by

winnowing, but would have required hand picking immediately prior to the utilisation of the grain, thereby possibly indicating that the material within sample 3 is derived from a late stage of processing. Other materials within this assemblage may include both animal and human ordure. The material within sample 4 is more difficult to interpret. The assemblage appears to be derived from an accumulation of plant material including roots, wood fragments and bark. Although natural accumulation is possible, if this were the case, a higher density of wind-blown seeds and other detritus may also be expected. It is, therefore, tentatively suggested that the material within sample 4 is derived from plant remains which were deliberately placed at this location, probably over a very short period of time. However, the purpose and true nature of this deposit are not fully understood at the time of writing. The remaining assemblages contain insufficient material for accurate interpretation.

Although sample 3 does contain a quantifiably viable assemblage (i.e. 100+ specimens), analysis of a single sample in isolation would contribute little to the overall interpretation of the site or its component features. There, no further analysis is recommended at this stage. However, it should be stressed that these assemblages clearly show that well-preserved plant remains do survive within the archaeological horizon in this area of Kings Lynn. Therefore, if any further work is expected within the near vicinity, it is essential that a comprehensive strategy for plant macrofossil sampling is included within any specification for archaeological works.

Reference

Stace, C., 1997 *New Flora of the British Isles*. Second edition. Cambridge University Press

Key to Table

x = 1 – 10 specimens xx = 10 – 50 specimens xxx = 50 – 100 specimens xxxx = 100+ specimens

c = charred tf = testa fragments C = century

Environmental Data

Sample No.	1	2	3	4
Context No.	1020	1016	1006	1022
Feature No.				
Feature type		Layer	Layer	
Date	13-14thC	13-14thC	13-14thC	13-15thC
Cereals				
<i>Hordeum</i> sp. (grain)		xc		
Dry land herbs				
<i>Agrostemma githago</i> L.			xxtf	
<i>Atriplex</i> so.			x	
Brassicaceae indet.			xxtf	
<i>Centaurea cyanus</i> L.			x	
<i>Chenopodium album</i> L.			xx	
<i>Chrysanthemum segetum</i> L.			x	
<i>Cirsium</i> sp.			x	
<i>Fallopia convolvulus</i> (L.)A.Love			xtf	
<i>Lapsana communis</i> L.			x	
<i>Leontodon</i> sp.			x	
<i>Papaver argemone</i> L.			x	

Small Poaceae indet.			x	
<i>Ranunculus acris/repens/bulbosus</i>			x	
<i>Raphanus raphanistrum</i> L. (siliqua frags.)			xx	
<i>Rumex</i> sp.			x	
<i>Silene</i> sp.			x	
<i>Sinapis</i> sp.			x	
<i>Taraxacum</i> sp.			x	
Wetland plants				
<i>Carex</i> sp.			x	x
<i>Cladium mariscus</i> (L.)Pohl			x	
<i>Hydrocotyle vulgaris</i> L.			x	
Tree/shrub macrofossils				
<i>Corylus avellana</i> L.			x	
<i>Prunus spinosa</i> L.			x	
Other plant macrofossils				
Charcoal <2mm	x	xx	x	
Charcoal >2mm		x		
Charred root/stem		x		
Waterlogged root/stem		xx	xxxx	xxxx
Wood frags.<5mm	x		xx	xxx
Wood frags.>5mm			xx	x
Indet.bark				xx
Indet.moss			xx	x
Indet.seeds			x	x
Indet.twigs			x	
Other materials				
Compacted organic concretion			xxxx	xxxx
Black porous 'cokey' material	x	x		
Fish bone		x	x	
Marine mollusc shell		x		
Small coal frags.	x			
Waterlogged arthropods			x	
Sample volume (litres)	10	10	2	2
Volume of flot (litres)	<0.1	<0.1	0.3	0.4
% flot sorted	100%	100%	50%	25%

Appendix 6: Context Summary List

Trench 1

Context No.	Type	Description	Interpretation
1000	Layer	Loose, light yellow sand with inclusions of modern bricks, concrete and plastic sheeting. Covers the trench.	Modern sand layer
1001	Layer	Loose, friable, dark black, sandy clay silt with frequent inclusions of small-medium stone/flint, charcoal fragments and pottery, also contained moderate amount of clay pipe and a few bones. Covers entire trench, max depth \approx 0.10m.	Occupation layer
1002	Layer	Loose, friable, mid grey black, clay silt, with frequent inclusions of stones, charcoal, pottery and bone, moderate amount of clay pipe and one piece of glass. Covers entire trench.	Occupational layer
1003	Cut	A NE-SW clear edged, linear feature with steep sloping sides and round base. Max width \approx 0.94m.	Modern linear. Contains 1004
1004	Fill	Very loose, brown orangey-orangey brown sand.	Fill of modern linear [1003]
1005	Layer	Firm, mid brownish blue, clay silt. Fairly sterile. Max width \approx 1.0m, max depth \approx 0.54m. Ground water present.	Alluvium layer
1006	Layer	Soft, black, organic material with frequent inclusions of charcoal and shell. Also with few inclusions of pottery, bone and one piece of leather.	Refuse build-up
1007	Cut	A NW-SE, clear edged, linear feature, with steep sides. Max length = 3.0m, max width = 0.80m, max depth = 1.80	Modern linear ceramic service pipe trench, contains 1008
1008	Fill	Loose, dark brown sandy silt	Fill of modern service pipe. Backfill of mixed deposit, modern.
1009	Fill	Loose, brown yellow silt sand. Max length = 1.0m, max width = 0.45m, max depth = 0.09m	Naturally deposited fine silt sand in [1017]
1010	Layer	Friable, loose, mid grey black, clay silt with moderate inclusions of charcoal and sandstone, pottery, CBM and bone	Refuse build up of 17 th century date
1011	Fill	Friable, mid whitish grey, clay silt with inclusions of CBM, pottery and bone	Demolition backfill of [1012]
1012	Cut	NW-SE, clear edged, linear feature with steep sides and flat base. Max depth = 0.32m	Cut of feature containing 1011
1013	Fill	Loose, dark grey brown, silt clay with moderate inclusion of charcoal, pottery, CBM and bone	Naturally deposited clayey silt in [1017]
1014	Fill	Loose, light brownish yellow, sterile, sand. Max length = 1.0m, max width = 0.50m, max depth = 0.07m	Naturally deposited fine silt sand in [1017]
1015	Fill	Loose, mid brownish grey, clay silt, with moderate inclusions of charcoal, CBM and bones. Frequent inclusions of pottery.	Naturally deposited clayey silt in [1017]
1016	Layer	Firm, mid bluish grey, clay silt, with rare inclusions of pale grey mortar flecks, and CBM, moderate amount of pottery.	Alluvium, cut by [1017]
1017	Cut	NW-SE, steep, very clear edged, linear feature, (base not exposed)/	Cut of a ditch or pit. Contains 1020, 1019, 1018, 1015, 1014, 1013 and 1009
1018	Fill	Loose, mid brownish grey, clay silt, with rare inclusions of charcoal, bone, CBM and pottery	Natural deposited clay silt in [1017]
1019	Fill	Friable, loose, brownish yellow, sand. Max depth =	Natural deposited clay

		0.05m, max width = 0.50m, max depth = 0.05m	silt in [1017]
1020	Fill	Firm, mid brownish grey, clay silt. Rare inclusions of pottery, CBM and wood. Max length = 1.0m, max width = 0.40m, max depth = 0.30m	Secondary fill of [1017] or primary fill of re-cut, naturally deposited silt, contained worked wood object.
1021	Void		
1022	Layer	Friable, dark reddish black, peat. Rare inclusion of pottery. Max width = 1.0m, max length = 1.0m, max depth = 0.24.	Consolidation horizon. Cut by [1017], wooden stake 1023
1023	Wood	Wooden stake. probably square cut, no toolmarks visible.	Driven post/stake, left in-situ. Visible in 1006 and 1022 Continuing below limit of excavation
1024	Layer	Compact, mid brownish grey, clay silt, with moderate inclusion of natural flint and pebbles. Max width = 0.40m, max length = 0.66m.	Alluvium, sealed by deposit 1022
1025	Fill	Compact, sterile, light brownish grey, clay silt. Max width = 0.30m, max length = 1.0m, max depth > 0.40m.	Natural deposited clay silt in [1027]
1026	Layer	Loose, friable, dark brownish grey, gritty silt, with moderate inclusions of pale grey mortar flecks and rare inclusions of charcoal flecks. Max width = 1.0m, max length = 1.0m, max depth > 0.20m.	Mixed layer, dump deposit?
1027	Cut	Vertically-sided cut, not bottomed	Ditch or pit of unknown date

Trench 2

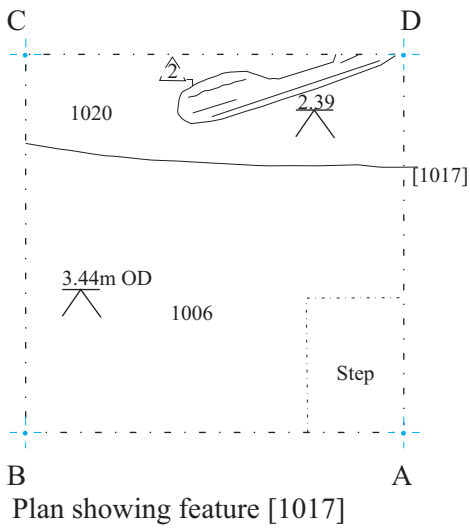
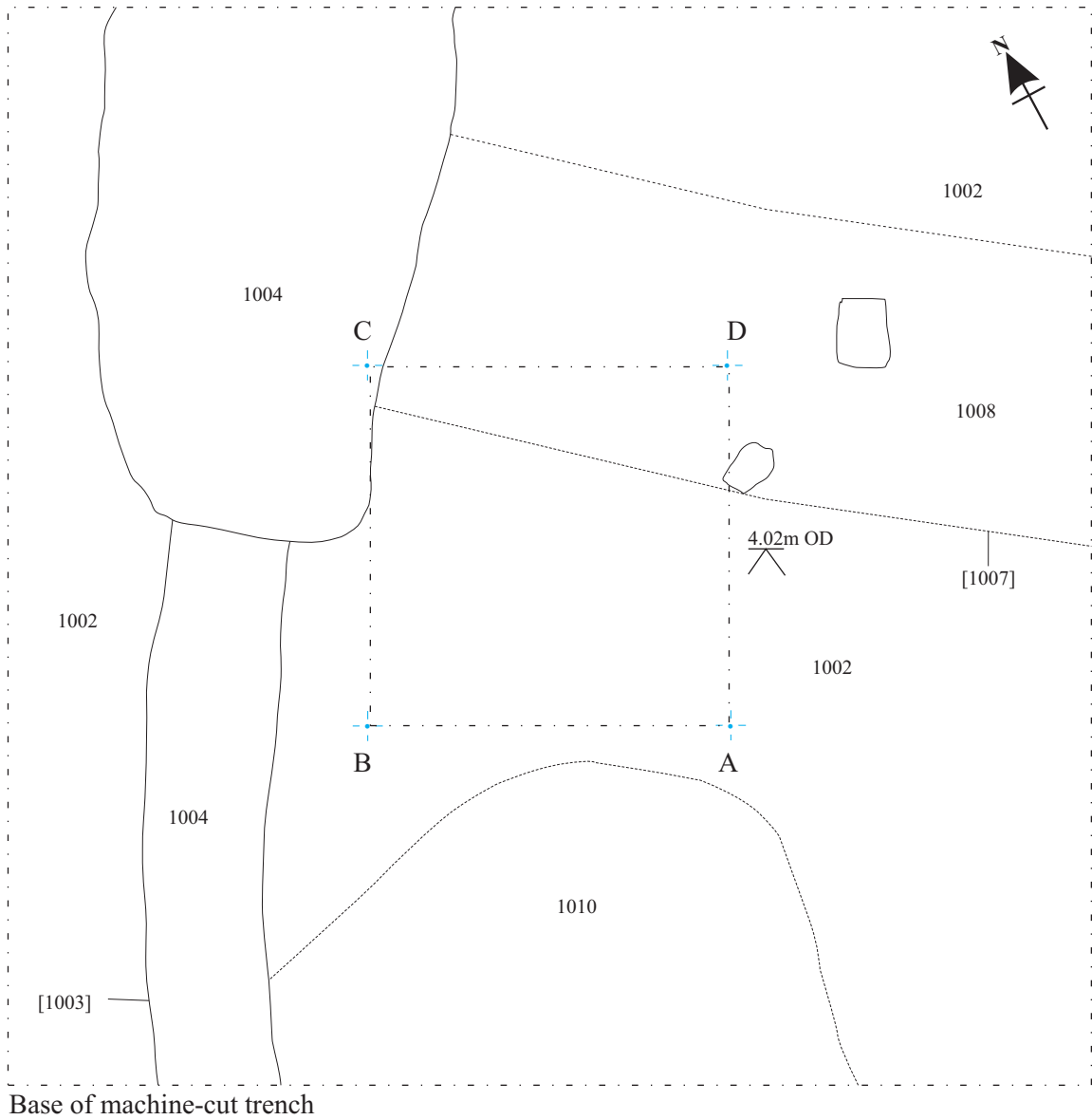
Context No.	Type	Description	Interpretation
2000	Layer	Loose, orange sand.	Backfilled sand layer
2001	Fill	Firm, orangey grey, clay sand	Fill of modern services trench [2002]
2002	Cut	Clear edged, linear feature with sloping sides. Max width = 1.60m, max deep excavated = 0.70m	Cut of modern service trench. Contains 2001
2003	Fill	Firm, brownish grey, sandy silt, inclusion of plastic pipe and modern pottery.	Modern, disturbed garden deposit of modern ditch [2002]
2004	Cut	Fairly clear edged, linear feature?	Modern service trench
2005	Layer	Loose, mid brownish grey, silt sand, with rare inclusions of concrete and plastic	Modern backfill layer

Trench 3

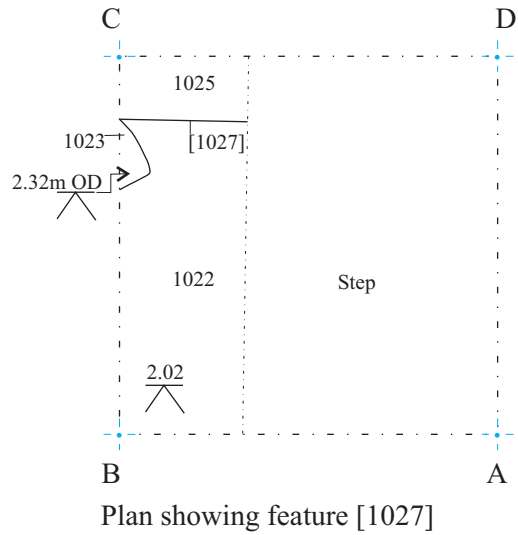
Context No.	Type	Description	Interpretation
3000	Layer	Friable, brownish yellow, fine sand. Saturated and unsafe to excavate	Backfill ground works after removal of petrol tank and contaminated ground.







Plan showing feature [1017]



Plan showing feature [1027]

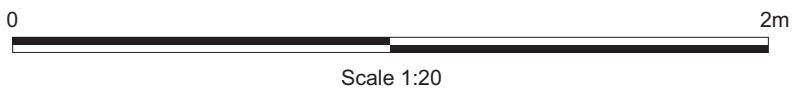
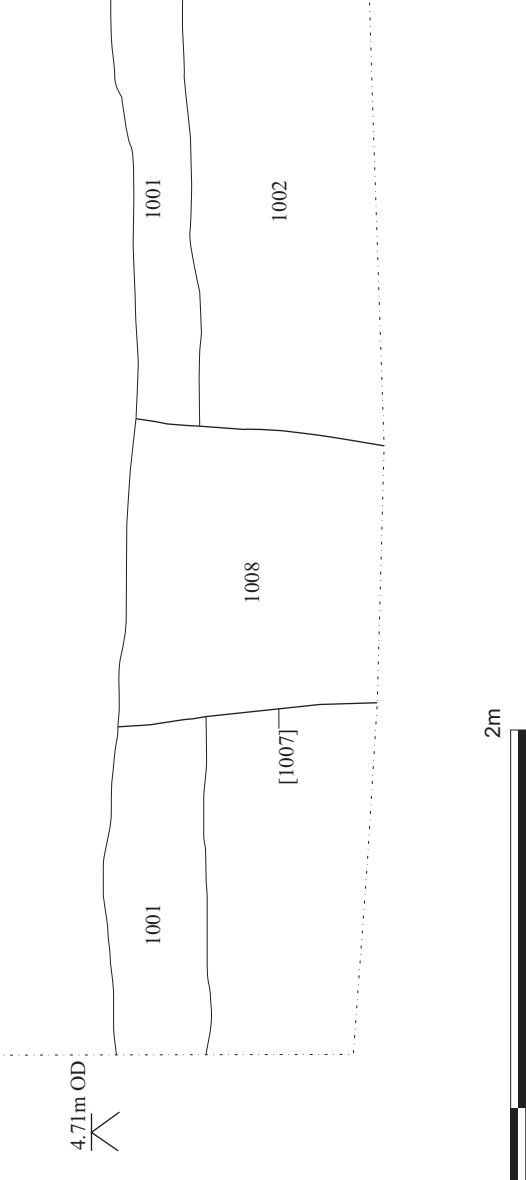
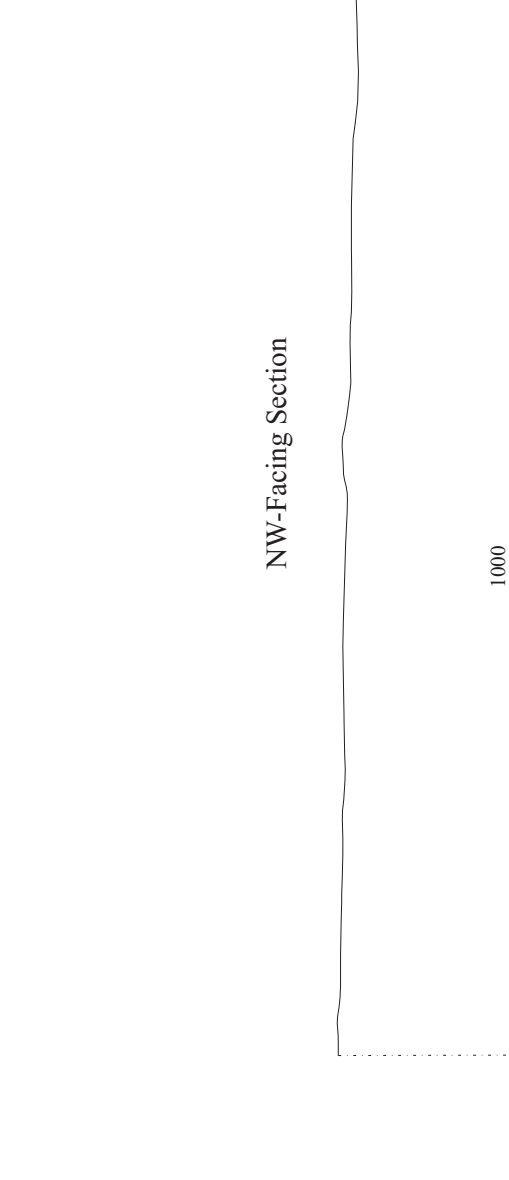
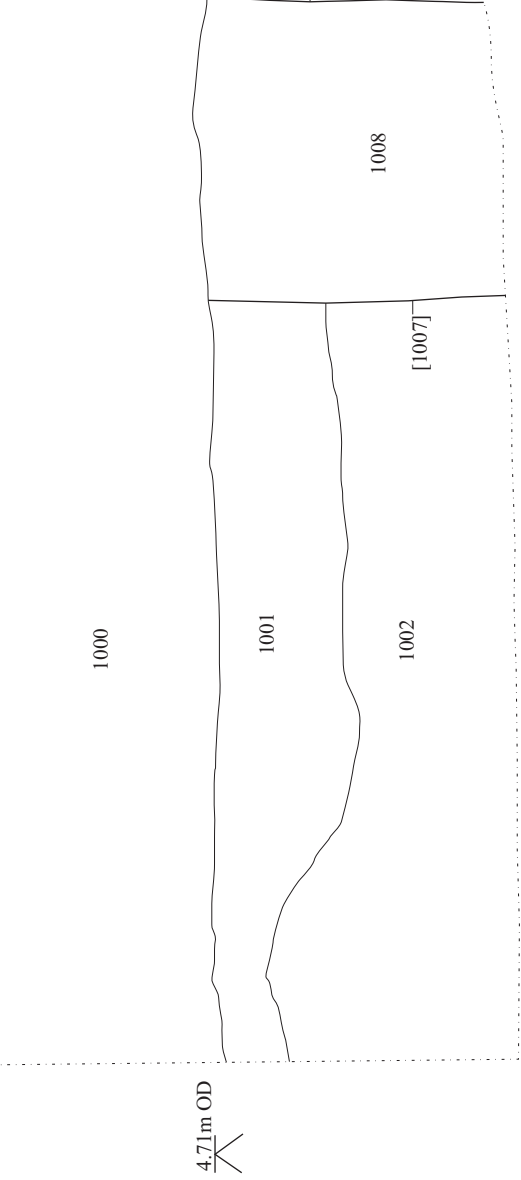


Figure 4: Trench 1 plans, at scale 1:20. Hand dug slot sections shown on Figure 6.



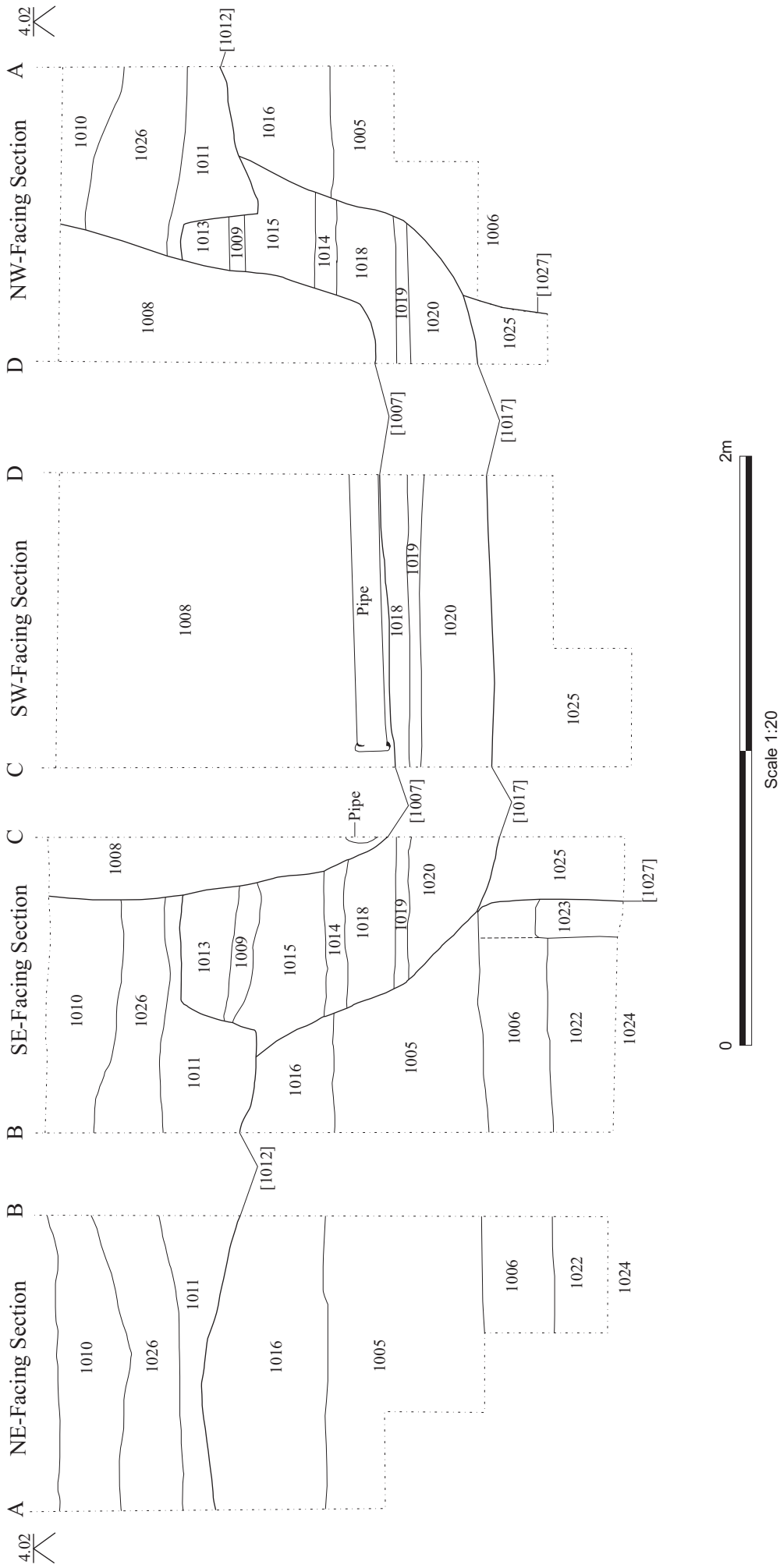


Figure 6: Trench 1 sections within hand dug slot at base of machine-cut trench, at scale 1:20. Location of slot shown on Figure 4.