

ARCHAEOLOGICAL STRIP MAP & RECORD AND MONITORING AND RECORDING REPORT:

LAND AT 195 AND 197 NEWPORT, LINCOLN

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Cover image: Area 1 under excavation. Looking west

Executive Summary

- Allen Archaeology Limited was commissioned by Tennyson Homes Limited to undertake a scheme of archaeological strip, map and recording, and monitoring and recording, as a condition of planning permission for a residential development on land off Newport, Lincoln, Lincolnshire.
- The site is located immediately to the west of Newport (Ermine Street Roman road) and 750m north of the Newport Arch, the former north gate to the Roman city. The development area encompassed two demolished dwellings and gardens, with the archaeological works comprising two strip, map areas and the monitoring of groundworks for four residential plots.
- A programme of evaluation trenching followed by open area excavation, previously carried out immediately to the west of the site, revealed linear ditches and probable quarry pits of Roman date, as well as a large and unusual assemblage of Roman pottery, suggesting the presence of a kiln close by. Eight inhumations and an unurned cremation were also recovered, along with a stone structure identified as a possible mausoleum. Medieval pits, postholes and a keyhole oven were also excavated.
- The earliest evidence revealed in the strip, map and recording exercise was a series of mid 2nd to 3rd century linear ditches, running parallel with and perpendicular to Ermine Street to the east. These, coupled with the results of previous investigations to the southwest and west, may be evidence of the *territorium* land division known as centuriation that would have extended beyond the city. No evidence for pottery production was forthcoming from the site, suggesting that this was focussed further to the west and northwest. Although other archaeological work has shown that the local area was used as a cemetery, possibly from the 1st century, but certainly in the 2nd and 3rd centuries, no remains were forthcoming from this site.
- There was a subsequent hiatus in activity on the site until the mid/late 12th to early 13th century, when Newport became an established suburb and a stone-lined firepit was in use on site, and later, a larger stone furnace likely to be of industrial rather than domestic use. The latter included reused Roman aqueduct sections laid on a line of 13th–14th century medieval tiles to create a flue leading into the furnace. The function of this furnace is unclear; however the lack of ferrous archaeometallurgical debris suggests it was not for iron smelting or smithing.
- A series of medieval postholes and a beam slot indicative of a wooden structure, orientated east to west and lying mostly to the south of Area 2 of the excavations was also recorded. This building was later rebuilt in stone in the same location.
- Activity on the site seems to have stopped in the 14th century, at a time when the suburb of Newport had depopulated significantly, mainly due to the numerous plagues that afflicted Europe at this time.
- A dwelling was built near the road in the early 20th century and the majority of the site was within its garden area.

1.0 Introduction

- 1.1 Allen Archaeology Limited (AAL) was commissioned by Tennyson Homes Limited to undertake a scheme of archaeological strip, map and recording, and monitoring and recording, as a condition of planning permission for a residential development.
- 1.2 The work was undertaken with reference to current national guidelines as set out in the Chartered Institute for Archaeologists '*Standard and guidance for archaeological field excavations*' (CIfA 2014a), '*Standard and guidance for an archaeological watching brief*' (CIfA 2014b), the English Heritage document '*Management of Research Projects in the Historic Environment*' (Historic England 2015) and the local guidelines set out in the '*Lincolnshire Archaeological Handbook*' (LCC 2016). All relevant Historic England guidelines on archaeological practice were also followed as well as a specification written by this company (AAL 2015a).
- 1.3 The site is archaeologically sensitive, lying in an area of archaeological interest and potential.

2.0 Site Location and Description

- 2.1 The development is located immediately to the west of Newport and 750m north of Newport Arch, the former Roman north gate to the walled city. The site is bordered by Newport to the east, The Colosseum residential development to the west, the access road to this development to the south and further housing to the north. At the time of the field investigations the site comprised an area of former gardens, centred on NGR SK 9762 7286.
- 2.2 The bedrock geology comprises Lincolnshire Limestone formation, with no overlying superficial deposits recorded (British Geological Survey 1973). The site is flat and lies at a height of c.63m above Ordnance Datum.

3.0 Planning Background

- 3.1 Planning permission was granted for the '*Demolition of 2 dwellings to facilitate the erection of three 2 storey terraced dwellings, four 3 storey terraced dwellings, 2 storey building to comprise of 4 garages and 1 apartment to first floor and 2 garage blocks*' (Planning Reference 2014/0675/F). As a condition of planning consent, a programme of archaeological works was required, comprising an archaeological strip, map and record and archaeological monitoring and recording.
- 3.2 The approach adopted is consistent with the recommendations of Chapter 12: Conserving and Enhancing the Historic Environment of the National Planning Policy Framework (NPPF) (Department for Communities and Local Government 2012).

4.0 Archaeological and Historical Background

- 4.1 The site lies in an area of significant archaeological interest, which has been discussed in detail in a preceding desk-based assessment for the adjacent Colosseum development site (AAL 2012). This identified a significant potential for archaeological activity in the immediate vicinity of Romano-British and medieval date. A subsequent programme of trial trenching was undertaken on the adjacent site (AAL 2013), followed by an open area excavation (AAL 2015b). The works identified a number of linear ditches and probable quarry pits of Roman date, producing a large

and unusual assemblage of Romano-British pottery, dominated by mortaria and local colour coated wares, of a probable mid 2nd century date. A number of overfired sherds were present, suggesting a possible kiln in the vicinity. Eight inhumations were recovered from the site, as well as a single unurned cremation, and a square stone structure interpreted as a possible mausoleum. A group of three of these burials was recorded at the northeast corner of the excavation area c.20m west of the current site.

- 4.2 Later activity at the site comprised a number of pits and postholes of medieval date as well as a keyhole oven and several plough furrows.

5.0 Methodology

- 5.1 A mitigation strategy for the targeted investigation of the archaeological resource of the site was agreed following discussions between AAL and the City Archaeologist at City of Lincoln Council. The strategy comprised a strip, map and record of a series of garages (referred here as Area 1) and House Plots 5–8 (referred here as Area 2), and monitoring and recording of House Plots 1–4. The strip, map and record was conducted over a period of ten days starting 9th March and ending 20th March 2015.
- 5.2 The areas of excavation were marked out by the client in advance of the site works commencing and recorded using a survey grade Leica GS08 RTK NetRover GPS. Within the area of investigation any concrete surfaces or other solid obstructions were broken out by a mechanical excavator fitted with a hydraulic breaker, with subsequent excavation undertaken by a tracked excavator fitted with a toothless bucket. Machine stripping was conducted by the main contractor and monitored by Aaron Chapman of AAL at all times. Non-archaeological overburden was removed in spits not exceeding 0.1m in thickness until the first archaeological or natural horizon was encountered.
- 5.3 Two stages of monitoring and recording were undertaken on site. The first stage comprised monitoring the excavation of footing for House Plot 04. This stage was monitored by Rebecca Jones of AAL on the 12th November 2015. The second stage comprised House Plots 1–3 and was monitored by Mike Jarvis on behalf of AAL on 12th to 13th of May 2016.
- 5.4 For all archaeological works, all exposed plan and section surfaces were inspected for archaeological features and deposits. A full written record of the archaeological deposits was made on standard AAL context recording sheets, with each deposit allocated a unique three digit identifier (context number) and accorded a written description, a summary of these are included in Appendix 9. Three digit numbers in square brackets refer to cut features, e.g. ditch cut [106].

6.0 Results

Area 1

- 6.1 Area 1 was located at the northwest end of the site. The uppermost deposits encountered comprised a 0.5m thick dump of modern demolition material, 100, overlying the former (modern) topsoil, 101, which was 0.3m thick and overlay a 0.2m thick orange brown silt subsoil 102. Below this was the natural geology; limestone brash with sandy pockets, 114. All deposits of archaeological interest were sealed by the subsoil 102 and cut the limestone brash, 114.

- 6.2 In the southwest corner of the excavation area was a short ditch section running north-south, [121], that was truncated by a later east-west ditch, [106]. Ditch [121], which either terminated here or turned westwards, contained two fills. The primary fill, 123, was a silting event with occasional charcoal that was found to contain a small assemblage of abraded greyware Roman pottery. The secondary fill, 122, was a friable orange brown slightly clayey silt containing further greyware pottery and a piece of Roman ceramic building material (CBM, e.g. brick, tile).
- 6.3 Ditch [106] was 1.85m wide and 0.6m deep and ran east-west across Area 1. It had three fills, 107, 119 and 120 (Plate 1). The lowermost fill, 120, was a silting deposit with occasional limestone and charcoal flecks, from which a small group of late 2nd century and later pottery, including locally-produced colour-coated beaker and wall-sided mortarium, was recovered. Secondary silting event 119 contained Roman greyware pottery, as well as a small, unidentifiable iron fragment. The uppermost fill, 107, contained an intrusive sherd of mid/late 12th to 13th century pottery, along with late 2nd century and later pottery and five fragments of animal bone.



Plate 1: East-facing section of ditches [106] and [121]. Scale 2m

- 6.4 Overlying ditch [106] was a localised deposit of brown/grey silt, 124, that contained a decorated, perforated lead disk of mid 13th–16th century date (Appendix 4: Small Find 18). This was in turn sealed by 105, a fan-shaped working hollow of grey/brown silt with numerous limestone fragments containing late 13th to early/mid 14th century pottery and a single fragment of residual Roman pottery. A copper alloy bell and annular brooch of 12th–15th century date were also found within this spread, as was a fragment of human femur, the latter most likely evidence of disturbance of the known Roman cemetery immediately adjacent to the site.
- 6.5 It was unclear if ditch [106] continued to the east or joined a north-south linear feature as the area was covered with a complex series of intercutting pits and ditches: [125/141], [131/145], [135/149], [137/143/147] and [178]. A number of these features contained residual Roman material and pottery of mid 12th–13th century date.
- 6.6 Towards the southeast corner of Area 1 was [109] a circular pit with a diameter of 1.36m and a stone lining, 110 (Plate 2). Its lowermost fill, 113, was a lens of dark grey burnt clayey silt and charcoal: evidence of localised burning. Over this was a backfill of brownish grey sandy silt, 111.

The pit contained 70 sherds of pottery of mid/late 12th to early 13th century, mainly jars, bowls and some jugs, with cross-joining sherds suggesting the two fills were broadly contemporary. Palaeoenvironmental samples from both deposits contained abundant charred cereal grains (mainly wheat), especially in the lower fill, suggesting that the fire pit was associated with crop processing. A quantity of animal bone was also dumped in 113, with identified fragments of sheet/goat, and a medieval iron knife was found within the upper backfill.



Plate 2: Stone-lined pit [109] following excavation, looking south-southeast. Scales 0.2m and 0.4m

- 6.7 At the northeast end of the site there was a 'horseshoe-shaped' cut [154] for stone-lined furnace or oven, 156 (Plate 3). It was open to the west, showed evidence for in situ burning, and contained a black silty clay, 157, the remnants of the firing process. The construction cut contained three fills, 158, 160 and then 161, all silty clays with some charcoal and limestone present. No dateable artefacts were recovered, but sealing the structure was a 0.15m thick dump of clayey silt 104/132 containing a small group of 3rd century and later pottery and Roman CBM.



Plate 3: Stone-lined furnace [156] following excavation, looking northeast. Scales 0.2m and 0.4m

- 6.8 However, although furnace/oven 156 was sealed by a dump of soil containing Roman material, it is without doubt of medieval date due to its association with other deposits close by. A series of Roman aqueduct blocks, 108, identical in form to the known aqueduct that broadly follows Nettleham Road to the east, were exposed running west-southwest to east-northeast towards the opening of furnace 156. Each block was uniformly c.0.77m long and had been split lengthways horizontally, along a joint created during its manufacture, to create a C-shaped rather than O-shaped profile. The C-shaped pipe was laid along a line of flat tiles of 13th to 14th century date. The structure was approximately 6m long and dropped c.0.17m as it ran towards the furnace from stone-filled hollow 105, indicating that it was a flue leading to, and not a drain leading from, the structure (Plate 4).



Plate 4: Reused Roman aqueduct 108 laid on medieval tiles, looking northwest

- 6.9 Immediately to the north of 156 was the remnants of a limestone wall, 112, running east to west. The wall survived to only a single course, with no foundations, and was 4.8m long, with its east end terminating adjacent to furnace/oven 156.
- 6.10 An east-west aligned linear feature towards the north end of Area 1, [163/165], ended immediately adjacent to furnace 156. It was 0.9m wide and 0.5m deep with vertical sides and a flat base, and contained very abundant small to large angular limestone fragments, 164/166. Its form and backfill suggests that this may be the robbed out footing of a substantial wall, although this is uncertain. It remains undated through a lack of dateable artefacts. At the west end of the ditch, cut [163] was sealed beneath working hollow layer 105 that contained late 13th to early/mid 14th pottery and a single residual sherd of Roman greyware pottery. At the east end the ditch, cut [165] was sealed by a dump of undated sandy silt, 175, which was in turn cut by wall 112.

Area 2

- 6.11 The stratigraphic sequence in Area 2 was slightly different to that of Area 1. Here a new topsoil, 200, sealed a mixed levelling layer, 201, that in turn covered a limestone hardcore layer, 202, all associated with the new development. These sealed the former topsoil, 203 (same as 101 in Area 1) which was 0.2m thick and overlay the natural geology, 204, a limestone brash. Unlike in Area 1 there was no evidence for a subsoil horizon.
- 6.12 At the west edge of the site a small group of features was noted. The earliest was a small, steep-sided and flat-based pit, [262], which contained evidence of two backfilling events, 261 and then 260; both of which contained 13th–14th century ceramics (Plate 5).



Plate 5: East-facing section through wall cut [259] and pits [262] and [272]. Scale 2m

- 6.13 Pit [262] was truncated by a further pit, [272], that was backfilled with dark brown sandy silt, 271, devoid of artefactual material, and was in turn truncated by [259], the construction cut for limestone wall 240.
- 6.14 The wall was not bonded and was of poor construction, using medium-sized pieces of limestone, and measured 0.72m wide (north-south) and 0.4m deep. Sealing wall 240 was a spread of re-

deposited sandy silt, 273, with 13th–14th century ceramics and that also contained several fragments of animal bone and a heavily corroded iron holdfast of unknown date. Although the wall was itself undated it cut features and was sealed by a dump of material both containing 13th–14th century material, suggesting the wall is likely to be broadly contemporary with this period of activity on the site.

- 6.15 Also within the western half of the area were two north-south aligned linear ditches, [208/216] and [210] that were almost certainly contemporary. Ditch [208/216] was approximately 1.2m wide and 0.6m deep, with a bowl-shaped profile, and at its southern extent, [208], was found to contain evidence of a single silting event, 209. Fill 209 was a brown silty clay and contained a piece of smithing slag and a small assemblage of 3rd century and later pottery, as well as Roman CBM. Immediately to the north, the ditch seemed to have three fills, 217–219, with the profile of the deposits suggesting the ditch may have been cleaned out multiple times. The sole fill of [208] to the south, 209, can be explained if this was the final recut: therefore 209 is likely to be contemporary with the final fill of [216], 217. The lowermost fill, 219, contained 2nd century pottery and Roman CBM, with the later silting events 218 and 217 containing 3rd century material.
- 6.16 Ditch butt end [210] was rounded in plan, with steep sides and a flat base (Plate 6). It contained fills, 234, 233 and 211, all of which suggest dumping into the end of the ditch. The lowermost backfill, 234, contained a small assemblage of Roman pottery, as well as intrusive mid 12th to early/mid 13th century pottery. The secondary backfill was dated to the mid 2nd century onwards based on the ceramics, and the uppermost the 3rd century onwards, again by the ceramic evidence. The latter deposit also contained a fragment of crucible with copper alloy residue, whilst a sample of the deposit contained little environmental information beyond traces of charred cereals and charcoal flecks.



Plate 6: East-facing section of ditch butt end [210]. Scale 1m

- 6.17 Towards the middle of Area 2, running north to south and likely contemporary with [208/216] and [210] was ditch [212]. The ditch was 1.7m wide and only 0.42m deep, and was backfilled with 213, a silty clay with a large quantity of small limestone fragments, as well as mid 2nd century onwards pottery. A palaeoenvironmental sample from the backfill contained only traces of charcoal, flecks of bone and fired clay, and some coal fragments that may be intrusive.

- 6.18 The east edge of ditch [212] was truncated by shallow, sub-oval pit [263]. This may have functioned as a working hollow that had been infilled with mixed silty clay, 264, with a large volume of medium-sized limestone fragments and charcoal. It also contained residual pottery dating from the 2nd century onwards, and early to early/mid 13th century pottery. The working hollow fill was cut by undated posthole/shallow pit [269] which did not contain any dateable artefacts.
- 6.19 Ditch [216] (see 6.14, above) was truncated at its north end by a complex of intercutting pits: [206], [220], [227] and [231]. The pits may be contemporary with hollow [263] to the east and are all likely to have had a similar function as refuse pits. They contained a series of backfills suggesting that they were in use from the 12th to the 13th century. Samples from pits [206] and [220] were mixed, with the former being almost devoid of palaeoenvironmental information, beyond charcoal, whilst pit [220] contained traces of charred cereal and some herbs, with abundant fine charcoal flecks.
- 6.20 Of some interest was a series of postholes ([237], [241], [243], [245], [248], [250], [254], [256] and [265]) and gully [267], which are likely to represent the north wall of a timber-structure that lay almost entirely to the south of Area 2 (Plate 7). None of these features contained any dateable artefacts; however it was clear that the structure post-dated Roman ditches [208] and [212].



Plate 7: North-facing section through posthole [265] and gully [267]. Scale 0.4m

- 6.21 The post and beam built structure was replaced by a stone structure at the same location, represented by robbed foundation trench [214] and stone wall 205. The foundation trench was c.0.9m wide and 0.4m deep with straight sides and a flat base. Wall 205 was approximately 0.5m wide and showed evidence of robbing along its length.



Plate 8: North-facing elevation of wall [205] sealing ditch [208]. Scales 1m and 0.5m

Monitoring and Recording

- 6.22 A programme of archaeological monitoring and recording was undertaken during the groundworks for House Plots 1–4 towards the road frontage, at the east end of the site. These were monitored by an experienced archaeologist on the 12th November 2015 and 12th–13th May 2016.
- 6.23 No archaeological deposits of significance were encountered during the monitoring and recording of the house plot foundation excavations.
- 6.24 In House Plots 1–3 the sequence comprised a c.0.75m thick modern dump of demolition spread associated with the development, 303, which sealed a further 0.5m thick dump of yellow/brown clayey soil 304 that was also of modern date. This overlay the topsoil 305, a compact brown clayey silt that was c.0.3m thick. Below this was natural limestone brash, 306 (Plate 9).



Plate 9: Plot 3 foundation trenches, looking east

- 6.25 House Plot 4 provided a broadly similar sequence to Plots 1–3, with a 0.2m thick modern dump, 300, over the modern topsoil, 301, which sealed a gritty clayey subsoil, 302.

7.0 Discussion

- 7.1 The site investigations revealed several phases of activity attributed to the Roman and medieval periods. The phasing has been assigned through dating of the ceramics and stratigraphic relationships.

Undated

- 7.2 Although robbed wall [163/165] remains undated, it is sealed by a stone-filled hollow 105 of 13th–14th century date and spatially is likely to pre-date medieval furnace [154]. It may therefore have been a Roman wall, perhaps associated with a structure that lay mainly to the north of Area A, which has been completely robbed of even its foundations, perhaps to build the 13th/14th century furnace immediately to the east.

Phase 1: 2nd century AD

- 7.3 A series of linear boundaries seen in in both Areas A and B running north to south and east to west, are likely to have been constructed during the 2nd century AD. Some mid-late 2nd century pottery was recovered from these; however this may relate to refuse dumping within the open ditches, and does not necessarily indicate the date of their creation.
- 7.4 The ditches are most likely evidence of field systems lying c.750m to the north of the walled upper city, and part of the structured agricultural zone encapsulating the Roman city.

Phase 2: 3rd century AD

- 7.5 By the third century AD several of the ditches had been abandoned and backfilled whilst others were still being maintained. The north-south ditches are likely to have been created in the 2nd century and maintained well into the 3rd century. Little more can be said of the Roman activity on the site at this time; however taking into account the evidence from adjacent sites the work provides a more detailed insight (see 8.0 Conclusions, below).

Phase 3: 12th–14th century

- 7.6 There appears to be a hiatus of nearly a thousand years, where no activity left a physical presence on the site.
- 7.7 One of the earliest medieval structures identified was circular firepit [109], which contained a large quantity of refuse, including abundant pottery of mid/late 12th to early 13th century date, including a large wheel thrown jar. The feature seems to have been associated with the processing of agricultural cereals, especially wheat. The size of the structure (1.36m in diameter) would perhaps suggest this was a domestic oven; however the presence of a larger horseshoe-shaped medieval furnace/oven to the north suggests a more industrial or commercial activity.
- 7.8 Furnace/oven [156] did not contain any dating evidence; however elements of reused Roman aqueduct 108 that formed a drain leading from the furnace to a stone soakaway included large fresh pieces of 13th to mid 14th century tile. The function of this structure remains unclear; however the extent of its construction shows it was of industrial size, and had a 6m long flue for drawing air into the furnace. The end of the flue is likely to have included a large bellows to aid the draw of the air, and continued use may have created the adjacent hollow. Its infill of stone may have been to effect a repair and enable the continued use of the bellows. To the north, wall 112 may well be the remnants of a stone structure associated with the horseshoe-shaped furnace.
- 7.9 The function of the industrial furnace remains unclear. Its form suggests that it may have been associated with iron smelting or smithing, or other metal production, although the limited ferrous or non-ferrous archaeometallurgical debris (slag) from only Roman contexts on the site shows this was not the case. Indeed, the lack of misfired pottery, glass, and so forth leaves few possible answers. Perhaps the process involved an organic component that has not survived, such as the distillation of alcohol, which developed in Europe in the 12th century as a medical elixir and was a popular 'cure' for the Black Death and other plagues of the 14th century (<http://www.oldcook.com/en/history-alcohol>).
- 7.10 A line of postholes and beam slots exposed at the southern end of Area 2 were later replaced by a stone wall, indicating the initial structure comprised a wooden building that extended southwards beyond the excavation area. Although undated it seems likely that this was medieval, as was the replacement stone building, 205. This can be concluded because a series of medieval pits, namely [206], [220], [227] and [231], were excavated along an east-west alignment close to and parallel with the structural remains. The location of the structural remains perhaps indicates it lay to the rear of dwellings fronting the road to the east, and was therefore perhaps a warehouse or shed associated with a cottage industry, with adjacent refuse pits dug within the tenement area, perhaps adjacent to a boundary.
- 7.11 The stone structure had been robbed along its length once the building went out of use.

8.0 Conclusions

- 8.1 There is no evidence of pre-Roman activity on the site.
- 8.2 Following the occupation and creation of the Neronian legionary fortress on the limestone scarp above the Witham Valley in c.70AD, the surrounding land would have been clearly demarcated for ownership and administration by the army (Southern 2007, 113). The '*territorium*' is believed to have extended across the site and further to the north; however no evidence for this was forthcoming during the investigations. There is also no evidence for activity during the late first century AD when Ermine Street to the east of the site was extended northwards to the new legionary base at York.
- 8.3 After the conversion of the fortress to a *colonia* in c.90AD, the *territorium* would have been transformed to parcels of land handed to retired Roman soldiers, a system known as centuriation. This grid-like approach to land division is particularly difficult to identify in Britain, and no evidence was forthcoming for any activity on the site at this time. By the mid 2nd century however we do see cultural material entering a series of north-south and east-west ditched boundaries, that, when combined with the results from the Colosseum excavations (AAL 2013), begin to suggest a possible grid pattern running parallel with Ermine Street (Figure 8). Although centuriation is likely to have begun with colonialism, recent studies have shown that their development may have come later, through a desire of the native population to prove their Roman status, by monumentalising the landscape as well as the city itself (Palet Martínez and Orengo 2011, 399).
- 8.4 To the east of the site, at Bishop Grosseteste College, archaeological investigations have shown activity began with the excavation of quarry pits in the mid 2nd century (Spence 2014, 340), most likely either associated with maintenance of Ermine Street, or with the construction of stone buildings in the local area.
- 8.5 The earliest structural evidence at the college site dates to the late 2nd century, and comprised a large stone building that may have replaced an earlier timber structure. This appears to have been in use until some point in the 4th century. The activity at the Bishop Grosseteste site has been interpreted as either a farmstead or a hostelry; however its location in relation to the walled city suggests the former is perhaps more likely.
- 8.6 The ditched system at Newport saw maintenance into the 3rd century, which is later than that noted at the Colosseum development (AAL 2013: section 7.3), and although there is an argument that the ditched enclosures may have been part of a regulated system of fields, it is clear from the Colosseum site that in the late 2nd to early 3rd century clay was being extracted and pottery produced in the local area (*ibid.*, sections 7.3-7.5). Whether the field system identified in Area A and B were being used for this or other industry remains unknown.
- 8.7 The loss of pottery production nearby seems to correlate with the use of the area for disposal of the dead, with nine individuals (eight inhumations and a cremation) recorded at the Colosseum site, although none were found within this programme of investigation. Further human remains have been exposed to the south of the site (Peachey 2011), and also to the east of Ermine Street (Jones *et al.* 2003, 111; Wragg 1995, 1), the former including pottery of late 1st–early 2nd century date associated with cremated human bone (Peachey 2011, 11). The evidence suggests a mixed cremation and inhumation cemetery developed along the road frontage from the early Roman period, expanding away from the road westwards (and probably eastwards) by the late 2nd–3rd century. It is therefore likely that further late Roman human remains will exist close to and within the boundaries of this development and its environs.

- 8.8 No human remains were encountered during the excavation of Areas A and B, or the monitoring of House Plots, and with those recovered from the Colosseum (AAL 2013) and Army Cadet HQ sites (Peachey 2011), it suggests that the area was not extensively used as a cemetery in the 3rd century and seems to have been abandoned by the 4th century AD.
- 8.9 After the 4th century AD, there is no evidence of activity on the site until the mid/late 12th–early 13th century, which sits well with the knowledge that Newport was an established suburb by the mid 12th century (Hill 1948, 169), being granted a market charter in 1330 (Vince 2003, 227). On site a stone-lined circular firepit was constructed at this time, along with a larger furnace or oven at a slightly later date (13th–mid 14th century). The earlier firepit seems to have been associated with the processing of cereal crops, whilst the function of the larger furnace remains unknown, although it is most likely for industrial rather than domestic use. Associated with the furnace was a flue created from reused Roman aqueduct blocks, an extravagant construction that required moving large and heavy concrete blocks from the aqueduct that ran alongside Nettleham Road at some distance to the east. This 6m long flue was used to draw oxygen into the furnace, very likely from a large, industrially-sized bellows. The lack of waste material shows the industrial activity associated with these structures has left no trace in the archaeological record, so one possibility is that it was for distilling alcohol, a practice that emerged across medieval Europe in the 12th century, or for brewing. It is perhaps not fanciful to suggest this as records show that 21 people in the Newport area paid 4d in Ale-toll taxes (a payment made by the brewer for the right to brew) to the city in the 13th century (Hill 1948, 214–5)
- 8.10 To the south, in Area 2, a series of postholes and beam slots, denoting the location of a medieval wooden building, was replaced by a stone structure, both extending southwards beyond the excavation area. A line of 12th–13th century refuse pits to the north were aligned with the building, suggesting that they are contemporary, and it seems most likely both the building and the pits were to the rear of a burgage plot that extended westwards from Riseholme Road. If this is the case then the building was probably a warehouse or shed.
- 8.11 The Army Cadet Force HQ investigations to the south encountered medieval activity from the mid 12th to mid 13th centuries, including a large stone undercroft and refuse pits, and excavations at Bishop Grosseteste College to the east of the site has revealed at least ten structures of 12th–14th century date, including domestic dwellings and possible barns (Spence 2012, 296–302).
- 8.12 Overall the 12th–14th century medieval suburb of Newport was an area of vernacular dwellings adjacent to the road frontage, with outlying barns, warehouses and sheds to the rear likely to have stored goods as well as being associated with cottage industries. The Newport site is located to the rear of the domestic properties and shows good evidence for industry, potentially involving the distillation of alcohol.
- 8.13 Of interest, the presence of unusual regional imports is a pattern that is beginning to emerge on sites in the Newport suburb. On this evidence it would appear the area had access to a wider market of material with several ware types only being recovered from the Newport area.
- 8.14 There is no evidence for activity on the site from the 14th century, or indeed the Army Cadet site to the south (beyond 19th century quarry pits). The work at Bishop Grosseteste University also shows no activity beyond the late 14th century, indicating the suburb has depopulated significantly, almost certainly due to the various plagues that affected Europe at this time. Indeed documentary evidence supports this; by 1428 it was noted that the parish of St. John Newport was reduced to fewer than 10 inhabitants (Spence 2012, 302).

9.0 Effectiveness of Methodology

- 9.1 The programme of archaeological work has proved effective in obtaining a record of the archaeological remains to be impacted upon by the construction of the new dwellings and infrastructure, and to aid the understanding of the Roman and medieval development of this part of the Newport suburb.

10.0 Acknowledgements

- 10.1 Allen Archaeology Limited would like to thank Tennyson Homes for this commission and Alastair MacIntosh, Lincoln City Archaeologist, for his continued guidance throughout this project.

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Appendix 1: Roman Pottery

By I M Rowlandson and H G Fiske with G. Monteil

Introduction

Two hundred and five sherds of Roman pottery (2.392kg, RE1.68) were presented for study. A maximum of 173 vessels could be distinguished amongst the assemblage. The majority of the pottery could be dated to the 2nd century AD. The group presented for study contained a range of the 2nd century AD wares produced on the adjacent kiln site (Rowlandson 2015, LINP13) but with a higher proportion of utilitarian grey wares. A limited quantity of pottery dating to the 3rd century AD suggested that activity continued on site after pottery production had ceased. The group lacked the quantity of late Roman pottery recorded from the settlement assemblages from Bishop Grosseteste University (BGU) on the other side of Ermine Street but was similar to the 2nd century AD pottery retrieved from test pitting undertaken to the west of Ermine Street (Rowlandson 2017, Pits 4 and 5) and broadly similar to other finds from this area (Beeby and Precious 2011; Wilson 1971).

In contrast to the pottery from the earlier investigations on the site (LINP13) there were few mortaria present amongst this assemblage. A higher proportion of grey ware was present amongst the material studied which suggested that the excavations were located in an area of domestic activity rather than in the immediate vicinity of the kilns. It also suggests that the inhabitants still favoured grey wares, probably made a greater distance away, for kitchen and storage uses rather than the oxidised and colour-coated wares that they were producing on the kiln site. This supports the assumption that the pottery produced on the LINP13 site was manufactured to service the needs of consumers of specialist wares in Lincoln and further afield rather than merely supplying the day to day needs of the inhabitants of the Newport suburb itself. A fragment from a crucible with copper alloy residue on suggested that metal working was undertaken in the area.

Methodology

The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by The Study Group for Roman Pottery (Darling 2004) using the codes developed by the City of Lincoln Archaeological Unit - CLAU (see Darling and Precious 2014). Rim equivalents (RE) have been recorded and an attempt at a 'maximum' vessel estimate has been made following Orton (1975, 31). Following the Lincolnshire Handbook and current museum deposition practices the pottery has been sub-bagged within each context by fabric. Samian, mortaria and amphora have all been bagged separately. The pottery suitable for illustration has been bagged separately with a 'D' number for ease of further study. All of the material should be deposited at The Collection, Lincoln to facilitate further study.

Results

The pottery is discussed by Phase and ware group below; full description and archive record are presented at the end of the report in Table 2–Table 5.

Phase 1

Thirty four sherds (0.308kg, 0.20 RE) were retrieved from contexts in Phase 1. Little chronologically diagnostic material was present amongst the pottery from this phase but it appeared to date to the mid to late 2nd century AD, probably after AD170. The largest group was retrieved from Linear feature 106 and included a fragment from a Central Gaulish samian form 79 platter (Monteil below, AD170–210), colour-coated beakers, a fine grey ware sherd, grey ware jars with everted rims, a lug-handled jar and a Lincoln wall-sided mortarium (broadly as Rowlandson 2015, Nos. 79–80 with grooves including one just above the flange). A small shell-gritted sherd from Linear 106 may date this group

to sometime in the 3rd century AD. The range of material retrieved mostly consisted of grey ware and on this basis was more likely to be a domestic assemblage.

Phase 2

One hundred and twenty two sherds (1.763kg, 1.06 RE) were retrieved from contexts in Phase 2. The majority of the pottery was retrieved from three linear features: 208, 210 and 216.

Ditch 208 contained a small group that included a rosette stamped East Gaulish samian dish (Monteil, below), a sherd from a cheese press, a grey ware jar and lipped bowl. A sherd of decorated colour-coated ware appears to be partially reshaped, perhaps to form an object. The group is dated by the presence of a Dales ware type shell-gritted sherd from a large jar.

Ditch 210 contained a medium sized group that included East Gaulish samian including a mould decorated form 37 bowl (Monteil below, D1), local colour-coated beakers of bag-shaped form and with rough-cast decoration, grey ware, a sherd from a crucible with copper alloy residue and a wall-sided mortarium (as Rowlandson 2015, No. 80 with a groove at edge of flange). The group is dated to the 3rd century AD by the presence of a sherd in a shell-gritted Dales ware fabric.

Ditch 216 contained a medium sized group of local colour-coated ware including a rough-cast decorated sherd, local light-fired sherds, grey ware and Central Gaulish samian. A shoulder fragment from a shell-gritted jar would suggest a date in the 3rd century AD.

A significant proportion of the pottery present was composed of local kiln products but grey ware made up the majority of the group and sherds from thirteen samian vessels were present. Whilst there were sherds of local mortaria and colour-coated wares there were only a few sherds of the light-fired CR ware present. Sherds of shell-gritted Dales ware dated the activity to the 3rd century AD.

From the range of products found during previous excavations on the site there is little evidence that pottery production continued into the 3rd century AD. It is likely that by Phase 2 the majority of the colour-coated pottery, light-fired CR wares and local mortaria amongst these groups were residual material from the kiln site included amongst a domestic assemblage from occupation in the vicinity of the site. Extensive areas of 3rd century AD roadside settlement have already been recognised on the Bishop Grosseteste site to the east of Ermine Street (Precious 1997; Rowlandson *et al.* 2013; 2014).

Phase 3

Thirty five sherds (0.256kg, 0.22 RE) were retrieved from contexts in Phase 3. The pottery was retrieved from pit, posthole and beam slot features. The assemblage was relatively small though grey ware was well represented, largely due to the presence of fragments from a single jar with an everted rim. No shell-gritted Dales ware sherds were present amongst this group and little, if any of the pottery from this phase ought to date to later than the 2nd century AD. Colour-coated beakers present included one with an everted rim of 2nd century AD date and another with a plain rim (BKPR) which may have dated to the later 2nd or perhaps the early 3rd century AD. A fragment from a hook-rimmed mortarium with fired clay trituration grits and tiny scraps, possibly from a samian vessel, were also present. A full description by context is presented in Table 2.

Phase 3 or 4

Three sherds (0.009kg, 0.02 RE) were retrieved from contexts in Phase 3 or 4. A sherd from a colour-coated beaker was retrieved from Feature 109 dating to the mid 2nd century AD or later and grey ware and Central Gaulish samian sherds, dating to AD120–200, were retrieved from Pit 263.

Phase 4

Seven sherds (0.045kg, 0.18 RE) were retrieved from contexts in Phase 4. The pottery from this phase included sherds from colour-coated and Black Burnished ware 1 beakers, a sherd of Central Gaulish samian and grey ware. The groups were all small and broadly dated to the 2nd century AD; much of the material may have been residual.

Unphased

Four sherds (0.011kg, 0 RE) were retrieved from unphased contexts. The sherds are described in the tabulated information (below).

Samian

by G Monteil

Introduction

A total of sixteen sherds of samian ware were submitted for this report. The fabric of each sherd was examined, after taking a small fresh break, under a x20 binocular microscope and was catalogued by context number. Each archive catalogue entry consists of a context number alongside fabric, form and decoration identification, sherd count, rim or base EVE (Estimated Vessel Equivalent) when appropriate and weight. The presence of wear, repair and graffiti was also systematically recorded.

A rubbing of the decorated fragment was taken then mounted, scanned and submitted as illustration. More detailed comments about the decorated ware (D1) are provided at the end of this report.

Results

Condition

The assemblage is largely made up of small and abraded fragments and this is reflected in the average weight which is particularly low (c.4g) and the high number of unidentified form (ten out of 16 sherds). This poor state of preservation is in keeping with other samian assemblages recovered from the Newport area (Monteil 2014a, b and c) and would suggest that the samian material is, as with the other sites, re-deposited and residual.

Composition and chronology

	Les Martres			Lezoux				East Gaulish			Total			
	sh	wght	MNV	sh	wght	RE	MNV	sh	wght	MNV	sh	wght	RE	MNV
dish								1	2	1	1	2		1
DR15/17	1	4	1								1	4		1
DR33				1	2		1				1	2		1
DR37								2	6	1	2	6		1
WA79				1	4	0.03	1				1	4	0.03	1
unid				6	22		6	4	11	3	10	33		9
Total	1	4	1	8	28	0.03	8	7	19	5	16	51	0.03	14

Table 1: Samian forms and fabrics

This small group is made up of 2nd c. AD Central and East Gaulish samian material (Table 1), with 16 sherds representing 14 vessels. The earliest piece is a dish form Dr.15/17 from Les Martres-de-Veyre in 211 which is Trajanic. The material from Lezoux includes little that is diagnostic, a cup form Dr.33 in 217 and a dish form Wa.79 in 101 which is more common after AD160. Two joining flakes from an East Gaulish decorated bowl and five undiagnostic plain sherds complete this small collection. The

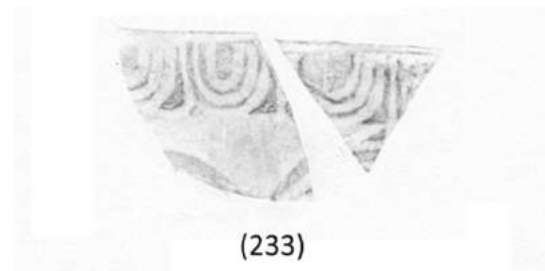
decorated vessel is the only one in this small group; from Trier in East Gaul it is also the latest vessel (see D1 below).

One vessel, an East Gaulish dish recovered in 209, shows evidence of repair.

Concluding remarks

As with previous excavations in that part of Newport (Monteil 2014a-c), South Gaulish material is absent from this assemblage and it is dominated by 2nd and early 3rd c. AD material from Central and East Gaul. The samian group is small, abraded and not necessarily representative. In itself this small samian group is of little value but the dataset might prove of use when combined with other datasets from this part of the Roman Town to explore Lincoln wide questions.

Decorated samian catalogue



D1-233-two joining flakes, Dr.37, Trier. Only the ovolo is visible, it is the one used by Comitalis of Trier (Bird 1986, no.2.64). AD170–240

Amphora

By I M Rowlandson

A single sherd from a Gaulish amphora was retrieved from Phase 2, Linear 216. Low levels of amphorae were present amongst the previous excavations on the LINP13 site (Rowlandson *et al.* 2015) but larger groups have been retrieved from the area of roadside settlement recorded to the east of Ermine Street (Rowlandson *et al.* 2014). The low level of amphorae sherds on some settlement sites in the vicinity of Lincoln may be due to commodities such as wine or olive oil being bought in smaller quantities and transported away from the market place in other vessels. Therefore the low level of amphorae on this site cannot be used to *ipso facto* infer low status or a lack of access to such goods.

Mortaria

Only four mortaria sherds were retrieved from the LINP15 investigations, they consisted of a wall-sided mortarium from Phase 1 Linear feature [120] which was broadly similar to an example from the LINP13 excavations (Rowlandson 2015 Nos. 79-80) with grooves including one just above the flange. A sherd from a similar wall-sided mortarium with groove at edge of flange (broadly as Rowlandson 2015 No. 80) was retrieved from Phase 2 Ditch terminus [210]. Another body sherd in the local MOLIN2 fabric was also retrieved from Phase 2 Ditch [208]. A hooked mortarium with a white fabric and fired clay trituration grits from Lincoln or Mancetter/Hartshill was retrieved from Pit [220].

The types of mortaria present from the LINP15 site were also present amongst the LINP13 assemblage (Rowlandson 2015). Mortaria made up 12.25% of the LINP13 by sherd count and 35.50% by weight in contrast to the low levels on the LINP15 site (Rowlandson *et al.* 2015, 1.95% and 7.73% respectively). The assemblage is more comparable to groups of pottery from the 3rd and 4th century AD sites at Bishop Grosseteste sites (Rowlandson *et al.* 2014, 0.58% and 3.33% respectively and Rowlandson

2013, >1%). The low level of mortaria, even as a residual element, amongst the LINP15 appears unusual considering the physical proximity of the two investigations.

Fine wares

Forty one sherds of Romano-British fine wares were retrieved from the LINP15 excavation, of these 39 were colour-coated types that may have been made at the kiln site. The local colour-coated wares consisted of 19.03% by sherd count and 9.07% by weight, similar to the proportion from the LINP13 investigation (Rowlandson 2015, 20.09% and 9.09% respectively). All of the colour-coated sherds that could be attributed a form were beakers, including rough-cast types with everted rims (Rowlandson 2015, e.g. No. 4); cornice-type rims (e.g. Nos. 7 and 13); rouletted vessels (e.g. No. 10) and plain rimmed vessels (e.g. Nos. 5 and 11). A single sherd with barbotine vegetation motif decoration that had been re-worked may not have been a local product (Phase 2, Ditch 208).

A small quantity of fine grey ware was also recorded of uncertain form (Phase 1 Layer 104 and Phase 2 Linear 106), a similar proportion to LINP13 assemblage (Rowlandson 2015). No imported fine wares or diagnostic late Roman fine wares were retrieved. All of the material could be dated to the 2nd century AD with the vast majority of the colour-coated ware produced by kilns in the immediate vicinity. Although quantities of these fine wares were found on the predominantly 3rd to 4th century AD sites at Bishop Grosseteste (Rowlandson 2014, 10.96% by sherd count and 4.80% by weight) the quantities were relatively high given the nature of the roadside settlement. They were however significantly lower than the LINP13 and LINP15 groups, which contained significant quantities of material from the 2nd century AD kilns. The range of colour-coated wares from the BGU site was lower.

Oxidised wares

Eighteen sherds of oxidised wares in the CR, CR2, OX, OXL and TILE fabrics were retrieved from Phases 2–4. Notable inclusions were a flagon neck from Linear 216, a necked jar or beaker in the OX fabric group from ditch [210] and a sherd from a dish or perhaps a *tegula* from pit [226] (e.g. Rowlandson 2014, No.3). The relatively low level of oxidised wares in comparison to the material from the kiln site suggests that little of this material was in use by the inhabitants of the LINP15 site during the 2nd century AD. Despite being located near to a kiln producing flagons it appears that few such vessels were used on this site.

Reduced wares

One hundred and nine reduced ware sherds were retrieved. With the exception of one all of the vessels could be attributed to the GREY ware fabric group. A Black Burnished ware 1 beaker with a bead rim retrieved from Phase 4, Demolition layer 239 was the only non-local reduced ware vessel noted. The low level of Black Burnished ware 1 from this site was unsurprising given the abundance of grey ware kilns in the Lincoln area.

The grey ware forms included a bowl copying samian form 36, a lipped bowl and a bowl with a triangular rim that may have functioned as table ware. The majority of types present were utilitarian jars including necked and lug-handled types. Of interest were a crucible fragment from Phase 2, ditch [210] and a fragment from a cheese press from Phase 2, ditch [208]. The forms present were typical of 2nd century to perhaps early 3rd century AD deposits from the Lincoln area. In contrast to assemblages from the BGU site there were none of the diagnostic late Roman forms present (Rowlandson 2014).

Native tradition wares

Three sherds of native tradition wares (IAGR) were recorded from Phase 2, ditch [208] and layer 132. These wares were typically in use in Lincoln during the mid to late 1st century AD until the late 2nd

century AD when they were largely replaced by grey ware or, subsequently, late Roman coarse wares (Darling and Precious 2014). The low levels of IAGR from this site would be expected for a site mostly occupied in the second half of the 2nd century AD until sometime in the first half of the 3rd century AD when the inhabitants favoured grey wares for their kitchen and storage needs. It is also possible that the IAGR sherds represent residual material from the 1st century AD activity recorded in the vicinity from Test Pit 5 of the Lincoln Archaeological Group's research project (Rowlandson 2017, Context 0510).

Late Roman shell-gritted wares

A maximum of seven vessels of late Roman shell-gritted wares were recorded (DWSHT and possibly also the miscellaneous SHEL group). None of the diagnostic shell-gritted Dales ware jar forms (Gillam 1970, Type 152) were noted; the only rim sherd was from a lid. 'Proto-Dales ware' types have not been recorded from Lincoln and the earliest date for the occurrence of this fabric in the immediate vicinity of the City of Lincoln has been suggested to be sometime in the 3rd century AD (Darling and Precious 2014). The presence of body sherds and bases in the DWSHT fabric group would therefore suggest that activity continued on the site into the 3rd century AD. Sherds in this fabric were recorded from Phase 1, linear [106] and Phase 2, features [208], [210] and [216] however, these sherds may be intrusive within otherwise 2nd century AD groups. It is clear from other excavations in the vicinity of the site that the area around the LINP15 trenches, particularly to the east of Ermine Street, remained occupied until the 4th century AD. An abundance of Dales ware has been recorded from the adjacent BGU sites (e.g. Rowlandson 2014).

Conclusions

This group, although somewhat underwhelming in quantity and diversity, provides an important assemblage from a building and other features close to Ermine Street that may have provided the accommodation for the potters working on the LINP13 site to the west during the 2nd century AD. Such groups are important as they highlight the importance of specialist pottery production centres established to service urban centres or military contracts rather than the immediate needs of the potters and their neighbours. It is likely that the potters themselves were not the intended market for their wares but may also have had no need of them or have been restricted from using them by their status (see discussion in Hartley 2016; Buckland *et al.* 2001; Buckland 2004).

Recommendations

All of the material from the LINP15 investigations should be deposited in the relevant local museum. The pottery from this investigation should be included with the LINP13 material as part of any publication of the site as it provides a contrasting group from contemporary domestic structures that may have been associated with pottery production.

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Tabulated Roman pottery data

Phase	F No	Context	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
?	247	247	Buried soil	Roman	A small group of grey ware.	2	6	0
?	256	257	Pit	Roman	A single light fired sherd and a grey ware sherd.	2	5	0
1	121	122	Ditch	Roman	A small group of grey ware.	2	20	0
1	121	123	Ditch	Roman	A small group of abraded grey ware.	4	32	0
1	212	213	Ditch	M2+	A small group including a sherd from a colour coated beaker.	4	4	0
1	106	107	Linear	L2+	A small group including grey ware, a colour-coated sherd and a sherd from a samian bowl or dish.	20	194	14
1	106	119	Linear	Roman	A small group of grey ware.	2	15	0
1	106	120	Linear	L2+	A small group including a sherd from a colour coated beaker and a wall-sided mortarium (broadly as Rowlandson 2015 Nos. 79-80 with grooves including one just above flange).	2	43	6
2	208	209	Ditch	3C+	A small group including sherds of samian, a sherd from a cheese press, a grey ware jar and lipped bowl. A sherd of decorated colour coated ware appears to be partially reshaped perhaps to form an object. The group is dated by the presence of a Dales ware type shell-gritted sherd from a large jar.	22	297	24
2	210	211	Ditch terminus?	3C+	A small group including samian, colour coated sherds including the base from a beaker and grey ware, a sherd from a crucible with copper alloy residue and a wall-sided mortarium as Rowlandson 2015 No. 80 with groove at edge of flange. The group is dated by the presence of a sherd in a shell-gritted Dales ware fabric.	45	873	53
2	210	233	Ditch terminus?	M2+	A small group including samian, colour coated sherds and a fragment from a shell-gritted lid.	8	74	13
2	210	234	Ditch terminus?	Roman	A small group including grey ware.	4	21	8
2	104	104	Layer	Roman	A single fine grey ware sherd.	1	9	0
2	132	132	Layer	3C+	A small group including a sherd from a pear-shaped colour coated beaker.	3	20	8
2	216	217	Linear	3C?	A small group of colour coated ware, light fired sherds, grey ware and samian. A shoulder from a shell-gritted jar would suggest a date in the 3rd century AD.	26	168	0
2	216	218	Linear	ML3+	A small group including shell-gritted Dales ware sherds and a colour coated sherd.	7	243	0
2	216	219	Linear	M2	A small group including grey ware and a sherd from a colour coated vessel with stab decoration.	6	58	0
3	267	268	Beam slot?	Roman	A single grey ware sherd.	1	7	0

Phase	F No	Context	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
3	206	207	Pit	L2+	A small group including sherds from a colour coated beaker with an everted rim, white ware, grey ware and a possible scrap of samian retrieved from samples 5 and 8.	9	16	4
3	206	226	Pit	Roman	A single grey ware sherd and a fragment from a tile or tile pot.	2	62	0
3	220	221	Pit	2C	A small group including a fragment from a large hook-rimmed mortarium.	2	50	6
3	220	223	Pit	Roman	A single grey ware sherd.	1	8	0
3	143	144	Pit or ditch	Roman	Sherds from a grey ware jar with everted rim.	15	96	12
3	237	238	Pit or post hole	Roman	A single grey ware sherd.	1	2	0
3	243	244	Pit or post hole	Roman	A single light fired sherd.	1	1	0
3	254	255	Pit or post hole	Roman	A single light fired sherd.	1	5	0
3	245	246	Post hole	M2+	A small group of colour coated pottery.	2	9	0
3 or 4	263	264	Pit	2C+	A small group including samian and grey ware.	2	8	2
3 or 4	109	111	Pit or hearth	M2+	A single colour coated sherd retrieved from sample 1.	1	1	0
4	239	239	Demolition layer	M2+	A small group including a sherd from a colour coated beaker and a Black Burnished ware beaker with a bead rim.	2	8	7
4	105	105	Layer	Roman	A single grey ware sherd.	1	10	0
4	116	116	Layer	AD120-200	A single sherd of Central Gaulish samian and an oxidised sherd.	2	11	0
4	231	232	Pit	Roman	A single sherd from a grey ware jar and a lid or dish.	2	16	11

Table 2: Roman pottery dating summary

Fabric code	Fabric group	Fabric details	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
SAM?	Samian	Undifferentiated	2	0.98	1	0.04	0
SAMCG	Samian	Central Gaulish	8	3.90	28	1.17	3
SAMEG	Samian	East Gaulish	7	3.41	19	0.79	0
SAMMV	Samian	Les Martres-de-Veyre samian (inclusion-less)	1	0.49	4	0.17	0
GAU	Amphora	Undifferentiated Gaulish amphorae	1	0.49	16	0.67	0
MOLIN2	Mortaria	Lincoln mortaria	3	1.46	139	5.81	19
MOMD	Mortaria	Midlands mortaria; precise source unknown	1	0.49	46	1.92	6
GFIN	Fine	Miscellaneous fine grey wares	2	0.98	23	0.96	0
CC	Fine	Other colour-coated wares	4	1.95	25	1.05	8
CC?	Fine	Other colour coated wares	1	0.49	1	0.04	0
CC1	Fine	Colour coated fabric 1	33	16.10	190	7.94	4
CC3	Fine	Colour-coated with a pale orange fabric	1	0.49	1	0.04	0
CR	Oxidised	Roman cream wares (various)	4	1.95	11	0.46	0
CR2	Oxidised	Cream ware: Site fabric 2	8	3.90	43	1.80	0
OX	Oxidised	Misc. oxidized wares	4	1.95	20	0.84	8
OXL	Oxidised	Light oxidised fabrics	1	0.49	3	0.13	0
TILE	Oxidised	Tile fabric vessels	1	0.49	41	1.71	0
BB1	Reduced	Black burnished 1, unspecified	1	0.49	5	0.21	7
GREY	Reduced	Miscellaneous grey wares	107	52.20	1391	58.15	106
GREY?	Reduced	Miscellaneous grey wares	1	0.49	3	0.13	0
IAGR	Reduced	Native tradition/transitional grit-tempered wares	3	1.47	37	1.55	0
DWSHT	Calcareous	Dales ware type	9	4.39	298	12.46	0
SHEL	Calcareous	Miscellaneous undifferentiated shell-tempered	2	0.98	47	1.96	7

Table 3: Roman pottery fabric summary

Form	Form Type	Form Description	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
A	Amphora	Unclassified form	1	0.49	16	0.67	0
BK	Beaker	Unclassified form	14	6.83	70	2.93	0
BKBR	Beaker	Bead rim	1	0.49	5	0.21	7
BKEV	Beaker	Everted rim	1	0.49	1	0.04	2
BKFN	Beaker	Funnel necked; form unknown	1	0.49	15	0.63	8
BKPR	Beaker	Plain upright rim	1	0.49	2	0.08	2
BKRC	Beaker	Roughcast	3	1.46	17	0.71	0
BKSC	Beaker	Scaled decoration (not folded)	1	0.49	2	0.08	0
37	Bowl	Samian form- see Webster 1996	2	0.98	6	0.25	0
B	Bowl	Unclassified form	3	1.46	13	0.54	0
B36	Bowl	Copy of Samian form 36	1	0.49	24	1.00	0
BFL	Bowl	Flange rimmed (eg Gillam 1970 Types 218-220)	1	0.49	17	0.71	6
BTR	Bowl	Triangular rimmed (eg. Gillam 1970 Types 222-3)	1	0.49	18	0.75	5
BL	Bowl-large	Large	2	0.98	290	12.12	0
BD	Bowl/dish	-	3	1.46	66	2.76	0
BD?	Bowl/dish	-	1	0.49	41	1.71	0
CLSD	Closed	Form	34	16.59	201	8.40	0

Form	Form Type	Form Description	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
33	Cup	Samian form- see Webster 1996	1	0.49	2	0.08	0
79	Dish	Samian form- see Webster 1996	1	0.49	4	0.17	3
D	Dish	Unclassified form	1	0.49	2	0.08	0
F	Flagon	Unclassified form	6	2.93	28	1.17	0
J	Jar	Unclassified form	4	1.95	46	1.92	0
JEV	Jar	Everted rim	16	7.80	108	4.52	19
JL	Jar	Large	4	1.95	271	11.33	13
JLH	Jar	Lug-handled	1	0.49	11	0.46	0
JNK	Jar	Necked	1	0.49	12	0.50	8
JNN	Jar	Narrow-necked	1	0.49	134	5.60	26
JBKEV	Jar/Beaker	Everted rim	1	0.49	9	0.38	14
JBKNK	Jar/Beaker	Necked	1	0.49	7	0.29	8
JB	Jar/Bowl	Unclassified form	1	0.49	13	0.54	4
JBL	Jar/Bowl	Large	5	2.44	170	7.11	0
JBNK	Jar/Bowl	Necked	1	0.49	7	0.29	6
L	Lid	Unclassified form	1	0.49	32	1.34	7
LD	Lid/dish	Unclassified	1	0.49	4	0.17	3
CHP	Misc	Cheese press	1	0.49	27	1.13	0
CRUC	Misc	Crucible	1	0.49	4	0.17	0
M	Mortaria	Unclassified Form	1	0.49	12	0.50	0
MHK	Mortaria	Hook-rimmed as Gillam 237-45	1	0.49	46	1.92	6
MWS	Mortaria	Wallsided as Gillam 287-9	2	0.98	127	5.31	19
15/17	Plate	Samian form- see Webster 1996	1	0.49	4	0.17	0
-	Unknown	Form uncertain	80	39.02	508	21.24	2

Table 4: Roman pottery forms summary

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve	Sample	Finds ref
104	GFIN	CLSD		1			BS		1	9	0	0		
105	GREY	-		1			BS		1	10	0	0		
107	CC1	CLSD		1			BS		1	4	0	0		
107	DWSHT	-		1	ABR		BS		1	5	0	0		
107	GFIN	CLSD		1	ABR		BS		1	14	0	0		
107	GREY	-		1	ABR		BS		3	40	0	0		
107	GREY	J	LA	1	ABR		BS		1	16	0	0		
107	GREY	J	LA	1	ABR		BS		1	4	0	0		
107	GREY	CLSD		3	ABR		BS		3	20	0	0		
107	GREY	JLH		1			HANDLE		1	11	0	0		
107	GREY	-		5	ABR		BS		5	51	0	0		
107	GREY	JEV		1			RIM		1	12	16	7		
107	GREY	JB		1			RIM		1	13	24	4		
107	SAMCG	79		1	ABR		RIM; AD170-210; LOST MOST OF EXT SURFACE		1	4	26	3		
111	CC1	BK		1			BS		1	1	0	0	1	
116	OX	-		1	VAB		BS; GRITTY FABRIC		1	9	0	0		
116	SAMEG	B		1	ABR		BS; AD150-250; GM WRITES "TR"		1	2	0	0		
119	GREY	-		2			BS		2	15	0	0		
120	CC1	BK		1	ABR		BS		1	2	0	0		
120	MOLIN2	MWS		1			RIM		1	41	24	6		
122	GREY	-		2	ABR		BS		2	20	0	0		
123	GREY	-		1	ABR		BS		4	32	0	0		
132	CC	BKFN		1			RIM; FORM AS HOWE ET AL 1980 NO. 34		1	15	10	8		
132	IAGR	CLSD		1			BS		2	5	0	0		
144	GREY	JEV		1			RIM		15	96	12	12		
207	CC1	BKPR		1	ABR		RIM		1	2	0	2	8	
207	CC1	BKEV		1	ABR		RIM		1	1	0	2	8	
207	CC3	CLSD		1			BS		1	1	0	0	8	
207	CR	CLSD		1	VAB		BS		1	3	0	0	5	
207	CR	-		1	ABR		BS		1	2	0	0	8	

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve	Sample	Find ref
207	GREY	CLSD		1	ABR		BS		1	3	0	0	8	
207	GREY?	-		1	VAB		BS		1	3	0	0	5	
207	SAM?	-		1	VAB		BS SCRAP		2	1	0	0	8	
209	CC1	CLSD		1	ABR		BS		1	3	0	0		
209	CC1	BKRC	RC	1			BS		1	2	0	0		
209	CC1	CLSD		1			BS		1	7	0	0		
209	CC1	-	BAVE	1	REWORKED?		BS		1	2	0	0		
209	DWSHT	JL		1			BS SHLDR		1	55	0	0		
209	GREY	-		3			BS		3	15	0	0		
209	GREY	BD		1			BASE		1	8	0	0		
209	GREY	CLSD		1	BURNT		BS		1	4	0	0		
209	GREY	CHP		1			BS		1	27	0	0		
209	GREY	BTR		1			RIM		1	18	26	5		
209	GREY	BFL		1			RIM		1	17	24	6		
209	GREY	JBL		1			BS		1	26	0	0		
209	GREY	CLSD		1			BS		1	9	0	0		
209	GREY	JL		1			RIM; EVERTED		1	31	17	13		
209	GREY	B36		1	ABR		BS NEAR RIM		1	24	0	0		
209	IAGR	JBL		1			BS; SHELL & GROG		1	32	0	0		
209	MOLIN2	M		1			BS		1	12	0	0		
209	SAMCG	-		2	VAB		BS FLAKES; AD120-200; CARINATION; LOST INT SURFACE		2	3	0	0		
209	SAMEG	D	STRO	1	ABR; REPAIR		BASE?; AD150-250; PARTIAL STAMPED ROSETTE; GM WRITES "rosette, partial slot repair too"		1	2	0	0		
211	CC	BK		1	ABR		BS		1	5	0	0		
211	CC	BK		1			BS		2	5	0	0		
211	CC1	BK		1			BASE PEDESTAL; BAG SHAPED?		1	49	0	0		
211	CC1	CLSD	ROUZ	1	VAB		BS		1	5	0	0		
211	CC1	CLSD		1			BS		1	3	0	0		

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve	Sample	Finds ref
211	CC1	BK		1			BS		1	1	0	0		
211	CC1	BK		4	ABR		BS		4	3	0	0	4	
211	CC1	BKRC	RC	1	ABR		BS		1	3	0	0	4	
211	CR2	CLSD		1	ABR		BS		1	12	0	0		
211	DWSHT	-		1			BS		1	8	0	0		
211	GREY	-		6			BS		6	38	0	0		
211	GREY	BD		1			BASE		1	36	0	0		
211	GREY	CLSD		1			BS		1	3	0	0		
211	GREY	JNN		1			RIM; BIFID; SOME CLAY PELLETS		1	134	16	26		
211	GREY	CRUC		1	CU SLAG		BS; HANDMADE; TRACES OF METAL RESIDUE (GREEN & ORANGE) ON EXT SURFACE		1	4	0	0		
211	GREY	-		6			BS		6	48	0	0		
211	GREY	BL	STRING	1	ABR		BASE		1	254	0	0		
211	GREY	JBL		3	ABR		BS		3	112	0	0		
211	GREY	JBKEV		1			RIM		1	9	10	14		
211	GREY	-		2	ABR		BS		2	13	0	0		
211	MOLIN2	MWS		1			RIM		1	86	24	13		
211	SAMCG	-		1	VAB; BURNT		BS FLAKE; AD120-200; LOST ONE SURFACE		1	5	0	0		
211	SAMCG	B		1	ABR		BS; AD120-200		1	9	0	0		
211	SAMEG	-		1	ABR		BS; AD150-250; GM WRITES "Trier"		2	8	0	0		
211	SAMEG	-		1	VAB		BS; AD150-250; LOST BOTH SURFACES		1	1	0	0		
211	SAMMV	15/17		1	ABR		BS NEAR RIM; AD100-130; LOST RIM TIP		1	4	0	0		
211	SHEL	-		1	ABR		BASE; ?DWSHT		1	15	0	0		
213	CC1	BK		1	ABR		BS		1	2	0	0		
213	GREY	-		1	ABR		BS		1	1	0	0		
213	GREY	-		1	ABR		BS		2	1	0	0	3	
217	CC1	BKSC		1	ABR		BS		1	2	0	0		

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve	Sample	Finds ref
217	CC1	BKRC	RC	1	ABR		BASE		1	12	0	0		
217	CC1	CLSD		1	BURNT		BASE		1	17	0	0		
217	CC1	BK		1	ABR		BS		1	1	0	0		
217	CC1	CLSD		4	ABR		BS		4	24	0	0		
217	CR2	F		1			BS NECK		6	28	0	0		
217	DWSHT	J		1			BS SHLDR		1	12	0	0		
217	GAU	A		1	ABR		BS		1	16	0	0		
217	GREY	-		6			BS		6	35	0	0		
217	GREY	J	LA	1			BS		1	14	0	0		
217	OX	-		1			BS		1	3	0	0		
217	SAMCG	B		1			BS; AD120-200		1	2	0	0		
217	SAMCG	33		1	VAB		BS; AD120-200; LOST ONE SURFACE		1	2	0	0		
218	CC1	BD		1			BASE		1	22	0	0		
218	CR2	CLSD		1			BS		1	3	0	0		
218	DWSHT	JL		1			BASE		2	185	0	0		
218	DWSHT	-		3			BS		3	33	0	0		
219	CC1	CLSD	ROU	1			BS; STABBED TRIANGULAR 'ROULETTING'		1	6	0	0		
219	GREY	-		1	ABR		BS		1	8	0	0		
219	GREY	-		1	ABR		BS		2	4	0	0		
219	GREY	BL		1			BS		1	36	0	0		
219	GREY	-		1			BS		1	4	0	0		
221	GREY	CLSD		1			BS		1	4	0	0		
221	MOMD	MHK		1			RIM; CLAY PELLETS; LINCOLN OR MANCETTER		1	46	41	6		
223	GREY	-		1			BS		1	8	0	0		
226	GREY	-		1			BS		1	21	0	0		
226	TILE	BD?		1	ABR		BS; FRAGMENT OF TEGULA OR DISH		1	41	0	0	9	
232	GREY	JNK		1	ABR		RIM		1	12	14	8		
232	GREY	LD		1	ABR		RIM		1	4	20	3		
233	CC1	CLSD		1			BS		1	4	0	0		

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve	Sample	Find ref
233	GREY	CLSD		1			BASE		1	12	0	0		
233	GREY	CLSD		1	ABR		BS		1	12	0	0		
233	GREY	JBNK		1			RIM		1	7	14	6		
233	OX	-		1	ABR		BS		1	1	0	0		
233	SAMEG	37	MOULD	1	VAB		BS FLAKE INC OVOLO; AD170-240; LOST INT SURFACE; GM WRITES "2=1 flake, ovolo is the one used by Comitalis of Trier (Bird 1986, no.2.64)"		2	6	0	0		
233	SHEL	L		1			RIM		1	32	24	7		
234	GREY	-		2			BS		2	11	0	0		
234	OX	JBKNK		1			RIM		1	7	13	8		
234	OXL	-		1			BS		1	3	0	0		
238	GREY	-		1			BS; CRUCIBLE? NO RESIDUE		1	2	0	0		
239	BB1	BKBR		1			RIM		1	5	10	7		
239	CC1	CLSD		1			BS		1	3	0	0		
244	CR	-		1	ABR		BS		1	1	0	0		
246	CC1	-		2	ABR		BS		2	9	0	0		
247	GREY	CLSD		2			BS		2	6	0	0		
255	CR	CLSD		1	ABR		BS		1	5	0	0		
257	CC?	BK		1	VAB		BS		1	1	0	0		
257	GREY	-		1	VAB		BS		1	4	0	0		
264	GREY	-		1	VAB		RIM; JAR OR DISH		1	5	0	2		
264	SAMCG	-		1	VAB		BS FLAKE; AD120-200; LOST ONE SURFACE		1	3	0	0		
268	GREY	-		1	ABR		BS		1	7	0	0		

Table 5: Roman pottery archive

Appendix 2: Post-Roman Pottery

By Jane Young

Introduction

Three hundred and eight sherds of post-Roman pottery representing 213 vessels were recovered from the site. The pottery ranges in date from the Saxo-Norman to the medieval periods. The assemblage was laid out in its entirety and checked for cross-fitting vessels of which three were found. The pottery was examined both visually and using a x20 binocular microscope, then recorded using the fabric codenames (CNAME) of the City of Lincoln Archaeology Unit and other nationally agreed codenames (Young *et al.* 2005). The assemblage was quantified by three measures: number of sherds, vessel count and weight, and the resulting archive entered onto an Access database (Table 8). Recording of the post-Roman assemblage was in accordance with the guidelines laid out in Slowikowski *et al.* (2001) complies with the Lincolnshire County Council's Archaeological Handbook (sections 13.4 and 13.5 2009).

Ceramic period	Trench 1	Trench 2	Totals
LFS	30	42	72
ST	1	1	2
<i>Saxo-Norman (11th to 12th)</i>	31	43	74
BEVO1T	1	0	1
DST	1	1	2
EMLF	0	1	1
LEMS	30	2	322
LSW1	9	6	15
LSW1/2	26	9	35
NSP	1	1	2
LSWA	2	1	3
<i>Early medieval (12th to early/mid 13th)</i>	1320	107	14271
HUM	1	0	1
LSW2	33	1	34
LSW2/3	8	0	8
MEDLOC	2	1	3
PSHW2	2	0	2
<i>Medieval (late 12th to 14th)</i>	14986	216	152028
Totals	148	66	213

Table 6: Pottery by ceramic period and ware type with total quantities by vessel count

Condition

The pottery is in a variable but stable condition. Sherd size mainly falls into the small to medium range (below 40g), however a number of sherds have freshly broken edges with no retained joining pieces indicating that on deposition they were much larger.

Results

In total 213 in 15 identifiable post-Roman ceramic ware types were recovered (Table 7). The range of vessel types is fairly limited with examples of various types of jug, bowl and jar forming the body of the assemblage.

Codename	Full name	Earliest date	Latest date	Total sherds	Total vessels
BEVO1T	Beverley Orange-type ware Fabric 1	1100	1230	1	1
DST	Developed Stamford ware	1150	1230	2	2
EMLF	Early Medieval Light firing	1080	1250	2	1
HUM	Humberware	1250	1550	1	1
LEMS	Lincolnshire Early Medieval Shelly	1130	1230	48	32
LFS	Lincolnshire Fine-shelled ware	970	1200	93	72
LSW1	12 th century Lincoln Glazed ware	1100	1200	24	15
LSW1/2	12 th - 13 th century Lincoln Glazed ware	1100	1300	53	35
LSW2	13 th to 14 th century Lincoln Glazed Ware	1200	1320	51	34
LSW2/3	13 th to 15 th century Lincoln Glazed Ware	1200	1450	12	8
LSWA	Lincoln Glazed ware Fabric A	1100	1500	8	3
MEDLOC	Medieval local fabrics	1150	1450	6	3
NSP	Nottingham Splashed ware	1100	1250	2	2
PSHW2	Peterborough Shelly Ware Fabric 2	1175	1400	3	2
ST	Stamford Ware	970	1200	2	2

Table 7: Pottery types with total quantities by sherd and vessel count

Saxo-Norman

Ninety-five sherds representing 74 vessels are of long-lived ware types (late 10th to 12th century) and can be assigned to the Saxo-Norman period. Seventy-two of these vessels are in a fine shell-tempered fabric (Lincolnshire Fine-shelled ware) whose currency spans the period between the late 10th and late 12th centuries. The long period of manufacture, together with little change in form, fabric or production technique can make close dating of small or undiagnostic sherds difficult, however some of the vessels recovered from this site are chronologically significant. All of the Lincolnshire Fine-shelled ware (LFS) sherds are likely to come from jars or bowls. Thirty of the vessels are identifiable as undecorated jars of small to large size. The recovered rims point to a post-conquest mid/late 11th to 12th century date. A large jar found in pit 109 appears to have been wheel thrown. Jars of this type were recovered from the Dean's Building on Monks Road in Lincoln (Young 2012), and date to the last quarter of the 12th century.

Two small sherds are from Stamford ware vessels (ST). The largest sherd is from a glazed jar or pitcher in Fabric B whilst the other vessel is a small unglazed jar in Fabric G. The Fabric B vessel is of post-conquest 11th century to mid 12th century date. The other vessel however is of early/mid 11th to mid 12th century type.

Early medieval

One hundred and forty sherds from 93 vessels in eight ware types are of early medieval type. In ceramic terms this covers the period between the end of the 11th century and the mid 13th century when 'high-medieval' ceramics become dominant. At least three of these ware types are products of kilns operating in or around Lincoln. Twenty-four sherds are from fifteen 12th to 13th century Lincoln Glazed ware (LSW1) vessels. All but one of the sherds is identifiable as coming from undecorated jugs of small to medium size. The other sherd is the flanged rim of a jar or bowl. This ware type originates in the early/mid 12th century but does not become common until the last quarter of the 12th century. It remains in use until into the first quarter of the 13th century. None of the recovered vessels are particularly chronologically significant except for two jugs found in layer 104 that have 'developed-type' glazes of late 12th century or later date. Fifty-three sherds representing 35 vessels are of indeterminate type (LSW1/2) and come from a range of jugs and possible jars. These vessels are of late 12th to early/mid 13th century type and include three jugs with in-turned rims, several with copper flacks in the glaze and one jug decorated with an iron-rich vertical painted strip. Three Lincoln Glazed ware Fabric A (LSWA) jugs of similar date include another vessel with iron-rich vertical painting. Two

sherds from an Early Medieval Light-firing jar (EMLF) are an unusual find. The fabric of the vessel found on this site suggests Lincoln production. The dating of this type is not yet fully understood but probably lies between the late 11th and mid 13th centuries.

Forty-eight sherds come from 32 Lincolnshire Early Medieval Shelly ware (LEMS) jars and bowls. This ware type dates to between the mid 12th and early/mid 13th centuries, but is most common in late 12th to early/mid 13th century deposits. A large bowl with incised wavy decoration on the rim edge and a large wheel thrown shallow bowl are typical of this later period of production. Two sherds come from jugs in Developed Stamford ware (DST). The jugs have a thick bright copper-green glaze and are in Fabrics B and B/C. They are likely to date to between the mid/late 12th and early/mid 13th centuries.

Only three regional imports were recovered from the site.

Two 'splash-glazed' sherds come from Nottingham Splashed ware (NSP) jugs. The jugs, which are in a sandy fabric, are of mid/late to late 12th century date. A small sherd with a reduced suspension glaze is from a Beverley 1-type jug (BEVO1T) of mid/late 12th to early/mid 13th century date.

Medieval

Seventy-three sherds representing 48 of the vessels recovered from the site can be dated to the medieval period, between about the late 12th and early/mid 14th centuries. Fifty-one sherds from 34 vessels are of Lincoln 13th to early/mid 14th century production (LSW2). Most of these vessels are probably of 13th century date. With the exception of two pipkins all of the sherds come from jugs of baluster, shouldered or rounded type. Only two of the jugs are decorated. One has an applied vertical strip whilst the other has an applied horseshoe motif. A further 12 sherds from eight vessels are of intermediate 13th to 14th or 14th to 15th century type (LSW2/3). These six jugs, pipkin and jar or pipkin probably date to between the mid/late 13th and early/mid 14th centuries.

Six sherds are from three vessels that were probably produced fairly locally (MEDLOC). Four of these sherds are from two coarsely shell-tempered jars in Fabric A. This fabric is usually only found in groups dating to between the first quarter of the 13th century. The other vessel is a quartz and shell-tempered jar or bowl.

Three other coarsely shell-tempered sherds are from two Peterborough-type Shelly ware vessels (PSHW2). This is an unusual occurrence of this mid 12th to 14th century type. A sherd from a Humberware jug (HUM) is of early, probably late 13th to early/mid 14th century type.

The Site Sequence

The pottery was recovered from twenty-three deposits in two trenches excavated during the excavation. The site has been divided into five phases and the pottery is discussed here by trench using this phasing.

Area 1

Two hundred and twenty-seven sherds from 153 were recovered from nine deposits in Area 1.

In Phase 1 ditch [106] (fill 107) produced a sherd from a Lincoln Glazed ware jar of mid/late 12th to 13th century date.

Phase 2 layer 104 produced a large group of seventy-nine sherds representing forty-two vessels. The assemblage forms a fairly cohesive group dating to Ceramic Horizon MH4. This horizon is at present dated to the first part (probably the first quarter) of the 13th century. The proportion of ware types suggests a date early within this horizon. Most of the recovered vessels are Lincoln-produced jugs (LSW1, LSW1/2, LSW2 and LSWA), but there are also jars and bowls in shell-tempered fabrics (LFS,

LEMS, MEDLOC and PSHW). Two of the jugs are decorated with iron-rich painted vertical strips. Thirteen of the vessels are represented by more than a single sherd and two vessels have con-joints to other deposits (Vessel 1 and Vessel 3). These con-joints are to pit group [178] and pit [125]. The sherd weight of most sherds is quite high, however eleven vessels have freshly broken edges with no surviving joining pieces suggesting that when deposited sherds were even larger. This group probably represents primary deposition.

Ditch [143] (fill 144) in Phase 3 contained a single sherd from a Lincolnshire Early Medieval Shelly ware jar or bowl of mid 12th to early/mid 13th century date.

Pit [109] in Phase 3 or 4 produced pottery from two fills (111 and 113). The seventy sherds come from forty-seven vessels. A cross-joining vessel between the fills suggests that they were filled from contemporary material. Much of this assemblage is comprised of shell-tempered (LFS and LEMS) jars and bowls, but there are also seven glazed jugs in the group. Six of the jugs are of Lincoln production (LSW1 and LSW1/2) and one is a Developed Stamford ware. This group dates to between the mid/late 12th and early 13th century (Ceramic Horizons MH3 to early MH4).

Phase 4 pit [125] (fill 115) produced five sherds from three vessels of mixed date and type. A residual Stamford ware sherd in Fabric G is from a small unglazed jar of early/mid 11th to mid 12th century date. The LSW1/2 jug has a late splashed-type or early suspension-type glaze suggesting an early to early/mid 13th century date. Three sherds are from a small early baluster jug in LSW2. This jug (Vessel 3) is of early to early/mid 13th century date and has a con-join to layer 104. Four sherds were recovered from layer 116. The three Lincoln produced glazed jugs (LSW1, LSW1/2 and LSW2) and a Lincolnshire Fine-shelled ware jar or bowl were probably deposited between the early and early/mid 13th century. Layer 105 produced a group of fifty-two sherds representing thirty-eight vessels. The group is quite mixed with several vessels dating to the first quarter of the 13th century. The latest sherds however come from a Humberware jug and six LSW2/3 jugs. Humberware is first found in late 13th century deposits in Hull (Watkins 1987 and 1993) and the sherd from this site appears to be an early example. The Lincoln jugs are unlikely to date to later than the early/mid 14th century. The complete lack of 14th to 15th century Lincoln Glazed wares (LSW3) in the group argues for a late 13th century deposition date.

Un-phased pit group 178 produced fourteen sherds from twelve vessels. The mixed composition of shell-tempered LEMS jars and bowls and glazed Lincoln jugs (LSW1/2 and LSW2) suggests an early to early/mid 13th century date.

Area 2

Eighty-one sherds representing sixty-six vessels were recovered from thirteen deposits in Area 2. In Phase 2 linear feature [210] (fill 234) produced two small pieces of pottery. One sherd is from a Lincolnshire Fine-shelled ware jar or bowl of 11th or 12th century date whilst the other sherd is from a Lincoln Glazed ware jug (LSW1/2) of mid/late 12th to early/mid 13th century type.

A series of pits ([206], [220] and [227]) and pit or posthole [243] in Phase 3 produced post-Roman pottery. Eleven sherds from ten vessels were recovered from two fills of pit [206] (fills 207 and 226). Nine of the vessels are jars or bowls in 11th to 12th century Lincolnshire Fine-shelled ware. The other sherd comes from a Nottingham Splashed ware jug in a sandy fabric. This small group probably belongs to the last quarter of the 12th century. Pit [220] (fills 221 and 223) produced 33 sherds representing 27 vessels. Almost all of the sherds come from Lincolnshire Fine-shelled ware jars or bowls. A single sherd is from a mid 12th to early/mid 13th century Lincolnshire Early Medieval Shelly ware bowl and two glazed sherds are from a Lincoln Glazed ware (LSW1) jug and a jar or bowl. Also in this group is a glazed Stamford ware jar or pitcher in Fabric B. This small group may belong to the mid 12th century. Three sherds from two vessels were recovered from pit [227] (fill 235). Two sherds are from a Lincoln Glazed ware jug (LSW1/2) with a late splashed or early pocked suspension glaze. The jug probably

dates to between the late 12th and early/mid 13th centuries. Pit or posthole [243] (fill 244) produced sherds from two small Lincolnshire Fine-shelled ware jars of 11th or 12th century date.

Pit [263] (fill 264) in Phase 3 or 4 contained a small group of ten sherds representing seven vessels. The group contains three shell-tempered jars and bowls (LEMS, LFS and MEDLOC Fabric A) and three Lincoln Glazed ware jugs (LSW1 and LSW1/2) and a small jar or pipkin. The large jar in coarsely shell-tempered Fabric A suggests a date in the early part of the 13th century.

Seven sherds representing five vessels were recovered from Phase 4 pit [231] (fill 232). The small group contains three Lincoln Glazed ware (LSW1/2) jugs, a copper-glazed Developed Stamford ware jug and a Lincolnshire Fine-shelled ware jar. This small group dates to between the late 12th and early/mid 13th centuries. The fill (258) of structure [240] produced a single basal sherd from a Lincolnshire Fine-shelled ware vessel of 11th or 12th century date. Tile recovered from this deposit potentially dates to between the mid/late 12th and 14th centuries. Nine sherds from seven vessels were recovered from demolition layer 273 over structure [240]. The small group includes two Lincolnshire Fine-shelled ware vessels and four Lincoln Glazed ware jugs (LSW1 and LSWA). The other two sherds are from an Early Medieval Light-firing jar of probable 12th century date. This small group of pottery dates to between the mid 12th and early 13th centuries, however the recovered tile suggests a slightly later deposition date.

Two sherds were recovered from demolition layer 239. A sherd from a Lincolnshire Fine-shelled jar or bowl is residual. The other sherd has freshly broken edges and comes from a 13th to 14th century Lincoln Glazed ware (LSW2) jug of probable 13th century date.

Un-phased layer 247 produced a single sherd from a Lincoln Glazed ware jug (LSW1/2) of probable mid 12th to early/mid 13th century date.

Discussion

The group of post-Roman pottery recovered from the site ranges in date from the Saxo-Norman to medieval periods and is mainly typical of other material found in the local area. There is an emphasis on the period between the mid/late 12th and early/mid 13th centuries and although pottery of both earlier and later date was recovered this probably reflects the main period of occupation. The presence of unusual regional imports (PSHW2 and early Humber) is part of a pattern emerging in the Newport suburb. There appears to have been access to a wider market of material with several ware types only being recovered from the Newport area.

The EMLF sherd has been removed to the Lincolnshire Type Series otherwise assemblage should be retained for future study.

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context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
104	BEVO1T		jug	1	1	5		LHJ			reduced suspension glaze
104	LEMS		jar	7	1	40		rim & BS		Vessel 1	sharp everted rim
104	LEMS		jar/bowl	1	1	9		base			
104	LEMS		jar/bowl	1	1	8		base			soot
104	LEMS		jar/bowl	1	1	4		BS			internal deposit
104	LEMS		jar/bowl	2	1	5		BS			soot
104	LEMS		jar/bowl	1	1	4		BS			soot
104	LEMS		jar/bowl	1	1	9		BS			soot
104	LEMS		jar/bowl	1	1	13		base			int soot
104	LEMS		small jar/bowl	3	1	16		base & BS			soot int & ext; leached int surface; worn basal edge
104	LFS		small jar	1	1	18		rim			soot ext & over rim; part leached int surface
104	LSW1	Fabric A	jug	5	1	79		BS			ridged shoulder; developed splashed glaze
104	LSW1	Fabric B	jug	1	1	16		BS			developed splashed glaze; fresh breaks with no joining sherds
104	LSW1	Fabric B	small jug	1	1	3		BS			splashed amber glaze
104	LSW1/2	Fabric A	jug	12	1	296		rim with lip handle & neck			inturned rim; strap handle; fresh breaks no joining sheds; part worn ext rim edge; heavily pocked & splashed glaze; thin neck cordon
104	LSW1/2	Fabric A	jug	2	1	21		BS			burnt
104	LSW1/2	Fabric A	jug	1	1	4		BS			amber pocked glaze; fresh breaks with no joining sherds
104	LSW1/2	Fabric B	jug	1	1	8		rim			reduced fabric; no glaze; wear mark around ext rim edge
104	LSW1/2	Fabric B	jug	1	1	5		BS			spots amber glaze; fresh breaks with no joining sherds
104	LSW1/2	Fabric B	jug	1	1	7		BS			shoulder cordon; pocked/suspension glaze; fresh breaks with no joining sherds
104	LSW1/2	Fabric B	jug	1	1	8	vert painted Fe strip	BS			pocked/splashed glaze

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
104	LSW1/2	Fabric B	jug	1	1	45		BS			rilled tall neck; pocked/splashed glaze
104	LSW1/2	Fabric B	jug	1	1	4		BS			amber glaze
104	LSW1/2	Fabric B	jug ?	1	1	2		BS			
104	LSW1/2	Fabric B	jug/jar	1	1	7		base			
104	LSW1/2	Fabric B	jug/jar	1	1	3		BS			
104	LSW1/2	Fabric B	jug/jar	1	1	5		BS			ext soot; int deposit
104	LSW1/2	Fabric B	small jug	1	1	2		base			wear mark on under basal edge
104	LSW1/2	Fabric B	small jug	1	1	6		rim			inturned rim; Cu mottled amber glaze; ribbed/rilled neck
104	LSW1/2	Fabric B	small jug	2	1	10		rim & BS			inturned rim; Cu mottled amber glaze; rilled neck; fresh breaks with no joining sherds
104	LSW1/2	Fabric B	small jug	2	1	14		BS			ext heavily pocked Cu flecked glaze; fresh breaks with no joining sherds
104	LSW2	Fabric A	small early baluster jug	4	1	69		base & BS		Vessel 3	splayed base; spots amber glaze; fresh breaks no joining sheds
104	LSW2	Fabric A	small jug	1	1	27		BS			foliate handle join or applied hand/leg; misfired Cu mottled glaze
104	LSW2	Fabric A	small jug	1	1	2		BS			Cu glaze
104	LSW2	Fabric B	jug	1	1	4		BS			reduced glaze; fresh breaks with no joining sherds
104	LSW2	Fabric B	large jug	1	1	131		base			soot on base for 10–15mm up wall; unsooted curved shadow - from trivet ?; pressed basal edge sets 2(+)
104	LSW2	Fabric B	large jug	2	1	109		handle			strap handle; amber glaze
104	LSWA		jug	2	1	25		BS			splashed yellow glaze; fresh breaks no joining sheds
104	LSWA		jug	5	1	48	vert Fe painted dec ?	BS			unmatured yellow glaze; neck cordon; fresh breaks no joining sheds
104	MEDLOC	Fabric A	jar	1	1	14		BS			
104	NSP	sandy fabric	jug	1	1	7		BS			

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
104	PSHW2		jar/bowl	2	1	20		base			? ID
105	HUM		jug	1	1	18		BS			ext red slip;
105	LEMS		jar/bowl	1	1	4		BS			
105	LFS		jar	1	1	3		BS			
105	LFS		jar/bowl	1	1	3		BS			soot
105	LSW1/2		jug	1	1	7		BS			spots amber glaze; fresh breaks no joining sherds
105	LSW1/2		jug	1	1	4		BS			
105	LSW1/2		jug	1	1	3		BS			reduced glaze
105	LSW2		jug	1	1	16		base			pressed basal edge sets 1(+);wear mark around base
105	LSW2		jug	1	1	5		BS			overfired/burnt glaze
105	LSW2		jug	1	1	6	applied horseshoe ddec	BS			Cu glaze
105	LSW2		jug	1	1	5		BS			reduced glaze; thin walled
105	LSW2		jug	1	1	3		BS			reduced glaze; thin walled
105	LSW2		jug	1	1	6		BS			Cu glaze; internal deposit
105	LSW2		jug	1	1	7		neck			amber glaze
105	LSW2		jug	2	1	13		BS			reduced glaze; thin walled
105	LSW2		jug	1	1	11		BS			Cu mottled glaze
105	LSW2		jug	2	1	5		BS			pocked reduced glaze
105	LSW2		jug	1	1	5		BS			burnt/misfired glaze
105	LSW2		jug	1	1	3	applied vertical strip	BS			Cu glaze
105	LSW2		jug	1	1	2		BS			Cu glaze
105	LSW2		jug	1	1	17		rim			slightly inturned cuff rim; corrugated neck
105	LSW2		jug	3	1	11		BS			Cu mottled glaze; thin walled
105	LSW2		jug	1	1	6		BS			ext slip; fresh breaks with no joining sherds
105	LSW2		jug	1	1	12		BS			reduced glaze
105	LSW2		large jug	5	1	26		BS			Cu glaze
105	LSW2		pipkin?	2	1	7		BS			soot; very thin walled
105	LSW2		pipkin?	1	1	2		BS			very thin walled; soot; unmaturred glaze

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
105	LSW2	Fabric B	jug	1	1	20		BS			internal deposit
105	LSW2/3		jar/pipkin	1	1	6		BS			soot
105	LSW2/3		jug	4	1	10	applied vertical strips	BS			Cu glaze
105	LSW2/3		jug	1	1	13		BS			Fe flecked reduced glaze
105	LSW2/3		jug	2	1	11		BS			Cu glaze
105	LSW2/3		large jug	1	1	25		base			spaced basal pressings of 1(+);Cu glaze
105	LSW2/3		pipkin	1	1	19		base			untrimmed base; soot
105	LSW2/3		small jug	1	1	7		BS			Cu glaze; part burnt; riled shoulder
105	LSW2/3		small jug	1	1	1		BS			reduced glaze
105	MEDLOC	OX/R/OX sandy & shelly	jar/bowl	2	1	12		base			abundant round to subround quartz & moderate fossil shell
105	PSHW2		jar	1	1	14		BS			ext soot
107	LSW1/2	Fabric B	jar	1	1	21		BS			soot
111	LEMS		jar	1	1	5		BS			ridged shoulder
111	LEMS		jar	1	1	12		BS		Vessel 2	
111	LEMS		jar	1	1	7		BS			ridged shoulder
111	LEMS		jar/bowl	1	1	27		base			soot
111	LEMS		jar/bowl	1	1	14		base			soot int & ext
111	LEMS		jar/bowl	1	1	21		base			base is thin walled; soot on walls & int base
111	LEMS		large jar	1	1	56		base			soot int & ext; wear on basal edge
111	LEMS		large jar	1	1	5		neck			
111	LEMS		large jar/bowl	1	1	11		BS			soot
111	LEMS		large sloping shallow bowl	1	1	97		profile			wheelthrown; soot int & ext
111	LFS		jar/bowl	2	2	3		BS		Sample 1	soot

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
111	LFS		large jar	11	1	286		rim base & BS			late; wheelthrown; ridged shoulder; thin everted rim; soot on lower body & base; fresh breaks with no joining sherds
111	LFS		small jar	2	1	3		BS		Sample 1	
111	LFS		small jar/bowl	3	1	19		base			thin walled; soot
111	LSW1	Fabric A	jug	1	1	2		BS		Sample 1	
111	LSW1	Fabric B	jug	1	1	45		handle			strap handle with pressed edge
111	LSW1	Fabric B	small jug	1	1	1		BS		Sample 1	amber splashed glaze
111	LSW1	Fabric B	small jug	4	1	5		BS		Sample 1	amber splashed glaze
111	LSW1	Fabric B	small jug	3	1	14		BS			amber splashed glaze
111	LSW1/2	Fabric B	jug	1	1	15		BS			burnt pocked/splashed glaze
113	DST	Fabric B	jug ?	1	1	1		BS		Sample 2	ext flake; Cu glaze
113	LEMS		jar	1	1	8		BS		Sample 2	
113	LEMS		jar	4	1	41		BS		Vessel 2	soot ext & part int
113	LEMS		jar	2	1	32		BS			int & ext soot
113	LEMS		jar/bowl	1	1	3		base		Sample 2	soot
113	LEMS		large jar	1	1	35		BS			wheel-turned ?
113	LEMS		large jar/bowl	1	1	6		BS			ext soot
113	LFS		?	1	1	3		base			soot; flake
113	LFS		jar	1	1	6		BS		Sample 2	
113	LFS		jar ?	1	1	11		BS			int soot; ext carbonised deposit
113	LFS		jar/bowl	1	1	8		BS			
113	LFS		jar/bowl	1	1	5		BS			

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
113	LFS		jar/bowl	6	6	11		BS		Sample 2	
113	LFS		jar/bowl	6	6	12		BS		Sample 2	soot
113	LFS		jar/bowl	1	1	6		BS		Sample 2	soot int ext & break
113	LFS		jar/bowl	1	1	4		BS		Sample 2	burnt
113	LFS		small jar/bowl	1	1	16		BS			soot; wheel-turned
115	LSW1/2		jug/jar	1	1	9		BS			rilled shoulder; pocked/late splashed glaze
115	LSW2	Fabric B	small early baluster jug	3	1	17		base & BS		Vessel 3	splayed base
115	ST	Fabric G	small jar	1	1	2		BS			ext soot
116	LFS		jar/bowl	1	1	3		BS			ext soot
116	LSW1	Fabric B	small jug	1	1	2		BS			thin walled; fresh breaks no joining sherds
116	LSW1/2	Fabric B	jug ?	1	1	111		BS			spots yellow glaze
116	LSW2	Fabric B	jug	1	1	10		BS			white slip; fresh breaks with no joining sherds
144	LEMS		jar/bowl	1	1	8		BS			ext soot
178	LEMS		?	1	1	3		BS			soot
178	LEMS		jar ?	1	1	11		BS			soot
178	LEMS		jar ?	1	1	4		BS			overfired/burnt
178	LEMS		large jar	1	1	17		rim		Vessel 1	everted rim with sharp overhang
178	LEMS		large jar	1	1	17		BS			ext soot; internal deposit
178	LFS		small jar	1	1	6		BS			ext soot; int leached surface
178	LSW1/2	Fabric B	jug	2	1	11		rim			transitional inturned/cuff rim; glaze spots ext
178	LSW1/2	Fabric B	jug/jar	1	1	3		BS			soot ext & part int
178	LSW2	Fabric B	jug	1	1	4		base			white slip
178	LSW2	Fabric B	jug	1	1	4		BS			reduced glaze

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
178	LSW2	Fabric B	small jug	2	1	6		BS			reduced glaze
178	LSW2	Fabric B	small jug	1	1	9		BS			thin walled reduced glaze
203	LSW2	Fabric A	small jug	1	1	4		BS			reduced glaze
207	LFS		jar/bowl	1	1	1		BS		Sample 5	soot
207	LFS		small jar ?	1	1	1		BS		Sample 5	
207	LFS		small jar/bowl	1	1	1		BS		Sample 5	soot
221	LFS		jar	1	1	6		BS			
221	LFS		jar	1	1	3		neck		Sample 7	
221	LFS		jar ?	1	1	6		BS			soot
221	LFS		jar ?	1	1	1		BS		Sample 7	ridged shoulder
221	LFS		jar/bowl	5	5	7		BS		Sample 7	soot
221	LFS		large jar/bowl	1	1	23		base			soot on underside
221	LFS		small jar	2	1	1		BS		Sample 7	
221	LFS		small jar	1	1	1		rim		Sample 7	soot
221	LFS		small jar ?	1	1	2		BS		Sample 7	hard fired
221	LFS		small jar/bowl	2	2	2		BS		Sample 7	soot
221	LFS		small jar/bowl	1	1	8		base			
223	LEMS		bowl	1	1	15		rim			everted rim
223	LFS		?	1	1	7		base			soot
223	LFS		?	1	1	5		base			soot
223	LFS		jar	2	1	7		BS			part int & ext soot
223	LFS		jar/bowl	1	1	8		BS			ext soot; int wipe marks

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
223	LFS		small jar	3	1	21		BS			soot
223	LFS		small jar	3	1	44		rim			hollow upright rim; int & ext soot
223	LFS		small jar	1	1	6		rim			hollow everted rim
223	LSW1	Fabric B	jar/bowl	1	1	9		rim			flanged rim; overfired; spots of glaze
223	LSW1	Fabric B	jug	1	1	5		BS			
223	ST	Fabric B	jar/pitcher	1	1	3		BS			glaze
226	LFS		jar ?	1	1	3		BS			
226	LFS		small jar	1	1	4		BS			soot
226	LFS		small jar	1	1	4		rim			thin everted rim
226	LFS		small jar	2	1	4		BS			soot
226	LFS		small jar	1	1	4		BS			soot
226	LFS		small jar ?	1	1	3		BS			soot
226	NSP	sandy fabric	jug	1	1	7		BS			
232	DST	Fabric B/C	jug	1	1	23		base			Cu glaze
232	LFS		jar	1	1	4		BS			soot int & ext
232	LSW1/2	Fabric A	jug	1	1	4		BS			pocked/splashed glaze
232	LSW1/2	Fabric B	jug	3	1	15		BS			burnt; spots of glaze
232	LSW1/2	Fabric B	jug	1	1	4		BS			flake; splashed glaze ?
234	LFS		jar/bowl	1	1	3		BS			soot
234	LSW1/2	Fabric B	jug	1	1	2		BS			burnt; pocked/splashed glaze
235	LFS		jar/bowl	1	1	3		BS			int carbonised deposit
235	LSW1/2	Fabric B	jug	2	1	10		BS			pocked/splashed glaze
239	LFS		jar/bowl	1	1	6		base			
239	LSW2	Fabric B	jug	1	1	11		rim			cuff rim; fresh breaks with no joining sherds
244	LFS		small jar	1	1	19		BS			soot
244	LFS		small jar	1	1	6		rim			everted rim
247	LSW1/2	Fabric B	jug	1	1	3		BS			pocked yellow glaze
258	LFS		?	1	1	7		base			
264	LEMS		large bowl	2	1	28	incised wavy dec on rim edge	rim			soot

context	cname	sub fabric	form type	sherds	vessels	weight	decoration	part	action	ref no	description
264	LFS		small jar	1	1	7		BS			soot; internal deposit
264	LSW1	Fabric B	jug	1	1	3		BS			
264	LSW1/2	Fabric B	jug	1	1	1		BS			glaze spots
264	LSW1/2	Fabric B	jug	1	1	7		BS			splashed amber glaze
264	LSW1/2	Fabric B	small jar/pipkin	1	1	9		base			soot; untrimmed basal edge
264	MEDLOC	Fabric A	large jar	3	1	22		BS			thick walled; soot
273	EMLF		jar	2	1	9		BS	Fabric Type Series	marked 278	soot; light reduced fabric
273	LFS		?	1	1	4		BS		marked 278	burnt
273	LFS		jar ?	2	1	7		BS		marked 278	soot
273	LSW1	Fabric B	jug	1	1	10		BS		marked 278	
273	LSW1	Fabric B	jug	1	1	4		BS		marked 278	burnt
273	LSW1	Fabric B	jug	1	1	5		BS		marked 278	
273	LSWA		jug	1	1	7		BS		marked 278	splashed glaze

Table 8: Catalogue of post-Roman pottery

Appendix 3: Ceramic Building Material

By Jane Young and Zoe Tomlinson

Introduction

A total of 391 fragments of ceramic building material weighing 34.664kg in total were presented for examination. The material was examined both visually and where necessary under x20 binocular microscope and then recorded using locally and nationally agreed codenames. The CLAU medieval and Roman tile type series were consulted for comparative material. The resulting archive (Table 11) was then recorded on an Access database and complies with the guidelines laid out in Slowikowski *et al.* (2001), the Archaeological Ceramic Building Materials Group (2001) and the Lincolnshire County Council's *Archaeological Handbook* (sections 13.4 and 13.5 2009).

Condition

The material is in variable condition with most fragments showing at least small degree of abrasion. Recovered fragments range from large-sized (1052g) to small (1g), however a number of these fragments have freshly broken edges with no retained joining pieces indicating that on deposition they were much larger. A few large fragments in a fairly fresh condition were recovered from culvert [108] in Area 1.

Results

A limited range of ceramic building material comprising local Roman and medieval brick and roof tile was found on the site (Table 9). A small amount of fired clay was also recovered. Most of the tile fragments found on the site are typical of those recovered from previous excavations within the local area.

Codename	Full name	Total fragments	Total weight in grams
FIRED CLAY	fired clay	8	87
GPNR	Glazed peg, nib or ridge	4	378
GRID	Glazed ridge tile	6	607
IMB	Imbrex	1	33
NIB	Nibbed tile	61	7105
PNR	Peg, nib or ridge tile	265	23124
RBRK	Roman brick	10	1290
RID	Unidentified ridge tile	1	114
RTIL	Roman tile	21	431
RTMISC	Roman or post-Roman brick or tile	5	47
TEG	Tegula	9	1448

Table 9: Ceramic material codenames and total quantities by fragment count and weight

Roman tile

Forty-one fragments of Roman tile or brick in 15 fabrics were recovered from the site. The assemblage includes identifiable examples of Imbrex (IMB), Tegula (TEG) and brick (RBRK). The nine Tegula are in Fabrics 3, 5, 8, 14, 29, 49 and 56 and vary between 17mm and 28mm in thickness. Two Tegula flanges present have a Bett's (1986) Type 8 flanges and both tiles have Type C lower cut-outs. The other flange is of the more common Type 31. A single abraded fragment of Imbrex is in Fabric 2. This tile is of 14mm thickness.

The ten bricks are in Fabrics 3, 4, 7, 18, 39, 45 and 53. The measurable pieces vary between 32mm and 40mm. Twenty-one small fragments or flakes come from un-diagnostic Roman tiles (RTIL). A further five fragments may be of Roman or post-Roman date (RTMISC).

Medieval tile

Three hundred and thirty of the fragments found on the site are from medieval flat roof tiles. A further seven fragments are from medieval ridge tiles. The range of fabrics found in this group is quite wide suggesting several builds, although the majority of the tiles are in Fabric 1 (Table 10).

Fabric	GPNR	GRID	NIB	PNR	RID	Totals
Fabric 1	4	1	53	217	1	276
Fabric 1/7	0	5	2	2	0	9
Fabric 1/7 oxid	0	0	1	0	0	1
Fabric 7; oxid	0	0	0	3	0	3
Fabric 15	0	0	3	12	0	15
Fabric 16	0	0	0	8	0	8
Fabric 17	0	0	0	13	0	13
Fabric 18	0	0	0	1	0	1
Fabric 25	0	0	0	1	0	1
Fabric 31	0	0	1	1	0	2
Fabric 35	0	0	0	5	0	5
LSWA	0	0	1	2	0	3
Totals	4	6	61	265	1	337

Table 10: Medieval tile by type and Fabric with fragment count

These fabric types recovered suggest that ceramic tile was in use in the area possibly from the mid/late 12th century through to the late medieval period, but that most of the recovered tile dates to between the late 12th and mid 14th centuries. At least seventeen tiles are of pre-mid 13th century date (Fabrics 7, 1/7 and glazed 1). The assemblage is unusual in that eight tiles with complete widths are present. The Fabric 1 tiles, which were recovered from culvert [108] in Area 1, measure between 195mm and 210mm across. Sixty-one diagnostic suspension nib types are present; most of which can be dated to between the 13th and mid 14th centuries (nib Type 4D). At least three of the nibs are of types that are no longer produced after the mid 13th century (nib Types 2E, 3A and 4E). Four fragments of flat roof tile are glazed (GPNR) and these are likely to date to between the mid/late 12th and mid 13th centuries. Six glazed fragments are from three ridge tiles (GRID) in fabrics 1 and 1/7. One tile is decorated with an applied diagonal crest. Two of these tiles have misfired glazes or have been burnt post-firing. At least two of these tiles are of pre-mid 13th century date. A single unglazed ridge tile fragment is in Fabric 1.

Fired clay

Eight fragments of fired clay were recovered from the site. These pieces were classified using the fabric type series developed for the 2013 investigations (Young 2015), although one new fabric (Fabric 15) has been identified. Six pieces in Fabrics 1, 2 and 9 are un-featured. An abraded fragment in oxidised Fabric 8 is possibly from a small thin kiln bar. The largest piece recovered is in newly identified Fabric 15. This curved flake may be from a large kiln prop or kiln dome.

The site sequence

The material was recovered from thirty-five deposits in three trenches excavated during the excavation. The site has been divided into five phases and the ceramic building material is discussed here by trench using this phasing.

Area 1

Phase 1 ditch [106] produced three fragments representing two tiles found in two fills (fills 107 and 119). Two large fragments come from a Tegula in Lincoln Fabric 3 with a Bett's Type 8 flange and a

Type C lower cut-out. A single fragment from a 28mm thick Tegula in Fabric 56 was recovered from the upper fill of ditch [121] (fill 122).

Phase 2 layers 104 and 132 produced a small mixed group of material. A very abraded flake of fired clay is featureless. Three fragments are of Roman date including a Tegula and a brick. A very abraded un-diagnostic piece is of Roman or post-Roman date. A small fragment from a medieval flat roof tile is probably intrusive in the group.

A small very abraded fragment from an Imbrex was recovered from Phase 3 pit/ditch [143] (fill 144).

In Phase 4 layer 105 produced thirty fragments of tile weighing 2.308kgs in total. Most of the fragments come from flat roof tiles in Fabric 1, but a few tiles are in other fabrics and two tiles are of Roman date. Two of the three nib types present and a glazed tile are of pre-mid 13th century type whilst the Type 4D nib is of 13th to mid 14th century type. A single un-diagnostic Roman fragment was recovered from layer 116. Pit [125] (fill 115) produced two fragments of Roman brick.

Un-phased pit [178] contained a small and very abraded piece of fired clay. Feature [108], described as a Roman tile culvert includes medieval flat roof tile One hundred and one fragments forming twenty-seven tiles and weighing 14.663kgs in total were recovered. The group is entirely composed of flat roof tiles in Fabric 1 and appears to have been formed from a contemporary group of material made at the same workshop. Eight of the tiles have complete widths. Nine nibs present are all of Type 4D. These tiles date to between the 13th and mid 14th centuries.

Area 2

Ditch [212] (fill 213) in Phase 1 produced two small pieces of generic Roman tile and a large fragment of Tegula in Fabric 56 with a Type 8 flange and a Type C lower cut-out.

Phase 2 ditch [208] (fill 209) produced three pieces of Roman brick and an un-diagnostic Roman tile. Two of the bricks are in Fabric 45 suggesting that they may have been from the same build and the other brick is in Fabric 18. A further brick in Fabric 39 and six un-diagnostic Roman tiles were recovered from ditch [210] (fill 211). Tile was recovered from three fills of ditch [216] (fills 217, 218 and 219). The material comprises a brick in Fabric 3 and two un-diagnostic Roman tiles. Linear [210] produced tile from two fills (233 and 234). Primary fill 234 contained two tiny flakes of Roman or post-Roman tiles. A similar part burnt flake was recovered from secondary fill 233.

Pit [206]/[220] in Phase 3 (fills 221, 223 and 226) produced a small group of Roman tile and brick and two pieces of fired clay. One of the fragments of fired clay appears to come from a thin kiln bar whilst the other is probably from a large curved pedestal or kiln dome. Ten fragments from six flat roof tiles of medieval date were recovered from pit [227] (fill 235). The two incomplete nibs present are of pre-mid 13th century moulded type. Small pit or posthole [237] (fill 238) produced a tiny un-featured piece of fired clay and two flakes of un-diagnostic Roman tile. Posthole [265] (fill 266) produced a single tiny flake from a Roman or post-Roman tile.

Phase 3, or 4 pit [263] (fill 264) contained a small mixed group of tile. A single Roman fragment is from a vitrified brick. The five post-Roman pieces come from three medieval flat roof tiles. The two Fabric 1 tiles could potentially date to anywhere between the mid 12th and 14th centuries but the tile in LSWA is of pre-mid 13th century date.

In Phase 4 pit [231] (fill 232) produced ten fragments from six medieval flat roof tiles including one glazed example. These tiles are of probable pre-mid 13th century date. A group of thirty-three fragments of medieval tile was recovered from pit [262] (fills 260 and 261). The group appears to be of mixed date as pre-mid 13th century glazed tiles and 14th century nibs are present in the group. The construction cut for structure [240] (fill 259) produced two fragments of 13th or 14th century flat roof

tile. Fill 258 of the structure itself contained a group of fifty fragments of flat roof tile. Most of the tiles are in Fabric 1 and can only be dated to between the mid/late 12th and 14th centuries, but two oxidised Fabric 7 tiles are of definite pre-mid 13th century date. Demolition layer 273 over this structure contained a group of thirty-eight fragments of tile weighing 2.331kgs. Most of the tiles are in Fabric 1 and the three nibs present are all of the pre-mid 13th century moulded type. The group includes a plain unglazed ridge tile fragment and one glazed example with the edge of an applied crest. The latest tiles could potentially belong to the first half of the 14th century, but the group is more likely to be of early to mid 13th century date. Another demolition layer, 239, produced a large mixed group of fifty-seven fragments weighing a total of .6.096kgs. A small piece of tile is of Roman date, otherwise the group is made up of flat roof tiles in a mixed range of fabrics and a single glazed ridge tile. Most of the fabrics suggest a 13th century date, but the single Fabric 31 tile and a Type 4C nib are of later, probably early to mid 14th century date.

Trench 5

Three flakes of un-featured fired clay were recovered from deposit 544.

Discussion

The ceramic building material recovered from the site is mainly of 13th to 14th century medieval date and typical of types found on other sites in the area. The recovery of some substantial fragments will aid further classification of the Lincoln tile.

Fragments have been discarded with a fully quantified archive in consultation with the local curator. All of the remaining material should be retained for future analysis.

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context	cname	fabric	sub type	frags	weight	action	ref no	description
104	PNR	Fabric 1		1	11	discarded		flat roofer
104	RBRK	LRT Fabric 4		1	37	discarded		flake
104	TEG	LRT Fabric 29		1	43	discarded		18mm
105	GPNR	Fabric 1		1	213			flat roofer; spot reduced glaze on upper
105	NIB	Fabric 1	moulded	1	37	discarded		
105	NIB	Fabric 1	Nib Type 2E	1	29	discarded		
105	NIB	Fabric 1	Nib Type 3A	1	28	discarded		
105	NIB	Fabric 1	Nib Type 4D	1	104			right corner
105	PNR	Fabric 1		1	54	discarded		flat roofer; mortar
105	PNR	Fabric 1		3	773	discarded		flat roofer; same tile; corner; mortar; fresh breaks with no joning frags
105	PNR	Fabric 1		1	34	discarded		flat roofer
105	PNR	Fabric 1		1	109	discarded		flat roofer
105	PNR	Fabric 1		1	117			flat roofer; finger impression
105	PNR	Fabric 1		1	62	discarded		flat roofer; mortar
105	PNR	Fabric 1		1	7	discarded		flake; flat roofer
105	PNR	Fabric 1		1	16	discarded		flat roofer
105	PNR	Fabric 1		1	34	discarded		flat roofer
105	PNR	Fabric 1		1	115	discarded		flat roofer;mortar
105	PNR	Fabric 1		1	16	discarded		flat roofer
105	PNR	Fabric 1		1	26	discarded		flat roofer;fresh breaks no joining frags
105	PNR	Fabric 1		2	20	discarded		varous;flat roofer
105	PNR	Fabric 1		1	17	discarded		flat roofer
105	PNR	Fabric 1		1	3	discarded		flat roofer
105	PNR	Fabric 35		3	264	discarded		various flat roofer;salt surfaced
105	PNR	Fabric 35		1	91	discarded		flat roofer;corner
105	PNR	Fabric 35		1	67	discarded		flat roofer;salt surfaced;mortar
105	RTIL			1	14	discarded		flake;TEG ?
105	TEG	LRT Fabric 5		1	58	discarded		18mm
107	TEG	LRT Fabric 3	Flange Type 8;cut out C	2	476			24mm thick;abraded;knife trimmed side & part underside
108	NIB	Fabric 1	Nib Type 4D	11	1186	Tile Type Series		same tile;width @ 270mm;12-17mm thickness;thumb impression on upper;2x nibmanufacture marks;stacking mark on

context	cname	fabric	sub type	frags	weight	action	ref no	description
								underside;1x untidy side & 1x chamfered side opposite
108	NIB	Fabric 1	Nib Type 4D	1	108	discarded		
108	NIB	Fabric 1	Nib Type 4D	1	190	discarded		right corner;chamfered side
108	NIB	Fabric 1	Nib Type 4D	6	314	discarded		2x nib;left corner;untidy edge
108	NIB	Fabric 1	Nib Type 4D	3	397	discarded		1x nib;right corner;chamfered edge
108	NIB	Fabric 1	Nib Type 4D	5	844			poorly executed nib;2x nib;width @ 200mm;12-16mm thick;chamfered edge;pressing on upper edge;mortar
108	NIB	Fabric 1	Nib Type 4D	9	1095			same tile;width @ 250mm;2x nib;variable thickness 14-16mm;poorly finished with untidy edges
108	NIB	Fabric 1	Nib Type 4D	3	743			same tile;width @ 230mm;12-17mm thickness;2x nib;finger pressing on side
108	NIB	Fabric 1	Nib Type 4D	2	744			same tile;width @ 200mm;12-20mm thickness;tile thinner at nib end;2x nib
108	PNR	Fabric 1		4	482	discarded		flat roofer;same tile
108	PNR	Fabric 1		4	1079			flat roofer;width @ 195mm;17mm thick;thumb pressing on upper;2x lower corner;1x chamfered edge & 1x partial
108	PNR	Fabric 1		1	1052			flat roofer;width @ 200mm;18mm thick;2x lower corner;thumb impression on bedded side;chamfered side
108	PNR	Fabric 1		1	56	discarded		Flat roofer ?
108	PNR	Fabric 1		3	251	discarded		flat roofer;same tile;1x lower right corner;chamfered edge
108	PNR	Fabric 1		1	233	discarded		flat roofer;lower left corner
108	PNR	Fabric 1		7	361	discarded		flat roofer;same tile;lower left corner;untidy edge;edge finger impression
108	PNR	Fabric 1		7	802	discarded		flat roofer;same tile;lower right corner;chamfered edge;edge thumb impression
108	PNR	Fabric 1		2	311	discarded		flat roofer;same tile;lower right corner
108	PNR	Fabric 1		4	599			flat roofer;same tile;lower right corner;? Spot glaze;thumb & finger impressions;knife mark on edge
108	PNR	Fabric 1		1	67	discarded		flat roofer;spalled flake

context	cname	fabric	sub type	frags	weight	action	ref no	description
108	PNR	Fabric 1		8	1361	6x discarded		flat roofer;width @ 250mm;15-19mm thick;2x lower corners;thumb impression on upper;
108	PNR	Fabric 1		2	89	discarded		flat roofer;same tile
108	PNR	Fabric 1		5	200	discarded		flat roofer;various
108	PNR	Fabric 1		3	353	discarded		flat roofer;same tile
108	PNR	Fabric 1		4	392	discarded		flat roofer;same tile
108	PNR	Fabric 1		2	862			flat roofer;width @ 210mm;15-17mm thick;2x lower corner;chamfered edge;thumb impression
108	PNR	Fabric 1		1	492	discarded		flat roofer;lower right corner
115	RBRK	LRT Fabric 4		1	39	discarded		flake
115	RBRK	LRT Fabric 53		1	41	discarded		flake
116	RTIL			1	13	discarded		very abraded;18mm
119	RTIL			1	11	discarded		very abraded;16mm
122	TEG	LRT Fabric 56		1	78	discarded		28mm
132	FIRE CLAY	LINP 13 Fabric 2	unfeatured	1	9			flake;very abraded
132	RTIL			1	17	discarded		flake;part nife trimmed
132	RTMISC			1	12	discarded		very abraded
144	IMB	LRT Fabric 2		1	33	discarded		very abraded;14mm
178	FIRE CLAY	LINP 13 Fabric 2	unfeatured	1	9			very abraded;veg marked;reduced core
209	RBRK	LRT Fabric 18		1	215	discarded		40mm;part knife trimmed
209	RBRK	LRT Fabric 45		1	144	discarded		32mm
209	RBRK	LRT Fabric 45		1	178			poss impression on upper
209	RTIL			1	75	discarded		flake
211	RBRK	LRT Fabric 39		1	278			35mm;soot
211	RTIL			1	9	discarded		flake
211	RTIL			1	40	discarded		flake
211	RTIL			3	22	discarded		various flakes
211	RTIL	LRT Fabric 66		1	22			
213	RTIL			1	8	discarded		flake
213	RTIL			1	3	discarded	Sample 3	flake

context	cname	fabric	sub type	frags	weight	action	ref no	description
213	TEG	LRT Fabric 56	Flange Type 8;cut out C	1	212			abraded
217	RTIL			1	3	discarded		near vitrified flake
218	RBRK	LRT Fabric 3		1	83	discarded		flake
219	RTIL			1	3	discarded		15mm
221	RBRK	LRT Fabric 7		1	185			38mm;knife trimmed underside;curved signature of 2(+)
221	RTIL			1	2	discarded	Sample 7	flake
221	RTIL			1	138	discarded		upper flake
221	RTIL			1	39	discarded		flake
221	TEG	LRT Fabric 49		1	229			20mm;abraded
221	TEG	LRT Fabric 8		1	79	discarded		25mm
223	FIRED CLAY	LINP 13 Fabric 8	kiln bar ?	1	41			abraded;reduced core;poss small thin bar;3x flat each at roughly right angles;35mm across one face;part burnt
226	FIRED CLAY	LINP 15 Fabric 10	prop/dome ?	1	18			curved flake;reduced core thin oxid surfaces;abraded
226	TEG	LRT Fabric 14	Flange Type 31	1	273			17mm abraded
232	GPNR	Fabric1		1	45			spots amber glaze;flat roofer/GRID;15mm
232	PNR	Fabric1		3	162	discarded		same tile;mortar;fresh breaks no joining frags
232	PNR	Fabric1		3	184	discarded		same tile;1x corner;fresh breaks no joining frags
232	PNR	Fabric1		1	135	discarded		flat roofer
232	PNR	Fabric1		1	52	discarded		flat roofer;mortar incl break
232	PNR	Fabric1/7		1	72	discarded		flat roofer;mortar
233	RTMISC			1	29	discarded		part sintered
234	RTMISC			2	5	discarded		various flakes
235	NIB	Fabric 15	moulded	1	53	discarded		left corner
235	NIB	Fabric 15	moulded	2	51	discarded		distorted nib;fresh breaks with no joning frags
235	PNR	Fabric 1		2	204	discarded		same tile;flat roofer;mortar
235	PNR	Fabric 1		2	119	discarded		same tile;flat roofer;mortar;1x corner;;fresh breaks no joining frags
235	PNR	Fabric 15		2	79	discarded		flat roofer;same tile;mortar;fresh breaks with no joning frags

context	cname	fabric	sub type	frags	weight	action	ref no	description
235	PNR	Fabric 17		1	66	discarded		flat roofer;mortar
238	FIRE CLAY	LINP 13 Fabric 9	unfeatured	1	2			very abraded flake
238	RTIL			2	8	discarded		same tile;flakes
239	GRID	Fabric 1/7	diagonal sharp crest	3	387			same tile;burnt/misfired Fe flecked reduced glaze;mortar
239	NIB	Fabric 1	Nib Type 4C	1	64	discarded		left corner
239	NIB	Fabric 1	Nib Type 4D	1	83	discarded		
239	NIB	Fabric 1/7	applied & cut nib	2	339			same tile;left corner;vitrified at corner;mortar incl break;mishapen nib
239	NIB	Fabric 1/7 oxid	moulded ?	1	96			finger pressings;? Cloth marks
239	PNR	Fabric 1		3	287	discarded		various;flat roofer;fresh breaks with no joning frags
239	PNR	Fabric 1		2	120	discarded		various flat roofer;corner;fresh breaks with no joning frags;mortar incl break
239	PNR	Fabric 1		1	112	discarded		flat roofer;mortar
239	PNR	Fabric 1		5	192	discarded		various flat roofer
239	PNR	Fabric 1		1	124	discarded		flat roofer;corner
239	PNR	Fabric 1		1	50	discarded		flat roofer;corner;fresh breaks with no joning frags
239	PNR	Fabric 1		2	172	discarded		various;flat roofer;fresh breaks with no joning frags;mortar
239	PNR	Fabric 1		2	351	discarded		same tile;flat roofer;corner;mortar
239	PNR	Fabric 1		3	219	discarded		various flat roofer;corner;mortar incl break
239	PNR	Fabric 1/7		1	26	discarded		flat roofer;thick
239	PNR	Fabric 15		1	78	discarded		flat roofer
239	PNR	Fabric 15		1	313	discarded		flat roofer;corner;mortar;fresh breaks with no joning frags
239	PNR	Fabric 15		1	158	discarded		various flat roofer;mortar incl break
239	PNR	Fabric 15		1	42	discarded		flat roofer;fresh breaks with no joning frags
239	PNR	Fabric 15		2	284	discarded		flat roofer;same tile;mortar;fresh breaks with no joning frags
239	PNR	Fabric 15		1	126	discarded		flat roofer;corner;abraded;mortar incl break
239	PNR	Fabric 15		2	206	discarded		various flat roofer;mortar
239	PNR	Fabric 16		1	71	discarded		flat roofer;mortar incl breaks
239	PNR	Fabric 16		1	219	discarded		flat roofer;mortar

context	cname	fabric	sub type	frags	weight	action	ref no	description
239	PNR	Fabric 16		1	96	discarded		flat roofer
239	PNR	Fabric 16		1	197	discarded		flat roofer;corner
239	PNR	Fabric 16		1	79	discarded		flat roofer;corner;part pressing
239	PNR	Fabric 16		3	262	discarded		various flat roofer;mortar;fresh breaks with no joning frags
239	PNR	Fabric 17		2	335	discarded		flat roofer;same tile;mortar
239	PNR	Fabric 17		2	269	discarded		flat roofer;same tile;corner
239	PNR	Fabric 17		2	322	discarded		flat roofer;same tile;mortar;corner
239	PNR	Fabric 18		1	90	discarded		flat roofer;corner;fresh breaks with no joning frags
239	PNR	Fabric 31		1	172			flat roofer;finger struck
239	PNR	Fabric 7;oxid		1	84	discarded		flat roofer;mortar
239	PNR	LSWA		1	67	discarded		flat roofer
239	RTIL			1	4	discarded		flake
258	GRID	Fabric 1/7		2	153			same tile;Fe flecked reduced glaze;mortar
258	PNR	Fabric 1		11	553	discarded		various flat roofer;corner;fresh breaks with no joning frags;mortar
258	PNR	Fabric 1		2	136	discarded		various flat roofer;mortar incl break
258	PNR	Fabric 1		3	286	discarded		various flat roofer;corner;fresh breaks with no joning frags
258	PNR	Fabric 1		8	511	discarded		various flat roofer;corner;mortar
258	PNR	Fabric 1		1	123			narrow tile;width at 110mm;1x cut edge;mortar
258	PNR	Fabric 1		1	146	discarded		flat roofer;corner;mortar
258	PNR	Fabric 1		3	193	discarded		various flat roofer;corner;mortar;corner
258	PNR	Fabric 1		14	113	discarded		various flakes & small frags;flat roofer;some mortar
258	PNR	Fabric 17		3	245	discarded		various flat roofer
258	PNR	Fabric 7;oxid		1	135	discarded		flat roofer;thick
258	PNR	Fabric 7;oxid		1	143	discarded		flat roofer;corner
259	PNR	Fabric 1		1	68	discarded		flat roofer;corner;mortar incl break
259	PNR	Fabric 17		1	134	discarded		flat roofer;mortar incl break;fresh breaks with no joning frags
260	GPNR	Fabric 1		1	96			flat roofer;corner;mortar;thick Fe flecked reduced glaze
260	NIB	Fabric 1	Nib Type 4C	1	98	discarded		part pressing
260	NIB	Fabric 1	Nib Type 4D	1	83	discarded		

context	cname	fabric	sub type	frags	weight	action	ref no	description
260	NIB	Fabric 1	Nib Type 4D/E	1	146	discarded		left corner;mortar
260	NIB	Fabric 1	odd applied cut back	1	102			left corner
260	NIB	Fabric 31	applied nib	1	72	discarded		broken nib
260	PNR	Fabric 1		1	18	discarded		flat roofer;corner
260	PNR	Fabric 1		7	260	discarded		flat roofer;various;mortar
260	PNR	Fabric 1		1	102	discarded		flat roofer;thick
260	PNR	Fabric 1		1	43	discarded		flat roofer;corner;mortar
260	PNR	Fabric 1		3	301	discarded		flat roofer;various;mortar incl break
261	GPNR	Fabric 1		1	24			flat roofer;thick Fe flecked glaze;fresh breaks with no joning frags
261	PNR	Fabric 1		5	50	discarded		flat roofer;various;mortar
261	PNR	Fabric 1		2	122	discarded		flat roofer;various
261	PNR	Fabric 1		5	178	discarded		flat roofer;various;mortar
261	PNR	Fabric 1		1	23	discarded		flat roofer;mortar incl break
264	PNR	Fabric 1		2	36	discarded		flat roofer;various;red slip
264	PNR	Fabric 1		2	30	discarded		flat roofer;various;mortar
264	PNR	LSWA		1	50	discarded		flat roofer
264	RBRK	vitrified		1	90	discarded		flake
266	RTMISC			1	1	discarded		tiny flake
273	GRID	Fabric 1		1	67		marked 278	misfired/burnt amber glaze;no crest present but diagonal thumb groove suggests there was
273	NIB	Fabric 1	moulded	1	31	discarded		left corner;mortar incl break
273	NIB	Fabric 1	Nib Type 4E	1	49	discarded		
273	NIB	LSWA	moulded	1	19	discarded		
273	PNR	Fabric 1		2	55	discarded		flat roofer;same tile
273	PNR	Fabric 1		1	28		marked 278	flat roofer;pressing
273	PNR	Fabric 1		2	197	discarded	marked 278	flat roofer;same tile;mortar;fresh breaks with no joning frags
273	PNR	Fabric 1		2	335	discarded	marked 278	flat roofer;same tile;mortar
273	PNR	Fabric 1		1	20	discarded	marked 278	flat roofer;mortar
273	PNR	Fabric 1		1	119			flat roofer;small paw print on upper;red slip ?

context	cname	fabric	sub type	frags	weight	action	ref no	description
273	PNR	Fabric 1		1	102	discarded		flat roofer;thick
273	PNR	Fabric 1		3	212	discarded		flat roofer;same tile;mortar
273	PNR	Fabric 1		2	66	discarded		flat roofer;same tile;mortar
273	PNR	Fabric 1		1	69	discarded		flat roofer;corner
273	PNR	Fabric 1		1	81	discarded		flat roofer;corner;mortar
273	PNR	Fabric 1		2	126	discarded		flat roofer;various;mortar
273	PNR	Fabric 1		2	57	discarded		flat roofer;various
273	PNR	Fabric 1		8	54	discarded		flat roofer;various;flakes incl mortar
273	PNR	Fabric 1		3	131	discarded		flat roofer;same tile;mortar
273	PNR	Fabric 15		1	205	discarded	marked 278	flat roofer;orange slip
273	PNR	Fabric 17		2	121	discarded	marked 278	flat roofer;same tile;mortar;corner;fresh breaks with no joning frags
273	PNR	Fabric 25		1	73	discarded		flat roofer
273	RID	Fabric 1		1	114		marked 278	part spalled ext;low fired;mortar
544	FIRE CLAY	LINP 13 Fabric 1	unfeatured	3	8			ext flakes;? Or low fired pot

Table 11: Catalogue of ceramic building material

Appendix 4: Other Artefacts

By Mike Wood

Introduction

A mixed assemblage of metalwork, coins, stone, glass, worked bone and fuel waste was recovered during excavation on land at 195 and 197 Newport in Lincoln.

Methodology

The material was counted and weighed in grams, then examined visually to identify any diagnostic pieces and the overall condition of the assemblage. A full catalogue of all material is at the end of the report, with a summary of the significant artefacts detailed below.

Condition

Animal bone was generally in excellent condition, with minimal wear and will require no conservation. Similarly worked stone is also in very good condition. The metalwork and glass has suffered more. Ironwork was almost always heavily corroded and encrusted with x-rays being required to identify artefacts. Copper alloy items including the coins, were in better condition, and while the Roman glass was generally stable the medieval window glass is badly degraded and crystalline and may require stabilisation.

Results

Worked bone

A single worked bone object was recovered from context 112 and represents the tip from a polished hairpin of uncertain date. The context has been phased to the medieval period; however the pin would also fit a Roman date.

Worked stone

Two worked stone artefacts were collected comprising a fragment of limestone roofing tile from a medieval context and a spindle whorl (SF 24) of uncertain provenance. The roofing tile of little interest beyond noting its presence, while the spindle whorl is a plano-convex form composed of either siltstone or mudstone with circle and dot decorations.

Spindle whorls in this form, but formed from limestone, are known from excavations at Flaxengate (Mann 1982, 23, f21, no.188) and have been found in 10th century contexts although dot and circle designs are also known from late Saxon examples and the form of whorls remains relatively constant throughout the medieval period. Siltstone/mudstone derived spindle whorls appear to be the most common occurrence on medieval sites, presumably due to the widely occurring material compared to ones formed of Jurassic limestone or chalk (Egan 1998, 258).

Glass

Only two examples of glass were recovered during the project and comprise SF 16, a fragment of medieval window glass and a small fragment of Roman bottle glass recovered from context 107, which has been phased to the mid-late 2nd century AD.

Coins

Two Roman coins were collected from site, a 3rd century radiate from context 127, which has been phased to the 1st–2nd century and a very worn nummus of Constantine c.307–318 AD from context 230, which appears to be a residual find in a 12th–13th century phased deposit. Both coins are likely out of their original contexts and are of limited value to assisting with any discussion of the site narrative.

Copper alloy objects

The copper alloy assemblage comprised eleven objects, and were predominantly medieval in date.

The only positively identified Roman find was a fragment of spring pin from a fibula brooch was recovered from deposit 211, phased to the 3rd century or later.

Medieval artefacts included a variety of dress accessories included buckles, a strap-end and a brooch as well as a rumbler bell, mount and a chain. Buckle plates included a die stamped example similar to pieces known from London, Norwich and Suffolk (Egan and Pritchard 1991, 111–112) and can be dated to the 12th–13th century although was recovered from a Roman phased context. Undecorated forms were also recovered from context 235 and 124 both phased to the mid-12th–14th and 13th–14th centuries respectively.

A circular brooch of a form with a bevelled frame and two collets was recovered from context 105 and is similar to examples from London recorded in 12th–mid 13th century contexts (Egan and Pritchard 1991, 248) and was found here in a deposit phased to the 13th–14th century. The brooch appears to retain traces of calcium carbonate in the collet settings and possibly very small fragments of coloured glass. A single cast rumbler bell [insert plate ref] was also recovered from deposit 105 and conforms to examples from London made in the 14th century (Egan and Pritchard 1991, 340).

One strap-end was found in context 235, phased to the mid 12th–13th century [insert plate ref]. The strap-end is of a composite form with forked terminal and a protruding knob and would similar examples from London have been dated to the mid 13th–mid 15th century date (Egan and Pritchard 1991, 140–141).

A decorative mount was recovered from deposit 104, which has been phased to the 3rd century or later. The mount has an incised design similar to a zoomorphic early medieval objects and is likely to date from this period or later.

A fragment of probable chain with traces of gilt was recovered from subsoil 102. Chains were used for various reasons including as dress accessories and this is likely of medieval date (Egan and Pritchard 1991, 318)

Lead and lead alloy objects

Lead objects were collected from a 3rd century or later context (104), and 13–14th century contexts (124, 232 and 239). Of these objects the Roman context produced an undiagnostic melted spill, while the medieval finds included an eyelet, weight and a chape. The weight is a rough conical shape with the remains of a now lost iron attachment at the apex and is fairly undiagnostic, while the chape and eyelet are both decorated and of more interest.

The eyelet retains a cross design and such forms were typical of being attached to buckle pin holes or lace holes for reinforcement of medieval clothing or dress accessories (Egan and Pritchard 1991, 227–228).

The chape is relatively small and probably was once attached to a knife sheath with no traces of any associated material remaining. The design comprises linear transverse lines and dots and would not be out of place in an early medieval date onwards.

Clay tobacco pipe

A single clay tobacco pipe stem was recovered from deposit 104. The stem can be broadly dated to the 18th century (Mann 1977) and offers little opportunity for further comment.

Iron objects

The iron assemblage is dominated by heavily corroded and largely undiagnostic fragments of bars, plates, nails and holdfasts of uncertain date.

The most identifiable object was a whittle tang knife [insert plate ref], in poor condition, but retaining traces of mineralised wood or bone around the tang as well as mineralised fibres mixed into the corrosion products possibly indicating the knife was sheaved or lay against clothing. Such knives have a long history and are difficult to date with precision (Ottaway, P in Griffiths, Philpott and Egan, 2007, 195).

Slag and fuel waste

Metalworking evidence was limited to a small assemblage of iron slags and fuel ash, all derived from Roman phased contexts. Hearth slags were recovered from 211, 2177 and 233 whilst smithing slag was also recorded from context 209. This is a limited assemblage and offers little opportunity for further discussion bar noting its presence.

Discussion

The assemblage is largely dominated by medieval artefacts with very few identifiable Roman finds submitted for study despite the proximity of known Roman remains within and around the site, including previous work at the nearby Coliseum site (AAL 2016).

Roman finds were restricted to two worn and abraded 3rd and 4th century AD coins, a fragment of glass bottle and the spring from a bow brooch. Such finds may suggest residual artefacts rather than primary deposition, with all showing signs of wear and abrasion. It should be noted that although the nearby Coliseum project produced more Roman finds than found here, the quantity of artefacts was still rather low and this may in fact represent a broad trend for this part of Roman Newport, perhaps due to landscaping and truncation of the Roman landscape by later development.

The medieval assemblage was larger and includes a variety of personal dress accessories including buckle frames, a strap end, a lead alloy eyelet and a brooch as well as more functional items. The spindle whorl is the earliest dated of the medieval finds and similar examples from Lincoln have been dated to the 10th century, which suggests some potential Saxo-Norman presence within the site. The remainder of the assemblage could however fit a broad 12th-15th century date when the area is known to be occupied.

Significance of the Data

The assemblage is of local significance reflecting a lower level of Roman finds to the nearby Coliseum project with the additional medieval evidence that was not present on that site. This is a relatively small group and while it adds to the overall picture of this part of Roman and Medieval Lincoln, there is insufficient data to draw anything but broad conclusions.

References

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Context	SF	Object	Measurements	Date	No.	Wt (g)	Comments
112	9	pin	53.92x8.72x6.28	undated	1	2.2	Tip from a bone pin. The bone has been polished but is quite abraded. Without the missing head, dating the item is not possible beyond either a probable Roman or Medieval date.

Table 12: Worked bone

Context	SF	Material	Object	Measurements	Date	No.	Wt (g)	Comments
0	24	Siltstone/mudstone	spindle whorl	35.25x35.28x20.63	medieval	1	23.3	Siltstone/mudstone plano-convex spindle whorl, polished with a centrally drilled aperture 10mm in diameter. Decorated on both the upper and lower surfaces with four dot and circle designs evenly spaced.
239		limestone	tile	135.96x80.08x12.42	undated	1	220.6	Fragment of limestone roof tile.

Table 13: Stone

Context	SF	Object	Measurements	Date	No.	Wt (g)	Comments
0	16	window glass	-	medieval	15	14.6	Degraded fragments of window glass. The glass has become quite crystalline with a heavy patina. Conservation is recommended.
107		bottle	24.97x10.25x8.94	Roman	1	5.3	Fragment from the lip of a green bottle.

Table 14: Glass

Context	SF	Material	Diameter (mm)	Wt (g)	Rev	Mint	Obv	Date	Comment
127	30	Cu alloy	17.6	1	Fides with standards?	illegible	Radiate	c.260-296	Worn and corroded radiate.
230	12	Cu alloy	19.4	2	Sol	illegible	Constantine	c.307-318	very worn

Table 15: Coins

Context	SF	Material	Object	Measurements	Date	No.	Wt (g)	Comments
102	1	Cu alloy	chain?	15.80x2.45	medieval	1	1.7	Circular loop (au gilded) with both terminals crossing and appearing to be forming a second loop as an s-shape. Possibly part of chain loop
104	2	Cu alloy	buckle plate	41.9x21.75x4.83	12th-13th	1	5.8	Rectangular plate die-stamped with lion passant. Retains D-shaped buckle but lacks the pin, spacer and opposing plate.
104	4	Pb	melted spill	-	undated	1	2.34	melted lead spill.
104	3	Cu alloy	Mount	63.62x11.55x4.82	medieval	1	13.9	D-profiled slightly tapering strip decorated with a discrete incised design similar to zoomorphic designs noted on early medieval brooches. There is one rivet hole (1.75mm diameter) present adjacent to the decorated area. The start

Context	SF	Material	Object	Measurements	Date	No.	Wt (g)	Comments
								of a second perforation is present at the slightly thicker terminal. The thicker terminal has been bent and fractured possibly when forcibly removed. The narrower terminal curves and has been snapped.
104		Fe	lumps	-	undated	3	61	Highly corroded ferric objects. One resembles the shaft of a large ail or bolt, the other two are too corroded to identify.
105	6	Cu alloy	brooch	26.64x27.17x5.96	M12-M13	1	3.7	Circular brooch, bevelled frame with two collets, round topped, possibly retaining traces of glass?
105	5	Cu alloy	bell	22.46x24.65x8.57	14th-15th	1	9.4	Flattened cast rumbler bell, top of bell and loop (cast as one) only.
107		Fe	plate	54.71x23.95x13.08	undated	1	33.8	sub-rectangular plate. Heavily corroded.
111	10	Fe	Knife	152x25.37x6.39	medieval	2	68.8	Massively corroded whittle tang knife. There are traces of mineralised wood/bone around the tang, while mineralised fibres are present within the corrosion products.
119	19	Fe	Nail	31.00x19.88x19.9	undated	1	13.2	corroded square shafted nail with large round head. Fracturing.
122	18	Fe	Undiag	-	Undated	1	40.7	Highly corroded lump
124	22	Fe	Nail	82.1x18.1x17.9	Undated	1	18.6	square shafted nail with slightly domed head.
124	23	Cu alloy	buckle	16.87x13.56x3.27	m13-16th	1	1.8	Small D-shaped buckle missing plate and pin.
124	21	Pb alloy	eyelet	15.9x16.22x1.19	medieval	1	1.5	thin pb disc with central perforation. One side is decorated with a cross, the reverse is undecorated.
209		slag	-	-	undated	1	6	Fragment of smithing slag, retains adhered natural soil on one surface and traces of charcoal impressions on the other side.
211	25	Fe	Nail	26.17x20.5x24.5	undated	1	11.6	Massively corroded nail head
211	29	Cu alloy	spring	35.82x19.36x4.54	RB	1	1.8	Spring pin formed from single piece of drawn wire. Probably from a fibula brooch.
211		Slag	-	-	undated	2	70	dense hearth slags.
212	17	Fe	rod	49.56x11.87x7.28	undated	1	9.3	Rod thickened into a rounded head at each terminal
217	26	Fe	plate	38.86x31.13x10.92	undated	1	19.2	corroded plate
217		Fe	Undiag		undated	3	18.4	corroded lumps
217	27	Cu alloy	fragment	12.35x5.38x2.00	undated	1	1.3	fragment of Cu alloy strip
217		slag	-	-	undated	1	154	concave-convex hearth slag cake
217		slag	-	-	undated	6	85	hearth slags

Context	SF	Material	Object	Measurements	Date	No.	Wt (g)	Comments
217		Fe	bar	16.2x15.66x19.9	undated	1	42	corroded section of bar.
232	13	Pb	weight	16.56x19.73x15.15	medieval	1	23.3	roughly conical weight with traces of iron attachment at base.
233		Slag	fuel ash	-	undated	1	7	Vesicular fuel ash
233		Slag	-	-	undated	4	282	hearth slags
234		Fe	bar	39.19x4.37x10.5	undated	1	4	corroded bar
235	15	Cu alloy	Strap-end	46.64x16.86x3.06	M13-M15	1	3	Circular strap end with protruding knob and forked terminals, part of a composite form.
235	14	Cu alloy	buckle plate	35.84x20.49x0.66	medieval	1	2.8	Rectangular plate with a semi-circular terminal. Retains three rivet holes, two are voids, one retains the rivet (Cu alloy). Part of a composite buckle plate.
235	32	Cu alloy	strip	38.21x10.57x1.04	undated	1	3	strip of gun-metal.
239	11	Pb	chape	51.37x8.04x21.1	medieval	1	16	Triangular chape decorated with a band around the top of the chape where it would have been fixed to the scabbard/sheath. The band is decorated with transverse lines and dots in triangles.
247		Fe	plate	38.3x27.7x11.9	undated	1	12.5	Highly corroded roughly triangular plate with two fused studs
258	31	Fe	Nail	36.8x13.5x8.3	undated	2	8.3	corroded shaft and head.
273		Fe	holdfast	31.82x31.66x12.57	undated	1	48	massively corroded holdfast

Table 16: Metalwork and slags

Appendix 5: Mortar and Plaster

By Graham Morgan

- 211: Lump of coarse sandy mortar with oolitic limestone pieces.
- 239: a] Pale buff sandy mortar or plaster with oolites, about 15 to 22mm thick, with impressions on some edges, probably from between laths. Both faces are smoothed, suggesting an infill plaster.
- b] Pale grey sandy mortar with some lime or chalk pieces, about 16mm thick, with a white lime coating, 0.5mm thick. This is probably a wall plaster.
- 239: Unmarked - is a piece of oolitic limestone.
- 260: Lump of friable coarse sandy plaster with lime lumps.

None of this collection would appear to be Roman, it is more likely to be later medieval.

Aqueduct samples

Samples were taken from a large fragment of the Lincoln aqueduct and analysed according to the methods of BS 4551. The mortar was seen to be composed of crushed brick or tile, ranging in colour from yellow to orange, red and black, with small lime and or chalk pieces. Samples were dissolved in dilute hydrochloric acid and the residues washed free of acid and dried. It is of note here that the solution actually gelled, due to the very high amounts of free silica present, a typical result for hydraulic lime mortars. The gelling causes the mortar to dissolve very slowly, taking nearly three weeks in this case. The residues were sieved and the results plotted on a graph (Chart 1). The results were compared with the previous analyses carried out on a complete section of the aqueduct (Chart 2). It can be seen that the fine tile and sand – 0.85mm – is the same in both cases, pointing to a very similar source.

The coarser aggregates are mostly crushed brick or tile, of varying colour as stated above. From 0.85 mm round to sub-angular quartz sand occurs, almost certainly being derived from the sand clay used to make the tiles. The very finest component is composed mostly of amorphous silica and tile dust. It is the tile or brick dust, which gives the mortar its hydraulic properties, to give the typical *opus signinum*, which is coloured according to the colour of the brick or tile used.

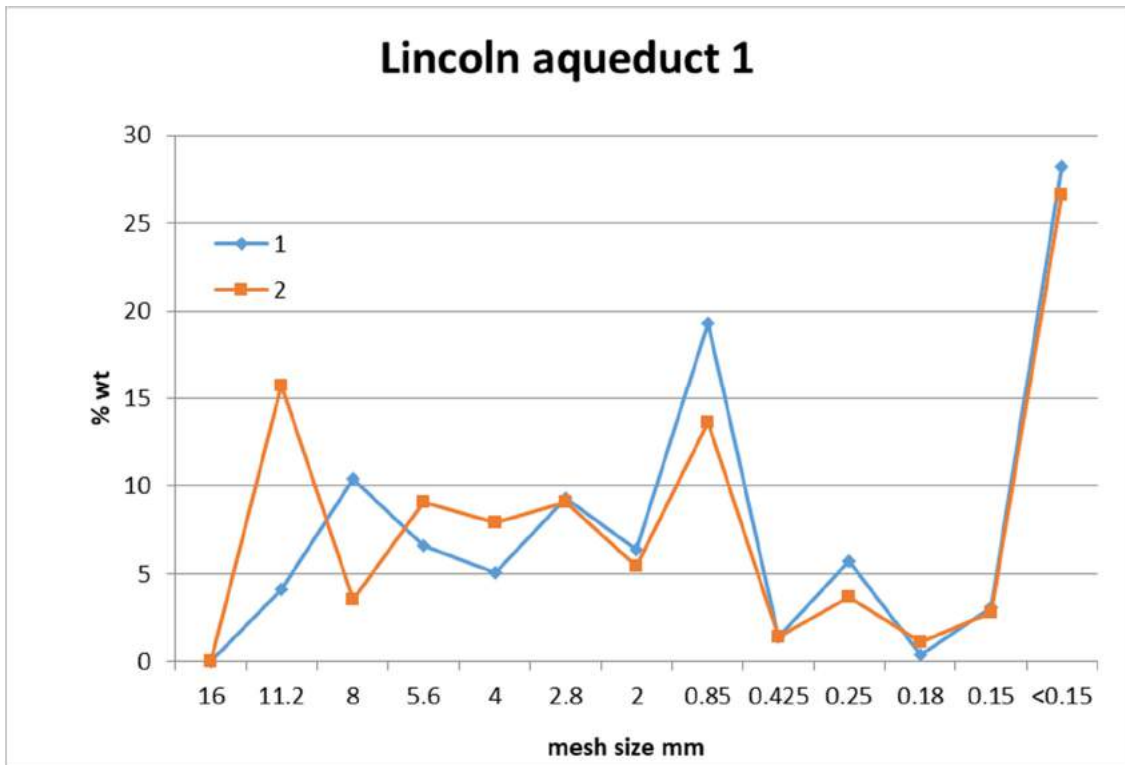


Chart 1: Plot of residues

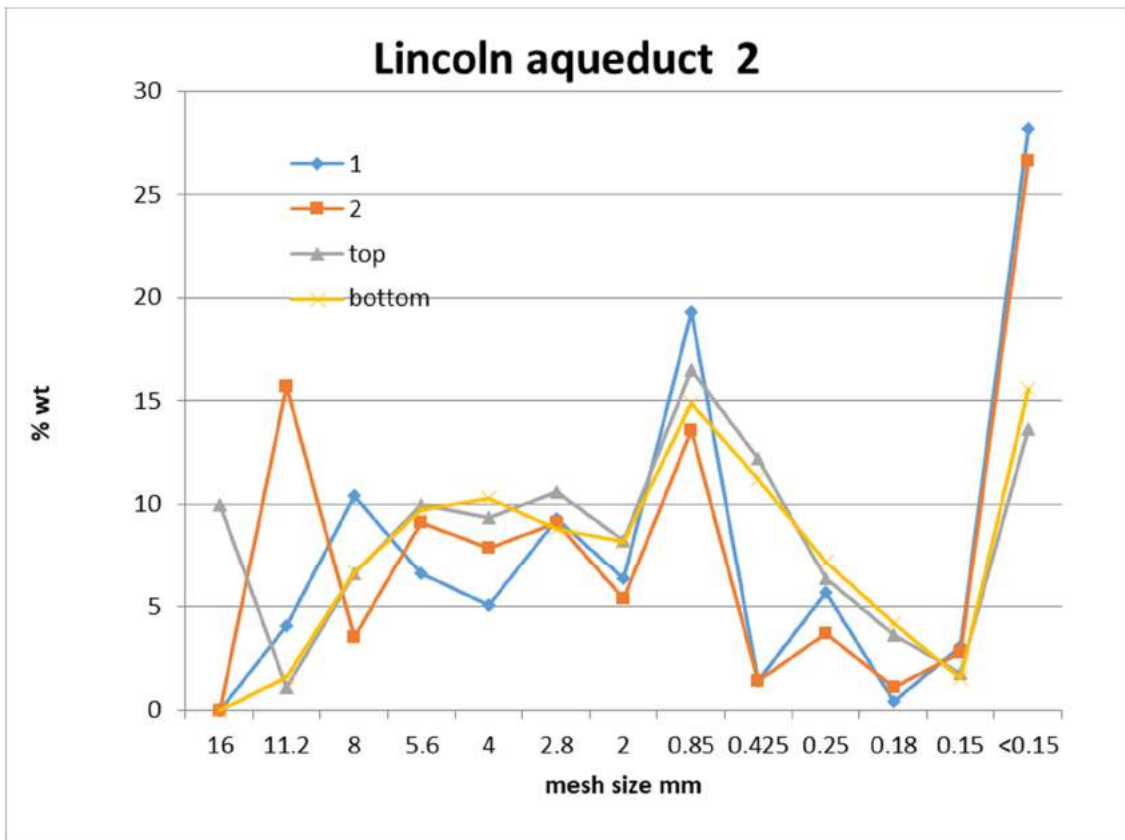


Chart 2: Comparison of residues with previous samples from the aqueduct



Plate 10: Section of reused aqueduct

This previous aqueduct sample was excavated by John Wachter probably in 1977 and could well be from the line of the aqueduct found in Nettleham Road, particularly Nos 101 and 95.

The section is, 330mm high, 400mm wide. The holes in the bottom are where samples were removed for strength tests. The left hand break is just about on the join between the top and the bottom mortar layers.

Reference

Morgan. G.C. 1992 Romano – British Mortar and Plaster - <http://hdl.handle.net/2381/27695>

Appendix 6: Human Remains

By Natasha Powers

Introduction

A single piece of human bone was recovered during a programme of excavation, followed by archaeological monitoring in advance of and during groundworks for a residential development. The development was located in an area of known archaeological significance, immediately to the west of Newport and 750m north of Newport Arch. Archaeological investigation of the adjacent site, revealed eight Roman inhumations, a cremation burial, and a square stone structure interpreted as a possible mausoleum (AAL 2015).

The fragment of human bone was recovered from within a layer of rubble, 105, interpreted as a possible disturbed surface.

Methodology

The human remains were subject to visual examination by the author to examine demographic and palaeopathological evidence. Age was determined from epiphyseal fusion data (Scheuer and Black 2000).

Results

The remains consisted of a moderately well preserved, adult, right femoral head and neck fragment. The bone had been broken after deposition, just beneath the level of the greater trochanter and the upper surface of the trochanter and the femoral head and neck showed significant post-mortem damage. There was no evidence of pathological change and damage to the femoral head prevented the collection of metric data.

Discussion of Potential

The remains have no further osteological potential. However, the presence of the remains confirms the occurrence of burials in the vicinity of the site and thus increases our knowledge of the extent of the Roman burial grounds to the north of the city. The human bone should be retained in the site archive for deposition.

Significance of the Data

The human remains are of limited local significance.

References

AAL, 2015, *Archaeological Excavation Interim Report: Trial Trenching on land off Newport, Lincoln, Lincolnshire*, AAL report number 2015017

Scheuer, L, and Black, S, 2000, *Developmental Juvenile Osteology*, San Diego: Academic Press

Appendix 7: Animal Bone

By Martyn Allen

Introduction

Excavations at LINP15 produced 403 hand-collected animal bone specimens and 65 specimens from environmental samples (Table 17 and *Table 18*). The assemblage was generally well preserved, though there was some evidence for burning and carnivore gnawing which caused some fragmentation to the bones. All of the material derived from Areas 1 and 2 and were widely distributed across a range of feature types, including layers, pits and ditches.

Methods

Species and elements were identified using the author's zooarchaeological reference collection, aided by identification manuals (Schmidt 1972; Cohen and Serjeantson 1996). Elements were recorded using the zoning system of Serjeantson (1996) to establish which parts of the bones were present. Evidence for epiphyseal fusion was recorded and the subsequent data were analysed using the closure timings detailed by Silver (1970). Evidence of butchery, burning, carnivore gnawing and pathology were recorded in detail.

Taphonomy

The animal bones assemblage was generally well preserved. Only 9% of the Roman assemblage (n=131) and 10% of the medieval assemblage (n=252) was unidentifiable. However, only 32% of the Roman assemblage was identified to species, compared with 19% of the medieval assemblage. This was largely due to the presence of a high proportion of rib, vertebrae and fractured long bone fragments from large and medium-sized mammals.

Very few animal bone specimens showed signs of butchery marks, burning or carnivore gnawing (Table 19). The majority of the burnt specimens were recovered from the basal fill of pit 109. These consisted of sheep/goat remains, mostly from fragments metapodials, though tooth, pelvis, tibia and phalanx specimens were also identified. Most of the remains were grey in colour, while some were black, suggesting that the remains were exposed to a moderate heat below c.600°C.

Provenance

Most of the animal bone from Roman deposits derived from three ditches (208, 210 and 216) excavated in Area 2 (Table 20). Fragments of long bones, as well as vertebrae and ribs from the trunks of large mammals dominated these assemblages. Horse bones were slightly more common than cattle in Roman contexts, and it is possible that many of the large mammal specimens derived from horse carcasses. The identified horse bones were recovered from several Roman contexts and there did not appear to be a particular concentration. Sheep/goat remains were represented by 11 specimens from several ditches. A single pig bone was recovered from layer 104, while two chicken bones were recovered from ditch 208 and layer 104 respectively.

In contrast, the medieval assemblage predominantly derived from pits, most notably from pit 109 in Area 1 and pits 206 and 220 in Area 2. Compared to Roman deposits, these included a higher proportion of sheep remains, alongside cattle bones. A few horse skull and foot bones were recovered, but in lower numbers than was found in Roman deposits. Pig bones were recovered from pits and a structure, while a cat humerus was recovered from layer 105. A rabbit scapula was found in the upper deposit of pit 109. This bone looked fairly fresh and may have been intrusive in this feature.

Body parts and carcass-processing

Although few in number, cattle bones from Roman deposits were mainly from meat-bearing elements such as the scapula, humerus, pelvis and femur (Table 22). One of the pelvis specimens had been chopped with a heavy implement, such as a cleaver, through the ilium. One humerus specimen had also been chopped through the shaft, while another had a spiral fracture along the shaft, indicating that it had been deliberately broken to expose the marrow.

The sheep/goat bones recovered from Roman deposits were also few in number. These covered a range of body parts and included skull specimens, elements from the upper and lower limbs, and foot bones. No evidence of butchery marks were recorded on sheep/goat bones from Roman contexts.

Roman horses were represented by a relatively wide range of body parts. Elements included fragments of the skulls, proximal vertebrae, the scapula, the humerus, the radius, the pelvis and the tibia. Horse foot bones, however, were absent from Roman features. None of the horse bones showed signs of butchery. Nonetheless, the deposition of disarticulated horse bones alongside cattle and sheep/goat remains suggests that they may have been processed and disposed of in a similar manner to other livestock.

Medieval cattle remains were represented by elements from most parts of the body (Table 23). Although the sample size is fairly small, waste deposits appear to have included remains from primary butchery activities as well as discard from secondary processing. One mandible included cut marks possibly related to removal of the jaw. A metatarsal and a radius included holes in their proximal surfaces; these may have been made to aid marrow extraction from within the bone (i.e. pushing it out from one end).

As with cattle, sheep/goat remains were represented by a range of elements. Tibia and metapodial bones were the most common bones identified. This is often found in sheep/goat assemblages and is usually reflective of the preferential survival rates of these bones. None of the sheep/goat bones showed any signs of butchery.

Pathologies

Pathologies were identified on three bones, each from deposits dating to the mid-12th–13th century. A horse 1st phalanx from pit 143 exhibited exostosis bone growth around the proximal epiphysis. A cow astragalus from pit 220 included some bone degeneration between the condyles. Both of these pathologies can be associated with age-related skeletal changes. A sheep/goat metatarsal also from pit 220 exhibited some abnormal bone formation on anterior surface of shaft. This may have been caused by a localised infection.

Environmental samples

Environmental samples produced, amongst other remains, three fish bones from medieval deposits, and a bone from an amphibian. None of these specimens could be identified to species.

Discussion

The faunal assemblage examined here is small and limited in the information it can provide regarding local animal exploitation. Nonetheless, it has highlighted some notable features. The prevalence of horse bones in Roman ditches suggests that horses were being slaughtered and processed nearby, perhaps alongside cattle and sheep. It is uncertain whether horse meat was being consumed, but this remains a possibility. Sheep/goat bones were more common in medieval deposits, and some were found to have been exposed to higher temperatures normally associated with cooking, perhaps representing industrial activities.

No further work is required on this animal bone assemblage. However, it should be archived as it may have potential for research purposes in conjunction with other, contemporary assemblages from Lincoln.

References

Cohen, A, and Serjeantson, D, 1996, *A Manual for the Identification of Bird Bones from Archaeological Sites*. Second Edition, London: Archetype Publications

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Serjeantson, D, 1996, 'The animal bones' in S. Needham and T. Spence (eds), *Refuse and disposal at Area 16 east Runnymede. Runnymede Bridge Research Excavations, Volume 2*, London: British Museum Press

Silver, I A, 1970, 'The ageing of domestic animals' in D.R. Brothwell and E.S. Higgs (eds), *Science in Archaeology: A Survey of Progress and Research*. Second edition, New York: Praeger, 283–302

area	date/phase	cattle	sheep/goat	pig	horse	cat	rabbit	large mammal	medium mammal	chicken	goose	bird	unidentified	Total
1	mid-late 2 nd C.	2	1					2	2				2	9
	3 rd C. +	3	1	1				7	1	1				14
	mid-12 th -13 th C.	4			1			3						8
	mid-12 th -14 th C.	3	18				1		34	1			1	58
	13 th -14 th C.	3	5		1	1		6	2				4	22
	unphased	4			1			7	3					15
	sub-total	19	25	1	3	1	1	25	42	2			7	126
2	late 2 nd -3 rd C.	1			1			2	2					6
	3 rd C. +	6	10		14			55	6	1			10	102
	mid-12 th -13 th C.	18	8	1	2			57	9	3			21	119
	mid-12 th -14 th C.		5					6	3					14
	13 th -14 th C.	3	6	2				7	9	2	1	1		31
	unphased		2		1			1		1				5
	sub-total	28	31	3	18			128	29	7	1	1	31	277
Total	47	56	4	21	1	1	153	71	9	1	1	38	403	

Table 17: Number of hand-collected animal bone specimens in Areas 1 and 2 by phase

area	date/phase	cattle	sheep/goat	pig	horse	large mammal	medium mammal	fish	amphibian	unidentified	Total
1	mid-12th-14th C.		6	1			5	2	1	2	17
	sub-total		6	1			5	2	1	2	17
2	late 2nd-3rd C.						1				1
	3rd C. +		1							2	3
	mid-12th-13th C.	1	4		1	16	14	1		6	43
	13th-14th C.						1				1
	sub-total	1	5		1	16	16	1		8	48
Total	1	11	1	1	16	21	3		1	10	65

Table 18: Number of animal bone specimens from environmental samples in Areas 1 and 2 by phase

area	phase	no. butchered	no. burnt	no. gnawed
1	mid-late 2 nd C.	1		
	3 rd C. +	1	1	1
	mid-12 th -13 th C.			
	mid-12 th -14 th C.	1	18	
	13 th -14 th C.	1	1	
2	late 2 nd -3 rd C.	1		
	3 rd C. +	2		
	mid-12 th -13 th C.	4	2	
	mid-12 th -14 th C.			
	13 th -14 th C.		2	1
Total		10	21	2

Table 19: Number of butchered, burnt and gnawed specimens (hand-collected and sieved assemblages)

taxa	ditch	layer	total
cattle	9	3	12
sheep/goat	11	1	12
pig		1	1
horse	15		15
large mammal	59	7	66
medium mammal	10	1	11
chicken	1	1	2
unidentified	12		12
total	117	14	131

Table 20: Number of identified specimens from mid-2nd-3rd C. AD features (hand-collected)

taxa	layer	pit	pit/ditch	structure	total
cattle	2	25	4		31
sheep/goat	6	36			42
pig		2		1	3
horse	1	2	1		4
cat	1				1
rabbit		1			1
large mammal	6	70	3		79
medium mammal	7	50			57
bird	1				1
chicken	2	4			6
goose	1				1
unidentified	4	22			26
total	31	212	8	1	252

Table 21: Number of identified specimens from mid-12th-14th C. AD features (hand-collected)

element	cattle	sheep/goat	pig	horse	chicken
maxilla		1			
mandible	1	2		2	
tooth		1			5
atlas					1
axis					1
scapula	1	1			1
humerus	2	2			2
radius		1	1		1
pelvis	3				1
femur	1				
tibia		2			1

element	cattle	sheep/goat	pig	horse	chicken
calcaneus	2				
metatarsal	2	1			
1st phalanx		1			
total	12	12	1	15	2

Table 22: Number of fragments from each element from Roman deposits (hand-collected)

element	cattle	sheep/goat	pig	horse	chicken	goose
skull		2		1		
mandible	5	3				
tooth	4	6	1			
atlas	1					
axis	1					
sternum					1	
scapula	1	1	1			
humerus	4	1				
radius	2	3			1	
ulna	2					1
metacarpal	1	9	1	1		
pelvis	1	3				
femur					2	
tibia	1	5			2	
astragalus	1					
metatarsal	3	6				
phalanges	4	3		2		
total	31	42	3	4	6	1

Table 23: Number of fragments from each element from medieval deposits (hand-collected)

Appendix 8: Palaeoenvironmental Remains

By Val Fryer

Introduction and method statement

Excavations at Lincoln Newport, undertaken by Allen Archaeology Ltd, recorded ditches, middens, a pit or hearth and other discrete features of probable Roman and medieval date. Samples for the retrieval of the plant macrofossil assemblages were taken, with a total of eight being submitted for assessment.

The samples were processed by manual water flotation/washover, with the flots being collected in a 300 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 in Table 1. Nomenclature within the table follows Stace (2010). Most plant remains were charred, but occasional mineral replaced seeds (de-noted within the table by a lower case 'm' suffix) were also noted. Modern roots were also present within most assemblages.

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

Cereal grains/chaff and seeds of common segetal weeds are present at varying densities within all but two assemblages (samples 3 and 8). Preservation is moderately good, although grains are puffed and distorted, probably as a result of exposure to extremely high temperatures during combustion.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains are recorded along with numerous other cereals which are too poorly preserved for close identification. Of the identifiable grains, wheat is predominant, with most specimens being of a rounded, hexaploid type form. However, a small number of slightly more elongated grains of a possible glumed wheat are present within the assemblages from undated pit/hearth [109] (samples 1 and 2), although there is no chaff to verify an identification to species. Chaff is relatively scarce throughout, but germinated barley grains with attached sprouts are present within the assemblages from the aforementioned samples along with indeterminate detached sprouts and cereal embryos.

Weed seeds are scarce, with many occurring as single specimens within an assemblage. All are of common segetal weeds, with taxa noted including corn cockle (*Agrostemma githago*), small legumes (Fabaceae), black bindweed (*Fallopia convolvulus*), corn gromwell (*Lithospermum arvense*), grasses (Poaceae), dock (*Rumex* sp.) and scentless mayweed (*Tripleurospermum inodorum*). Individual fruits of sedge (*Carex* sp.), spike-rush (*Eleocharis* sp.) and bur-reed (*Sparganium erectum*) are also noted along with a fragment of hazel (*Corylus avellana*) nutshell. Comminuted charcoal/charred wood fragments are present throughout, but other plant macrofossils are scarce. However, small fragments of charred root/stem (including pieces of heather (Ericaceae) stem) are also recorded.

Fragments of black porous material, most of which are probably derived from the high temperature combustion of organic remains (including cereal grains), are present throughout, occurring at an especially high density within the assemblages from pit [109]. Small pieces of bone (some of which are burnt) are also noted along with small pellets of burnt or fired clay and small mammal/amphibian bones. Small pieces of coal (coal 'dust') are also present within most assemblages, but it is currently unclear whether these are contemporary with the features from which the samples were taken, or later contaminants.

Conclusions

In summary, although the assemblages from pit [109] are relatively large and diverse in composition, the remaining assemblages are all small (i.e. <0.1 litres in volume) and sparse, possibly suggesting that they are largely derived from scattered detritus, much of which was probably accidentally incorporated within the feature fills. Pit [109] does appear to have had a very specific function, although the nature of the assemblages does somewhat impede any clear interpretation of the feature. As both assemblages include relatively high densities of cereal grains (some of which had obviously germinated prior to combustion), it is possible that the material is derived from either grain drying detritus or the burning of grain storage waste. However, without knowing the exact date and nature of the feature, it is equally likely the material could be indicative of the use of chaff or similar detritus as tinder or kindling within a hearth. Other sources may include malting waste or domestic hearth refuse, although the latter may be unlikely, as wheat was very rarely used as a whole grain for human consumption. It would appear that materials from this feature are probably incorporated within most other assemblages, but given the intensive use of this area of the outlying city during both the Roman and medieval periods this is, perhaps, not that surprising.

Reference

Stace, C, 2010, *New Flora of the British Isles*. 3rd edition, Cambridge: Cambridge University Press

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens xxxx = 100+ specimens
 cf = compare fg = fragment m = mineral replaced b = burnt
 Rom = Roman Med = medieval

Sample No.	3	7	9	1	2	4	5	8
Context No.	213	221	226	111	113	211	207	207
Feature No.	212	220	206	109	109	210		
Feature type	Ditch	Midden	Midden	Pit/ Hearth	Pit/ Hearth	Ditch		
Date	Rom.	Med.	Med.					
Area	2	2	2	1	1	2	2	2
Cereals								
<i>Avena</i> sp. (grains)				x	x			
<i>Hordeum</i> sp. (grains)		xcf		x	xx			
(germinated grains)				x	x			
<i>Triticum</i> sp. (grains)		x		xx	xxxx		x	
(rachis internode)					x			
Cereal indet. (grains)		x		xx	xxxx	x	x	
(detached sprouts)				x				
(detached embryos)				x	x			
(basal rachis node)		x						
Herbs								
<i>Agrostemma githago</i> L.					x			
<i>Bromus</i> sp.		xcf						
<i>Cirsium</i> sp. type					xfgm			
Fabaceae indet.		x	x	x	xx	x	x	
<i>Fallopia convolvulus</i> (L.)A.Love					x			
<i>Lithospermum arvense</i> L.		xm		xm	x xm			
<i>Medicago/Trifolium/Lotus</i> sp.				x				
<i>Plantago lanceolata</i> L.					x			
Small Poaceae indet.				x	x			

Sample No.	3	7	9	1	2	4	5	8
Context No.	213	221	226	111	113	211	207	207
Feature No.	212	220	206	109	109	210		
Feature type	Ditch	Midden	Midden	Pit/ Hearth	Pit/ Hearth	Ditch		
Date	Rom.	Med.	Med.					
Area	2	2	2	1	1	2	2	2
Large Poaceae indet.		x		x	x			
Polygonaceae indet.				x	x			
<i>Rumex</i> sp.				x	x			
<i>Sherardia arvensis</i> L.					xcf			
<i>Tripleurospermum inodorum</i> (L.)Schultz-Bip				x				
Wetland plants								
<i>Carex</i> sp.				x				
<i>Eleocharis</i> sp.					xcf			
<i>Sparganium erectum</i> L.							x	
Tree/shrub macrofossils								
<i>Corylus avellana</i> L.		x						
Other plant macrofossils								
Charcoal <2mm	x	xxx	xxx	xxx	xx	xx	x	x
Charcoal >2mm	x	x	xx	xxxx	x	x	x	x
Charcoal >5mm		x	x	x				
Charcoal >10mm							x	
Charred root/stem	x	xx	x	x	x	x	x	
Ericaceae indet. (stem)		xx	x	x			x	
(floret)					x			
Indet. seeds		x		x	x			
Other remains								
Black porous 'cokey' material	xx	x	x	xxx	xxx	x	x	xx
Bone	x		x		xb	x		xxx xb
Burnt/fired clay or daub	x	x	x	x	x		x	
Eggshell					xb			
Mineralised concretions				x	xx			
Small coal frags.	xx	x	x	x	x	xx		xx
Small mammal/amphibian bones	x	x	x	x		x		x
Vitreous material		x			x		x	
Sample volume (litres)	30	30	30	30	20	30	20	30
Volume of flot (litres)	<0.1	<0.1	<0.1	0.2	0.3	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	50%	50%	100%	100%	100%

Table 24: Palaeoenvironmental results

Appendix 9: Context Summary

CBM = Ceramic Building Material

loe = Limit of excavation

Sf= Small find

s/a = same as

Area 1

Context No	Type	Description	Interpretation
100	Layer	Friable mid brown silt with frequent modern building material rubble and concrete, c.0.50m thick across the site, seals 101	Modern overburden
101	Layer	Mid to dark brown friable silt with occasional limestone fragments, 0.30m thick across the site, sealed by 100, seals 102	Buried topsoil
102	Layer	Friable mid orangey brown silt with occasional limestone fragments, 0.20m thick across the site, sealed by 102, seals 108, 112, 115, 116, 161	Subsoil
103	Void	-	-
104	Layer	Friable mid to dark brown clayey silt with occasional charcoal and limestone fragments, 0.15-0.28m thick, 0.70-1.16m wide, cut by [135], seals 127, 133, 156	Dumped deposit s/a 132
105	Layer	Hard mid greyish brown silt and limestone blocks, 0.10m thick across the west end of site, seals 108	Rubble deposit or disturbed earlier surface,
106	Cut	E to W aligned linear with moderately steep to gradual sloping sides and irregular base, contains 120, 119, 107, cuts 122	Ditch, cuts earlier ditch [121]
107	Fill	Friable mid greyish brown clayey silt with occasional limestone fragments, 0.25m thick, sealed by 124	Tertiary fill of [106]
108	Structure	SSW to NNE aligned tiled culvert with side walls of limestone and two blocks of roman cement sf 7 and 8 at the SSW end, feature measured 5.60m long and 0.22-0.34m wide, tiles measured c.0.20x0.18x0.02m, seals 124	Tiled Roman culvert – reused as flue
109	Cut	Circular feature with vertical sides and flat base, 1.36m wide, 0.28m deep, contains 110, 113, 111, cuts 114	Stone-lined circular fire-pit,
110	Structure	Rough cut, unsorted limestone of varying sizes facing centre of pit, irregular dry stone bond, three courses deep, sealed by 113	Stone structure within cut [109]
111	Fill	Loose mid brownish grey sandy silt, 0.14m thick	Upper dumped deposit of pit [109]
112	Structure	E to W aligned, 4.8m long limestone wall with rough cut, unbonded stones, one course of stones all facing north and south with a rubble core of smaller unsorted stones. Sealed by 102, Seals 114	Limestone wall, no visible construction cut
113	Fill	Friable very dark greyish brown clayey silt and charcoal, 0.04m thick, sealed by 111, seals 110	Lens of burnt material at the base of pit [109]
114	Layer	Loose light yellowish brown sand and limestone brash, across the site, cut by [103], [121]	Natural geology
115	Fill	Friable mid brownish orange clayey silt with occasional limestone and charcoal fragments, 0.14m thick	Single fill of possible pit [125], s/a 142
116	Layer	Firm mid brown silt and limestone, 1.8m wide, 0.34m deep, sealed by 102	Limestone rubble layer
117	Cut	Modern truncation 0.95m deep, backfilled with 118, cuts [100]	Modern truncation cut through modern overburden caused by the machine and then backfilled
118	Fill	Modern rubble	Backfill of truncation [117]

Context No	Type	Description	Interpretation
119	Fill	Friable mid orangey brown clayey silt with occasional limestone fragments, 0.3m deep	Secondary fill of [106]
120	Fill	Friable mid brownish grey clayey silt with occasional limestone and charcoal fragments, 0.08m deep	Primary fill of [106]
121	Cut	E to W aligned linear with north edge truncated by [106] and extending beyond loe to the S, base appeared flat, contains 123, 122	Ditch, extends under the southern baulk of the area
122	Fill	Friable mid orangey brown clayey fill with occasional charcoal and limestone, 0.38m thick	Upper fill of ditch [121]
123	Fill	Firm light grey silty clay with orange mottling with occasional charcoal and moderate limestone	Primary fill of ditch [121]
124	Layer	Friable mid brownish grey silt with moderate limestone and charcoal	Medieval deposit
125	Cut	E to W sub rectangular feature with gradual sides and concave base, contains 115, cuts 102	Possible pit, heavily truncated and only seen in section, same as [141]
126	Cut	E to W aligned linear with gradual sloping sides and concave base, 1.18m wide, 0.86m deep, contains 129, 128, 130, 127	Ditch, same as [131]?
127	Fill	Friable mid orangey brown clayey silt with occasional charcoal and limestone fragments, 0.30m thick, sealed by 104, seals 130	Fourth and upper fill of ditch [126], same as 133
128	Fill	Friable mid orangey brown clayey silt with occasional coal and limestone fragments, sealed by 130, seals 129	Second fill of ditch [126]
129	Fill	Friable mid to light greyish brown clayey silt with occasional limestone fragments, 0.28m thick, sealed by 128	Primary fill of ditch [126]
130	Fill	Friable mid brown clayey silt with occasional limestone fragments and oyster shells, sealed by 127, seals 128	Third fill of ditch [126], same as 152
131	Cut	E to W turning N to S aligned linear with moderately steep sides and flat base, 1.1m wide, 0.76m deep. Contains 134, 133, cuts 114	Cut of ditch, same as [126]?
132	Layer	Friable mid to dark brown clayey silt with occasional charcoal and limestone fragments, 0.15-0.28m thick, 0.70-1.16m wide, cut by [135], seals 133 s/a 127	Dumped deposit same as 104
133	Fill	Friable mid orangey brown clayey silt with occasional charcoal and limestone fragments, 0.30m thick, sealed by 132, seals 134	Fourth and upper fill of ditch [131], same as 127
134	Fill	Friable mid orangey brown clayey silt with occasional coal and limestone fragments, sealed by 130, seals 129	Primary fill of ditch [131], same as 128
135	Cut	N to S aligned sub rectangular feature with gradual to vertical sides and flat base, 0.50m wide, 0.50m deep. Contains 136, cuts 104 s/a 132	Possible robber trench, same as [139]
136	Fill	Firm mid brownish orange silty clay with frequent large limestone fragments, 0.5m thick, cut by [125]	Fill of [135], same as 140
137	Cut	E to W aligned linear with moderately steep sloping sides and flat base, 0.30m wide, 0.26m deep. Contains 138, cuts 114	Cut of ditch or pit, mainly caught in section and heavily truncated by later features, same as [143], [147] and [145]?
138	Fill	Friable mid brown clayey silt with occasional limestone fragments, 0.20m thick, sealed by 116	Fill of [137], same as 144 and 148
139	Cut	N to S aligned sub rectangular feature with gradual to vertical sides and flat base, 0.50m wide, 0.50m deep. Contains 140, cuts 132	Possible robber trench, same as [135]
140	Fill	Firm mid brownish orange silty clay with frequent large limestone fragments, 0.5m thick, cut by [125]	Fill of [139], same as 136
141	Cut	N to S aligned sub rectangular feature with gradual sloping sides and curved base, 0.76m wide, 0.40m deep, seen only in section, contains 142, cuts 102	Possible pit only observed in section and extends beyond loe, same as [125]

Context No	Type	Description	Interpretation
142	Fill	Friable mid brownish orange clayey silt with occasional limestone and charcoal fragments, 0.14m thick	Single fill of [141], same as 115
143	Cut	N to S aligned linear with moderately steep sloping sides and slight tapered base, 2.40m wide, =>0.60m deep, extends beyond loe, contains 144	Cut of pit or ditch extending beyond loe, same as [137], [147] and likely [145]
144	Fill	Friable mid brown clayey silt with occasional limestone fragments, 0.60m thick, sealed by 116	Fill of [143], same as [138] and 148
145	Cut	E to W aligned linear with gradual sloping sides and concave base, 0.20 deep, contains 146	Cut of pit or ditch extending beyond loe, likely to be the base of [143], [137] and [147]
146	Fill	Friable mid to light greyish brown clayey silt with occasional limestone fragments, 0.30m thick	Fill of [145]
147	Cut	N to S aligned feature with steep sloping sides and flat base, 0.56m deep, extends beyond loe, contains 148	Cut of ditch or pit, same as [137], [143] and likely [145]
148	Fill	Friable mid brown clayey silt with occasional limestone fragments, 0.56m thick, cut by [149]	Fill of [147], same as 138 and 144
149	Cut	N to S turning E aligned linear with moderately steep sides and undulating base, 0.62m deep, 1.49m wide, extends beyond loe. Contains 153, 152, 151, 150, cuts 148	Cut of ditch, possibly continuation of ditch [212] in Area 2
150	Fill	Friable mid orangey brown clayey silt with occasional charcoal and limestone fragments, 0.13m thick, sealed by 116, seals 151	Top fill of ditch [149]
151	Fill	Friable mid orangey brown clayey silt with occasional charcoal and limestone fragments, 0.34m thick, sealed by 150, seals 152	Third fill of ditch [149]
152	Fill	Friable mid brown clayey silt with occasional limestone fragments and oyster shells, 0.08m thick, sealed by 151, seals 153	Secondary fill of [149], same as 130
153	Fill	Friable mid orangey brown clayey silt with occasional coal and limestone fragments, 0.54m thick	Primary fill of [149]
154	Cut	Curvilinear feature with vertical sides and flat base, 0.70m wide, 0.45m deep, 0.56m wide trench cut, overall 2.5m wide feature from north to south, extends beyond loe, contains 156, 159, 158, 160, cuts	Construction cut of structure 156
155	Fill	Friable mid greyish brown silty clay with occasional limestone fragments, 0.40m thick	Backfill of feature 156 [154]
156	Structure	Rough cut, dry limestone curvilinear feature in rubble bond, max three courses high, c.0.30m wide across the stones, entire feature measures c.2.5m from north to south and max 1.5-2.3m from east to west	Possible remains of an oven
157	Fill	Thin lens of firm black silty clay with charcoal and occasional limestone fragments, sealed by 159	In situ burning within [154]
158	Fill	Moderately compact mid orangey brown silty clay with moderate charcoal and chalk flecks, 0.46m thick, sealed by 160, seals 159	Later and third backfill of feature 156 [154]
159	Fill	Friable mid brown silty clay with occasional limestone fragments and charcoal flecks 0.06m thick, sealed by 158,	Second backfill of feature 156 [154]
160	Fill	Moderately compact mottled mid greyish brown silty clay with frequent charcoal and chalk flecks, 0.10m thick, sealed by 161, seals 158	Fourth backfill of feature 156 [154]
161	Fill	Moderately compact mid orangey brown silty clay with occasional charcoal and chalk flecks, 0.10 thick, sealed by 104 s/a 132	Top backfill of feature 156 [154]
162	Layer	Friable dark brown silty clay with rare charcoal and chalk flecks, 0.15m thick	Soil build up

Context No	Type	Description	Interpretation
163	Cut	E to W aligned linear with vertical sides and flat base, 13m long, extends beyond loe, 0.94m wide, 0.50m deep. Contains 164, cuts 114	Ditch or stone-filled soakaway, same as [165]
164	Fill	Loose to coarse yellowish grey silty clay and limestone rubble, 0.50m thick	Redeposited natural fill of soakaway [163], same as 166
165	Cut	E to W aligned linear with vertical sides and flat base, 13m long, extends beyond loe, 0.94m wide, 0.50m deep. Contains 166, cuts 114	Ditch or stone-filled soakaway, same as [163]
166	Fill	Loose to coarse yellowish grey silty clay and limestone rubble, 0.50m thick, sealed by 175	Redeposited natural fill of soakaway [165], same as 164
167	Cut	E to W sub oval feature with shallow sides and base, 0.50m long, 0.21m wide, 0.07m deep, contains 168, cuts 114	Heavily truncated pit or posthole
168	Fill	Moderately compact light brown silty sand with frequent charcoal flecks, 0.07m deep, sealed by 175	Fill of [167]
169	Cut	E to W aligned sub oval feature with shallow sides and base, 0.25m long, 0.20m wide, 0.03m deep, contains 170, cuts 114	Heavily truncated pit or posthole
170	Fill	Friable light brown silty sand with rare charcoal flecks, 0.03m thick, sealed by 175	Fill of [169]
171	Cut	E to W aligned sub oval feature with steep sides and undulating base, 0.70m long, 0.40m wide, 0.21m deep	Heavily truncated pit or posthole
172	Fill	Moderately compact light brown silty sand with rare limestone and charcoal fragments and flecks, sealed by 175	Fill of [171]
173	Cut	E to W aligned sub oval feature with steep irregular sides and base, 0.50m long, 0.40m wide, 0.20m deep, contains 174, cuts 114	Heavily truncated pit or posthole
174	Fill	Moderately compact light brown sandy silt with frequent small limestone and charcoal fragments, 0.20m thick, sealed by 175	Fill of [173]
175	Layer	Friable to firm mid orangey brown sandy silt with occasional small to medium limestone fragments and charcoal flecks, 0.32m thick, sealed by 112, seals 166	Possible buried soil horizon
176	Layer	Coarse to loose mid greyish brown silty sand with frequent unsorted limestone and limestone fragments, max 2.5m wide, length 2.38m extends beyond loe to the east	Demolition layer associated with destruction of structure 156 [154]
177	Group	E to W aligned ditch splitting at the east end to turn north and south. Includes [106], [126], [131], [149]	Ditch
178	Group	Semi half circular feature extending beyond loe to the east. Includes [143], [145], [137] and [147]	Possible pit
179	Group	N to S aligned elongated pit extending beyond loe to the east. Includes [135] and [139]	Possible pit
180	Group	Half circular feature at east end of site extending beyond loe to the east. Includes [125] and [141]	Possible pit
181	Group	E to W aligned linear, terminating before loe to the east. Includes [163] and [165]	Ditch or soakaway

Area 2

Context No	Type	Description	Interpretation
200	Layer	Firm dark greyish brown sandy silt with moderate small angular limestone fragments, 0.11m thick, seals 201	Topsoil
201	Layer	Firm mid yellowish grey sandy silt with frequent unsorted limestone fragments, 0.40m thick, sealed by 200, seals 202	Levelling material

Context No	Type	Description	Interpretation
202	Layer	Hard pale yellowish grey unsorted limestone, sealed by 201, seals 203	Levelling material
203	Layer	Hard dark grey sandy silt with frequent CBM, limestone and mortar, 0.20m thick, sealed by 202 seals 205, 270	Buried topsoil
204	Layer	Firm to hard light yellow grey silt and limestone, cut by [263], [262], [208], [265], [254], [237], [252], [250], [212], [245], [241], [248], [216], [210]	Natural geology
205	Structure	Rough cut limestone blocks measuring: 0.50m width, 0.10 length and 0.05-0.25m thickness makes up an east to west aligned, north facing, linear wall, sealed by 203, seals 247	Limestone wall
206	Cut	A NE to SW aligned sub rectangular pit with steep sides and flat base, measures 3.7m length, 2m with and 0.80m deep. Contains by 221/226, 222/225, 223/207, cuts 217	Medieval midden, same as [220]
207	Fill	Friable dark brownish grey silt with moderate limestone blocks and occasional charcoal, 0.34m thick, cut by [227], seals 225	Tertiary fill of pit [206] and [220], same as 207
208	Cut	N to S aligned linear with concave sides and irregular base, measures >1.2m long extends beyond loe, 0.60m deep. Contains 209, cuts 204	Ditch, same as [216]
209	Fill	Moderately compact, mid orangey brown silty clay with frequent unsorted limestone fragments and charcoal, 0.6m thick, cut by [267]	Fill of ditch [208]
210	Cut	N to S aligned terminus linear with moderately steep sides and undulating flat base. Measures: 1.30m length, 0.56m wide, 0.40m deep. Contains 234, 233, 211. Cuts 204	A possible terminus ditch
211	Fill	Friable mid yellowish brown silty clay with frequent unsorted limestone blocks, measures 0.56m thick, sealed by 239	Primary fill of possible ditch [210]
212	Cut	N to S aligned linear with gradual sloping sides and flat base, 1.70m wide, 0.42m deep. Contains 213, 224, cuts 204	Roman ditch
213	Fill	Moderately compact mid brown silty clay with frequent limestone fragments and chalk flecks, 0.42m thick, sealed by 224	Primary fill of ditch [212]
214	Cut	Oblong feature that extends beyond loe, steep sides and flat base, measures >0.9m long, 0.40m wide, contains 215, cuts 224	Cut of possible pit or terminus linear. Truncates earlier ditch [212]
215	Fill	Moderately compact light grey silty clay with frequents small limestone and charcoal flecks, 0.40m thick, sealed by 239	Fill of [214]
216	Cut	N to S aligned linear with steep sloping sides with slight moderately flat base, measures 1m wide, 0.64m deep. Contains 219, 218, 217, cuts 204	Ditch, possible enclosure, same as [208]
217	Fill	Firm mid grey brown sandy silt with occasional mid to large limestone fragments with occasional charcoal flecks and oyster shells. Cut by [206] s/a [220]	Natural and top accumulated fill within [216]
218	Fill	Firm mid orangey brown sandy silt with frequent small to medium limestone fragments, moderate charcoal flecks, charcoal and occasional shell fragments, 0.18m thick. Sealed by 217, seals 219	Second fill of ditch [216]
219	Fill	Firm light grey brown silt with frequent limestone fragments and animal bone, occasional charcoal flecks, 0.12m thick. Sealed by 218	Basal fill of ditch [216]
220	Cut	NE to SW aligned sub rectangular feature with sharp sloping sides and flat base, 2.20m wide, 0.62m deep. Contains 221, 222, 223. Cuts 217	Medieval midden same as [206]
221	Fill	Friable dark brownish grey sandy silt with moderate limestone fragments and charcoal, 0.20m thick, sealed by 222	Primary backfill of pit [220] same as 226

Context No	Type	Description	Interpretation
222	Fill	Friable mid brownish grey silt with moderate small to medium limestone fragments and charcoal flecks, 0.22m thick, sealed by 223, seals 221	Secondary backfill of pit [220], same as 225
223	Fill	Friable dark brownish grey silt with moderate small to medium limestone fragments and charcoal flecks, 0.32m thick, cut by [227], seals 222	Tertiary fill of pit [220] same as 207
224	Fill	Moderately firm light brown silty clay with occasional small limestone fragments, 0.15m thick. Cut by [214], seals 213	Top fill of ditch [212]
225	Fill	Friable mid brownish grey silt with moderate limestone blocks and charcoal, 0.31m thick, sealed by 207, seals 226	Secondary fill of midden [206], same as 222
226	Fill	Friable dark brownish grey sandy silt with moderate limestone block and charcoal, 0.22m thick, sealed by 225	Primary fill of [206], same as 221
227	Cut	E-W aligned sub oval feature with steep sides and flat undulating base, 2.25m wide, 2.5 long, 0.50m deep. Contains 236, 228, 229, 235, 230, cuts 207 s/a 223	Re-cut of earlier midden [206] and [220]
228	Fill	Friable light brownish grey clayey silt with moderate limestone blocks and charcoal, 0.15m thick, sealed by 229, seals 236	Secondary fill of pit [227]
229	Fill	Friable dark greyish brown clayey silt with frequent charcoal, moderate limestone fragments, 0.1m thick, sealed by 235, seals 228	Third fill of burnt material in pit [227]
230	Fill	Friable light yellowish brown silty clay with occasional limestone blocks and moderate charcoal, 0.1m thick, cut by [231], seals 235	Fifth and upper fill of pit [227]
231	Cut	N to S aligned sub oval feature with steep sides and slight rounded base, 2m long, 1.7m wide. Contains 232, cuts 230	Possible recut of earlier midden [227]
232	Fill	Friable mid greyish brown clayey silt with moderate limestone blocks and charcoal, 0.45m thick, sealed by 239	Only fill of pit [231]
233	Fill	Firm light brownish yellow silty clay with frequent limestone and occasional charcoal, 0.13m thick, sealed by 211, seals 234	Secondary fill of terminus linear [210]
234	Fill	Firm mid orangey brown clay with frequent limestone and occasional charcoal, 0.53m thick, sealed by 233	Primary infill of terminus linear [210]
235	Fill	Friable mid greyish brown sandy silt with moderate limestone blocks and charcoal, 0.32m thick, sealed by 230, seals 229	Fourth fill of pit [227]
236	Fill	Friable mid yellowish grey clayey silt with limestone with frequent limestone blocks, occasional charcoal, 0.34m thick. Sealed by 228	Primary fill of pit [227]
237	Cut	Sub circular feature with moderately steep sloping sides and round tapered base, 0.43m wide, 0.31m deep. Contains 238, cuts 204	Small pit or posthole
238	Fill	Firm mid orangey brown sandy clay with frequent limestone, 0.31m thick, sealed by 247	Fill of small pit or posthole [237]
239	Layer	Friable mid brown silty clay with occasional limestone fragments, sealed by 203, seals 205, 215, 244, 246, 243, 232, 211	Demolition layer
240	Structure	Terminus of a drystone limestone structure extending beyond Loe, >0.58m long, 0.72m wide, 0.40m deep. Sealed by 258, sealed by 273	Stone structure within [259]. Infill of tile fragments found within and around structure
241	Cut	Sub circular feature with vertical sides and concave base, 0.25m wide, 0.24m deep. Contains 242, cuts 204	Cut of pit or posthole
242	Fill	Firm mid greyish brown silty clay with occasional charcoal and gravel, 0.24m thick. Cut by [243]	Fill of pit or posthole [241]
243	Cut	NE to SW aligned sub rectangular feature with steep sides and flat base, 0.5m long, 0.45m wide, 0.16m deep. Contains 244, cuts 242	Cut of pit or posthole
244	Fill	Firm to friable mid brownish grey clayey silt with occasional limestone pebbles and occasional charcoal. 0.16m deep, sealed by 239	Fill of pit or posthole [243]

Context No	Type	Description	Interpretation
245	Cut	NE to SW aligned sub oval feature with steep sides with concave base, 0.45m long, 0.40m wide, 0.18m deep. Contains 246	Cut of posthole
246	Fill	Firm mid greyish brown clayey silt with occasional limestone fragments and moderate charcoal, sealed by 239	Single fill of posthole [245]
247	Layer	Friable mid brownish grey clayey silt with occasional limestone and charcoal, sealed by 205, seals 238, 251, 253 257, 268	Buried soil
248	Cut	Sub oval feature with steep sides and concave base, 0.5m long, 0.45m wide, 0.25m deep. Contains 249, cuts 204	Cut of posthole
249	Fill	Firm mid greyish brown clayey silt with occasional limestone fragments, 0.25m thick. Sealed by 239	Single fill of posthole [248]
250	Cut	Sub circular feature with moderately steep sides and concave base, 0.25m wide, 0.08 deep. Contains 251, cuts 204	Possible remained of a truncated posthole
251	Fill	Firm mid greyish brown clayey silt with occasional limestone and charcoal, 0.08m deep, sealed by 247	Single fill of [250]
252	Cut	Sub circular feature with concave edges and base, 0.30m wide, 0.09m deep. Contains 253, cuts 204	Possible remained of a truncated posthole
253	Fill	Firm to friable light greyish brown clayey silt with occasional limestone and charcoal. Sealed by 247	Single fill of [252]
254	Cut	Sub circular feature with steep sides and concave base, 0.25m wide, 0.18m deep. Contains 255, cuts 204	Cut of small pit or posthole
255	Fill	Firm light brownish grey clayey silt with occasional limestone fragments, cut by [256]	Fill of [254]
256	Cut	Sub circular feature with steep sides and slight concave base, 0.60m wide, 0.18m deep, extends beyond Loe. Contains 257, cuts 255	Cut of pit
257	Fill	Firm mid greyish brown clayey silt with occasional limestone fragments and moderate charcoal, sealed by 247	Fill of [256]
258	Fill	Loose mid greyish brown silty sand with frequent limestone and tile fragments, 0.40m thick. Sealed by 273, seals 240	Infill of stone structure 240
259	Cut	E to W aligned rectangular feature with slight sloping sides and flat base, 0.72m wide, 0.35m deep, extends beyond Loe. Contains 240, 258, cuts 271	Construction cut of stone structure 240
260	Fill	Friable dark orangey brown sandy silt with frequent limestone and tile, 0.17m deep, cut by [272], seals 261	Upper fill of pit [262]
261	Fill	Friable dark brown sandy silt with frequent limestone and tile fragments, 0.26m deep, sealed by 260	Lower fill of pit [262]
262	Cut	N to S aligned terminus linear with gently sloping sided and concave base, 0.90m wide, 0.43m deep. Contains 261, 260, cuts 204	Elongated pit
263	Cut	Irregular feature with irregular sides and base, 2.2m long, 2.40m wide, 0.25m deep. Contains 264, cuts 204	A possible working hollow
264	Fill	Moderately compact dark brown silty clay with orange mottling, frequent medium limestone fragments and charcoal flecks, max 0.25m thick. Cut by [269]	Fill of pit [263]
265	Cut	Sub circular feature with very steep sides and concave base, 0.22-0.25m wide, 0.11m deep. Contains 266, cuts 204	Cut of posthole
266	Fill	Firm mid brownish grey clayey silt with occasional limestone, 0.11m thick, cut by [267]	Fill of [265]
267	Cut	E to W aligned linear feature with vertical sides and concave base, 3.8m long, 0.35m wide, 0.18m deep. Contains 268, cuts 209 and 266	Possible beam slot
268	Fill	Firm mid greyish brown silty clay with occasional limestone pebbles, 0.18m thick. Sealed by 247	Single fill of [267]
269	Cut	Circular feature with moderate concave sides and base, 0.50m wide, 0.23m deep. Contains 270, cuts 264	Cut of pit
270	Fill	Moderately compact dark brown silty clay with rare limestone fragments and charcoal flecks, 0.23m thick. Sealed by 203	Fill of pit [269]

Context No	Type	Description	Interpretation
271	Fill	Friable dark brown sandy silt with frequent limestone, occasional tile fragments, 0.30m thick, cut by [259]	Fill of [272]
272	Cut	E to W aligned linear feature with moderately steep sloping sides and undulating flat base, 0.46m wide, 0.35m deep. Contains 271, cut by [259], cuts 260	Heavily truncated pit or ditch
273	Layer	Friable very dark brown sandy silt with frequent limestone fragments, 0.05m thick, 1m wide, sealed by 203, seals 258	Demolition deposit above structure 240 and infill 258
274	Group	N to S aligned linear. Includes [208] and [216]	Ditch

Area 3 (Monitoring and Recording)

Context No	Type	Description	Interpretation
300	Layer	Moderately compact dark greyish brown clayey silt and brick with modern building material, rubble and plastic, 0.20m thick	Modern levelling deposit. Demolition material sealing 301
301	Layer	Moderately loose very dark greyish brown silt with occasional small unsorted stones, 0.20m thick	Buried modern topsoil above sub-soil 302
302	Layer	Compact mid brownish grey gritty clay, >0.20m thick	Subsoil overlying 303
303	Layer	Layers of varying compaction comprised of multiple modern deposits, including demolition. <0.75m	Modern deposits
304	Layer	Firm, light yellow-brown slightly clayey soil with occasional angular limestone chippings. 0.5m thick	Redeposited subsoil sealing 305
305	Layer	Firm, dark-brown clayey silt with occasional charcoal and shell flecks. 0.3m thick	Buried soil overlying the natural geology 306
306	Layer	Compact, light yellow-brown clayey-silt with frequent limestone fragments	Natural geology beneath 306

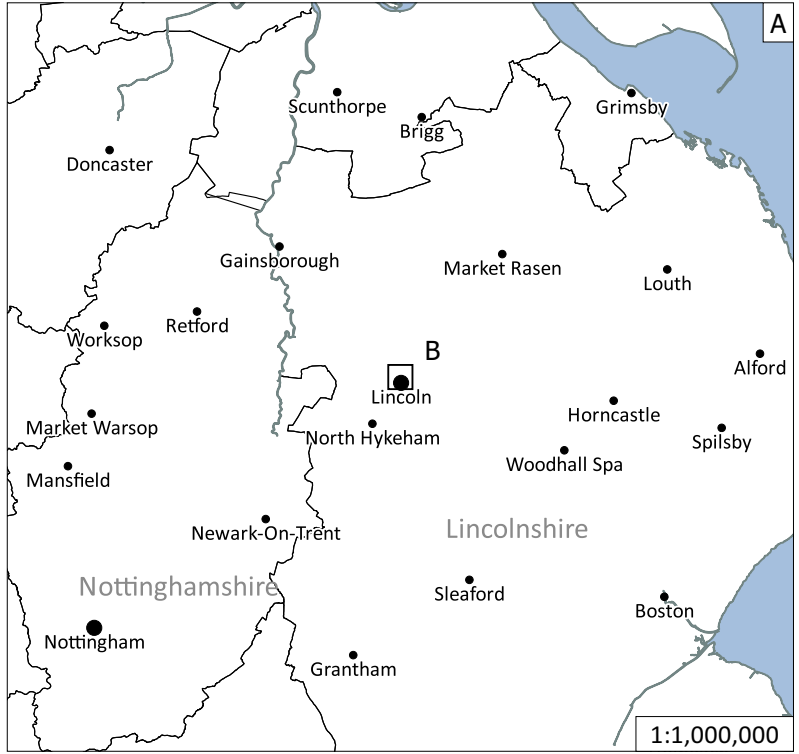


Figure 1: Site location outlined in red

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Site Code	LINP 15
Scale	1:10,000,000 1:1,000,000 1:25,000 @ A4
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Date	16/11/17

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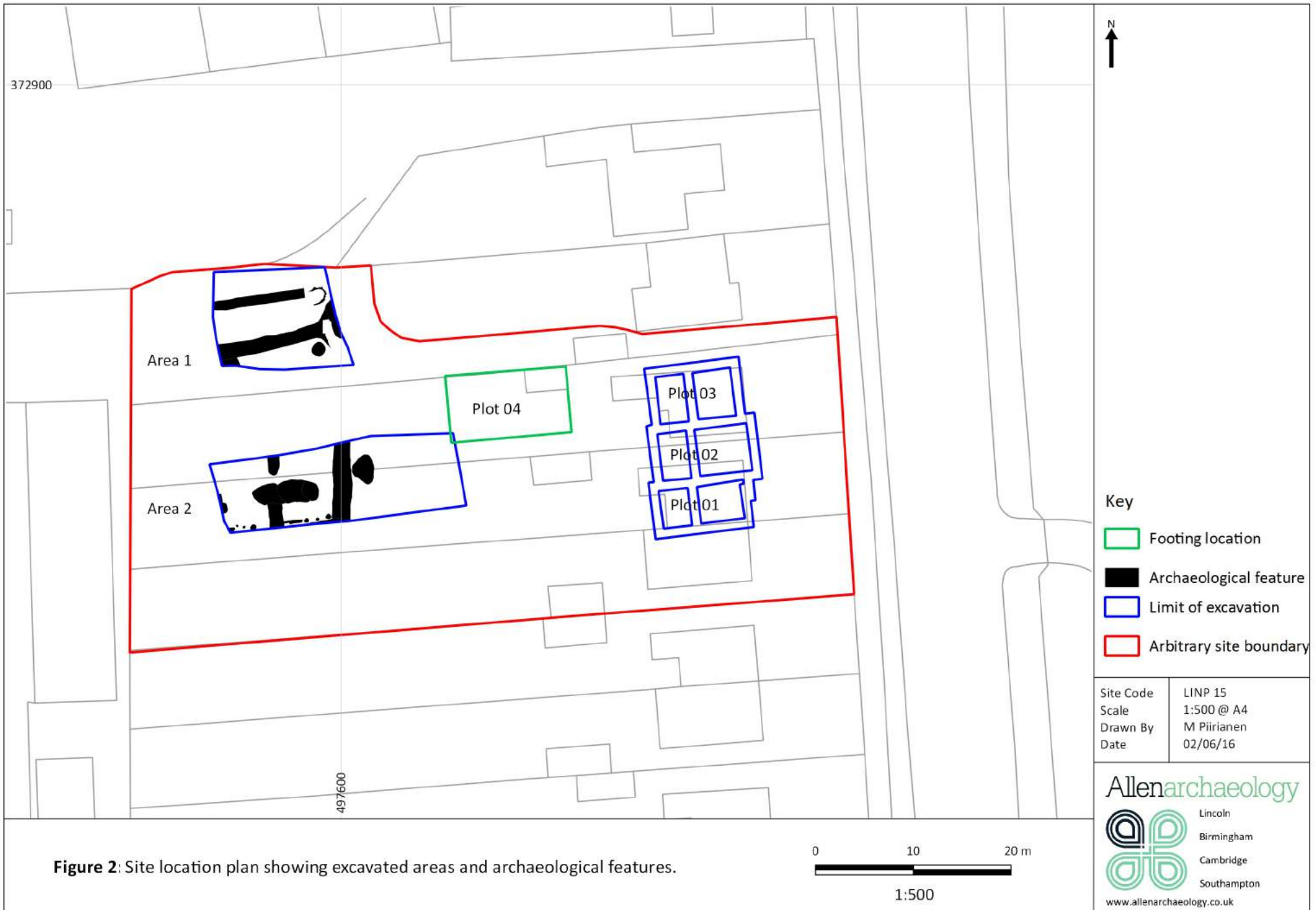


Figure 2: Site location plan showing excavated areas and archaeological features.



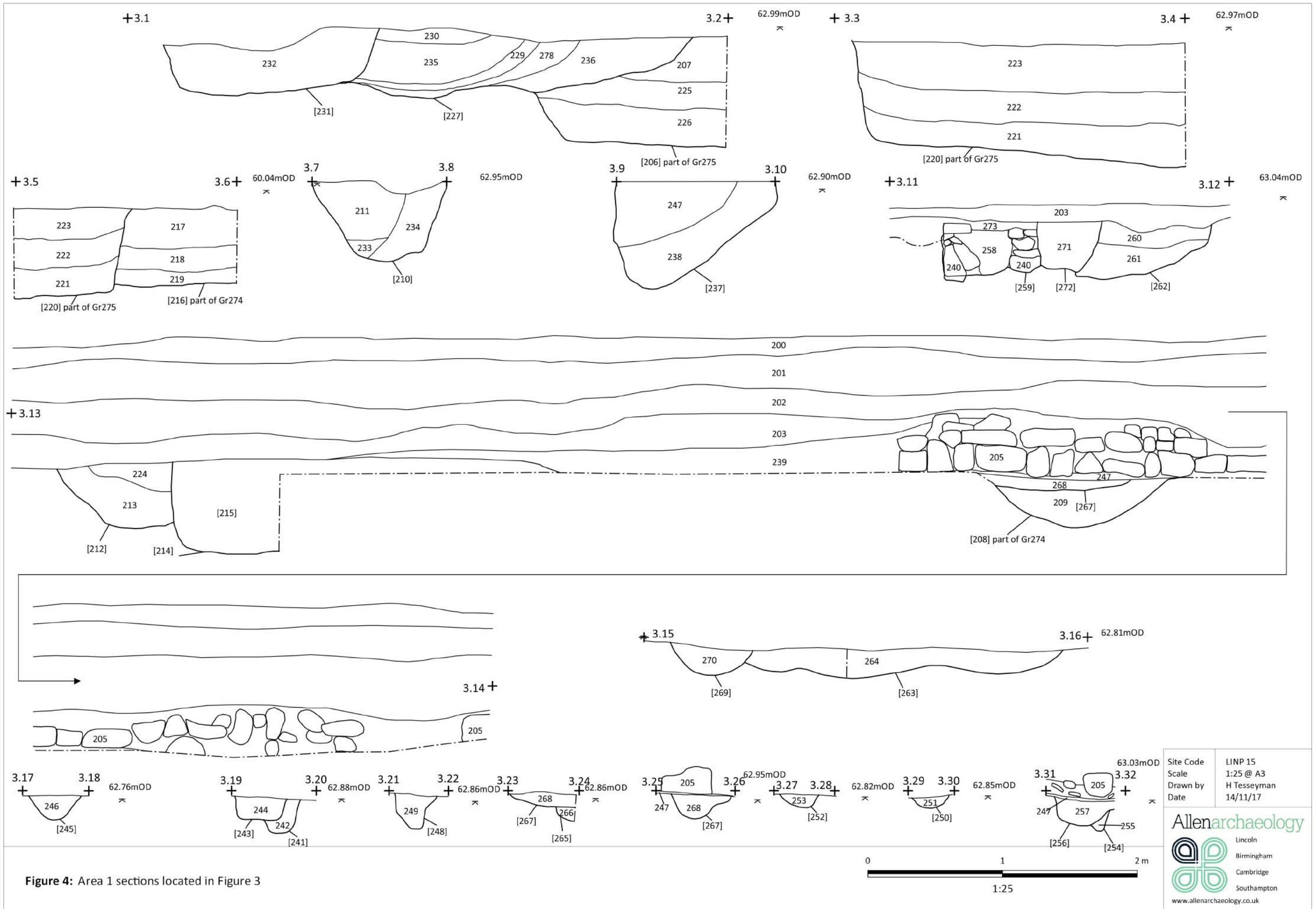


Figure 4: Area 1 sections located in Figure 3

Site Code	LINP 15
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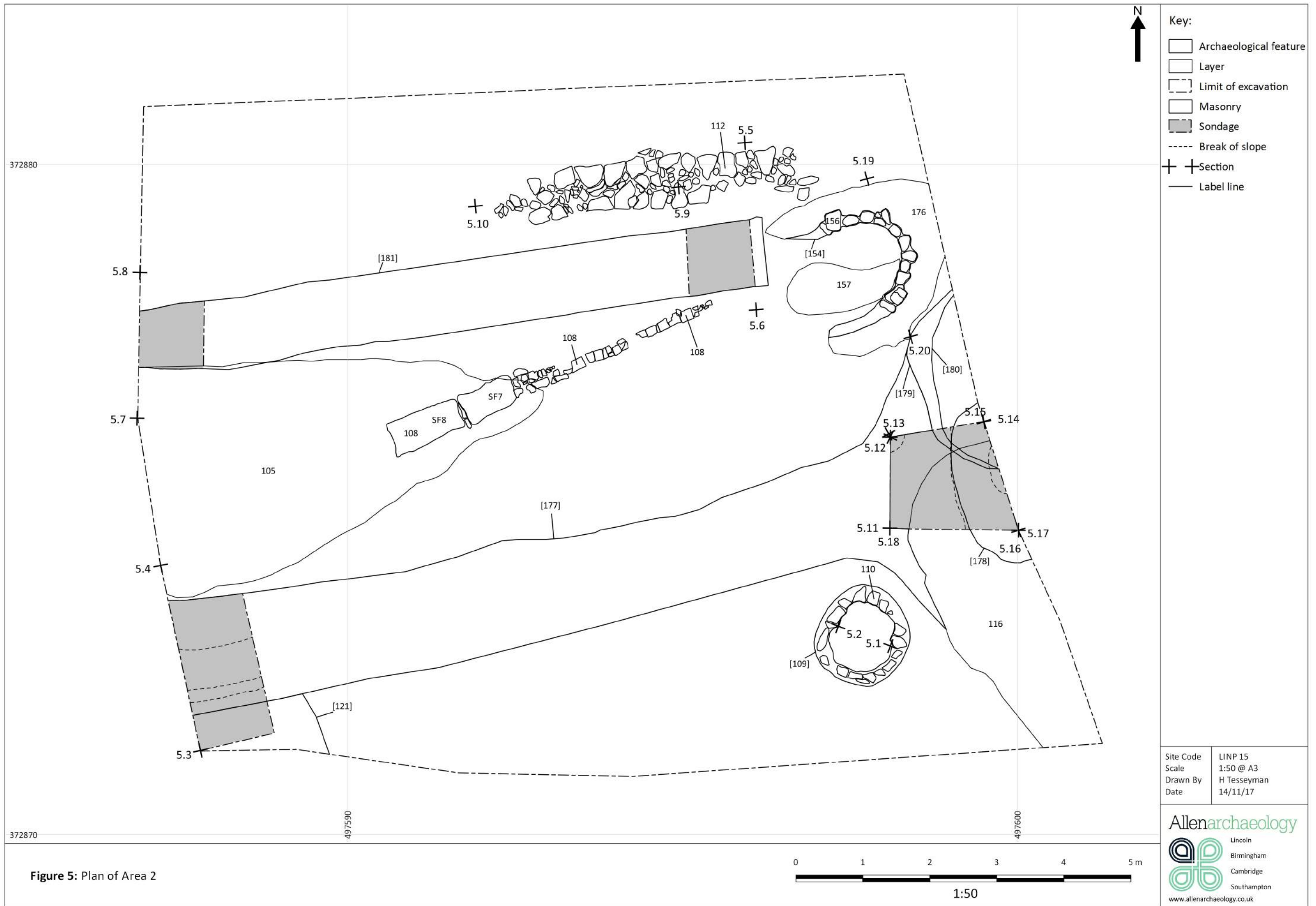


Figure 5: Plan of Area 2

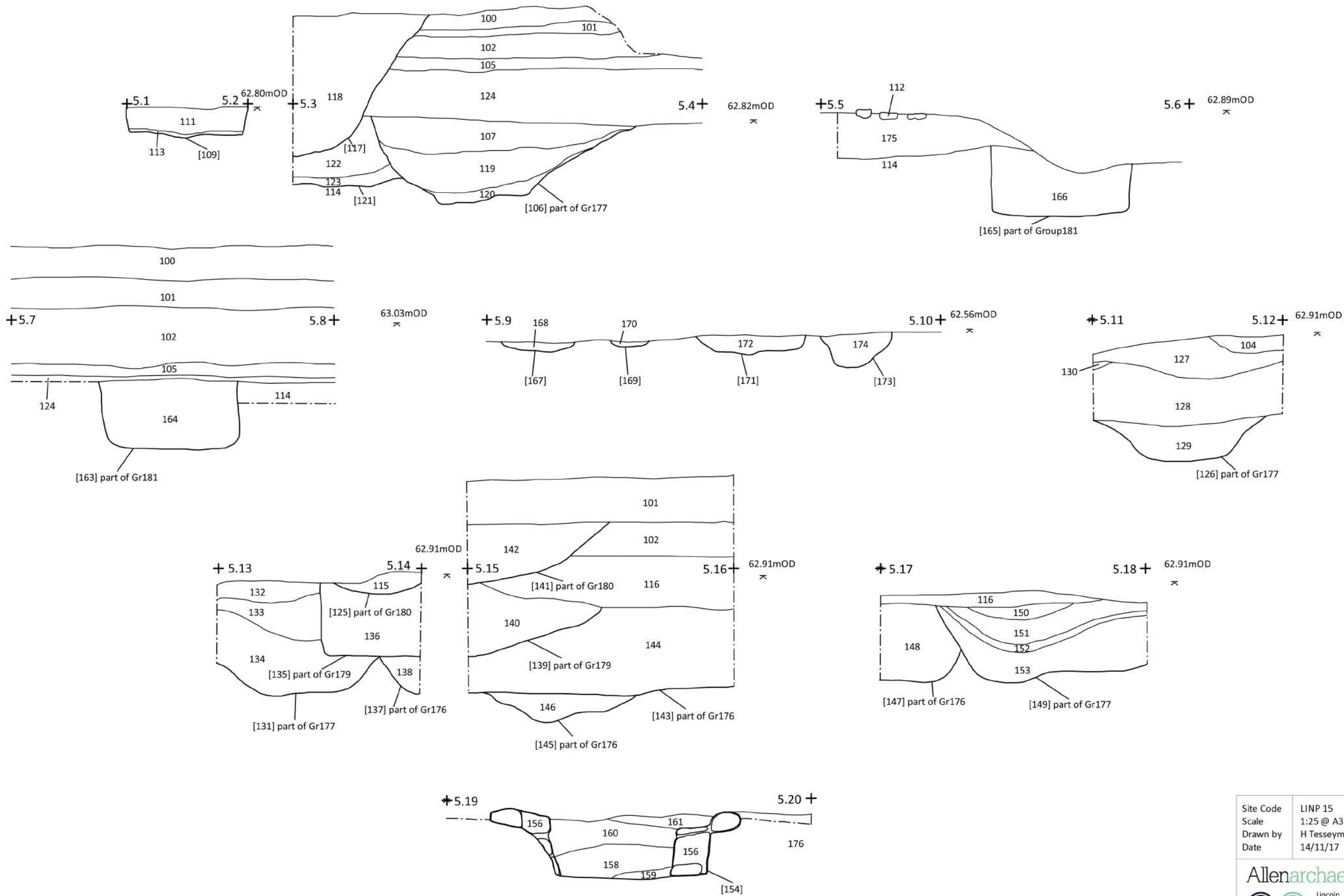
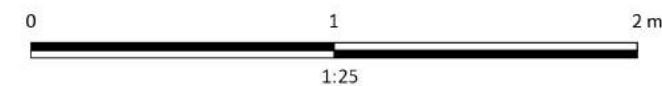
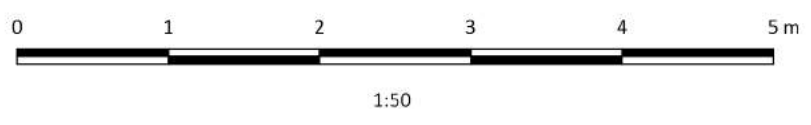
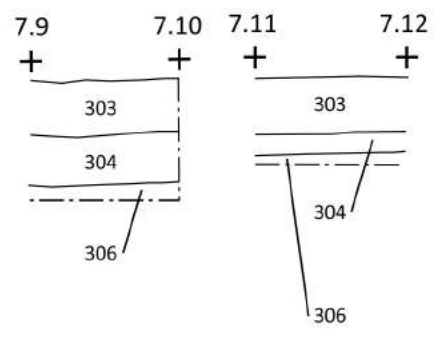
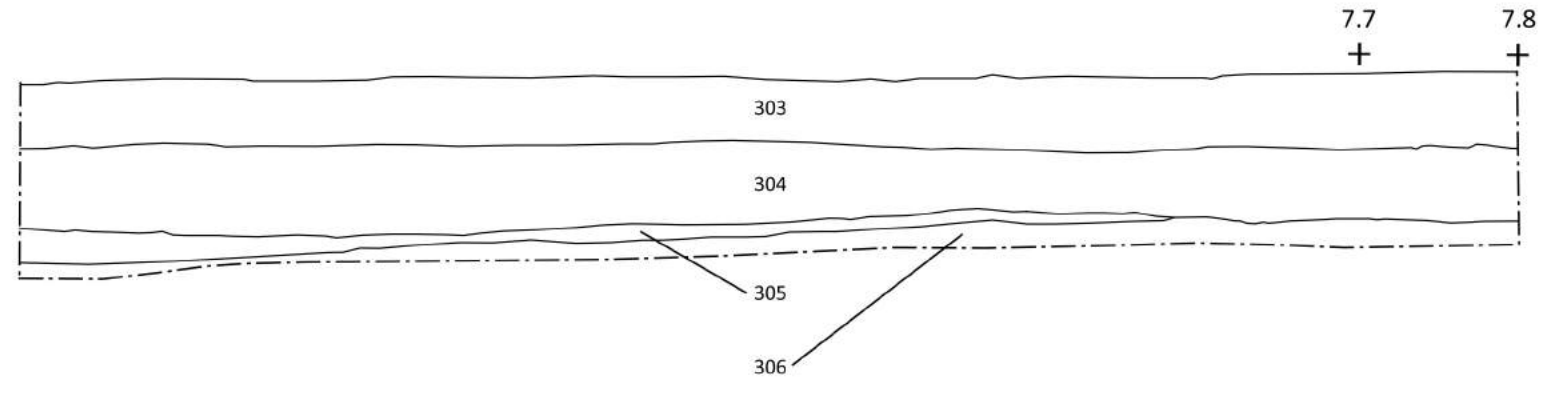
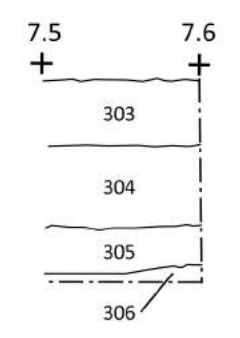
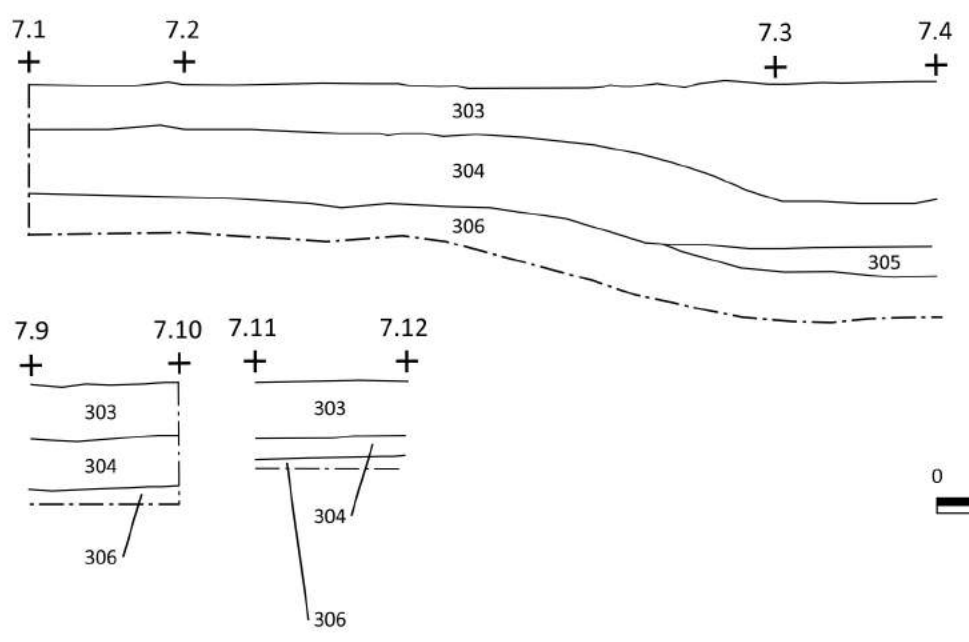
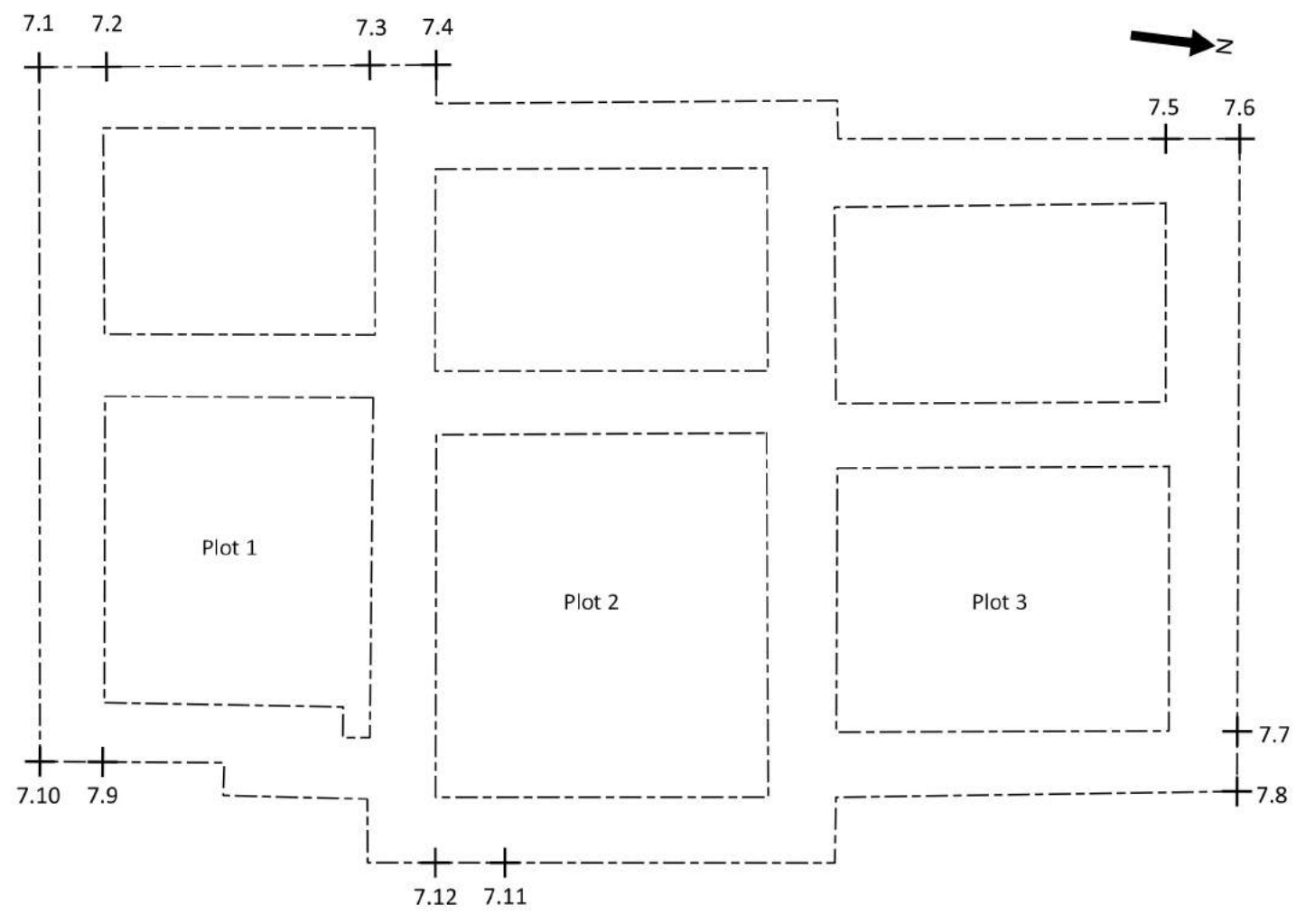
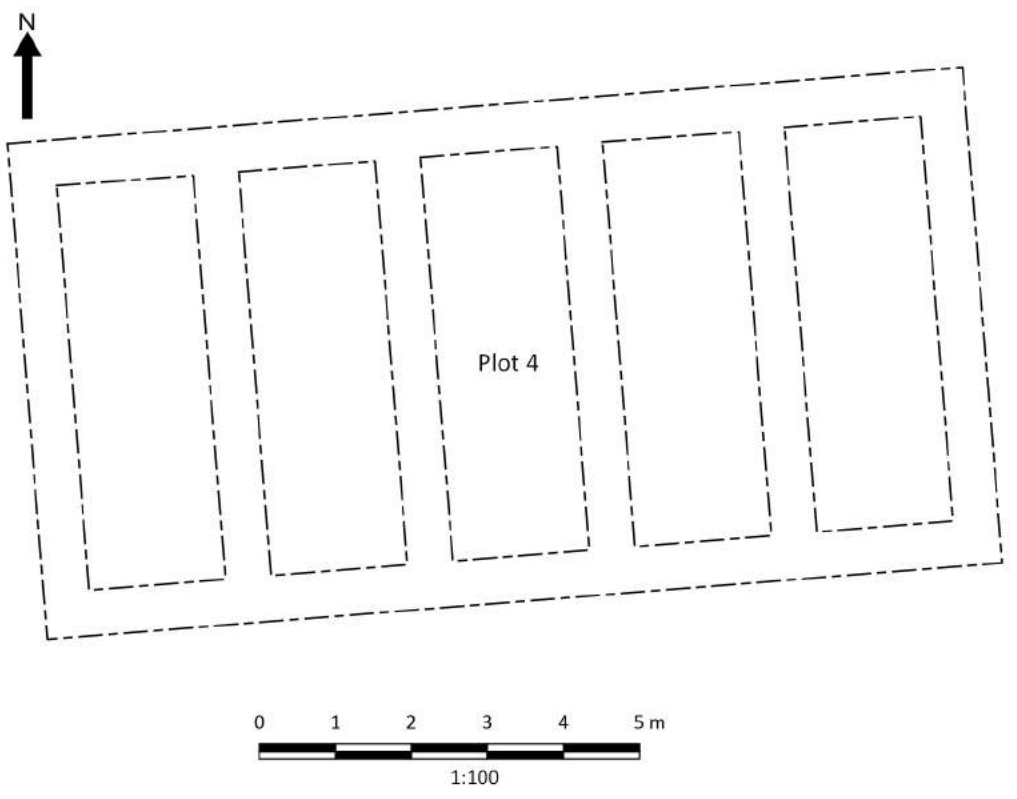


Figure 6: Area 2 sections



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Figure 7: Plans and sections of Area 3



Figure 8: Results of this investigation and previous work within the local landscape



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