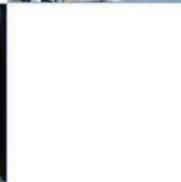
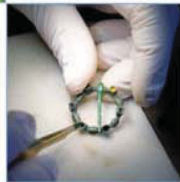
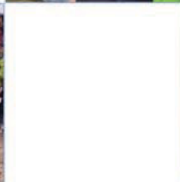
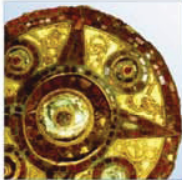


Blacksmith's Corner, Tattershall, Lincolnshire: A Post-Excavation Assessment Report

Planning Ref: S/175/1649/09
National Grid Reference: TF 2120 5803
AOC Project No: 30906
Site Code: BCT11
Museum Accession: LCNCC:2011.77
Date: October 2011



ARCHAEOLOGY

HERITAGE

CONSERVATION

Blacksmith's Corner, Tattershall, Lincolnshire; A Post Excavation Assessment Report

On Behalf of: DPP LLP
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National Grid Reference (NGR): TF 2120 5803

AOC Project No: 30906

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Date of Excavation: 3rd – 26th August 2011

Date of Report: October 2011

This document has been prepared in accordance with AOC standard operating procedures.

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Plate 3. Posthole groups [60] and [61] looking west.

NON-TECHNICAL SUMMARY

Between the 3^d and 26th August 2011, a programme of archaeological strip, map and sample was undertaken by AOC Archaeology Group on a site at Blacksmith's Corner, Tattershall, Lincolnshire, National Grid Reference (NGR) TF 2120 5803. The works were conducted on behalf of DPP LLP and carried out ahead of a proposed development for the construction of a new retail store with associated parking.

The principal objective of this report is to refine the research objectives of the project in light of the findings, and assess the potential of the archive to address these research objectives. This report summarises the stratigraphical sequence of archaeological remains, and describes the work undertaken to date on the archive.

The earliest phase of activity identified on site occurred during the Early Roman period, primarily consisting ditches that may form part of a coaxial field system. This activity continued into the Late Roman period with the alteration of some of the field system. The site appears to have been abandoned for much of the next 500 years with the next phase dated to AD 1066 - 1200, although this activity consisted of only a single ditch. The very low level of activity continued throughout much of the medieval period with only occasional pits and a pond being recorded.

A dramatic increase in activity occurred in the mid 15th to mid 16th centuries, coinciding with the reconstruction of Tattershall Castle, and the construction of Tattershall College and Church. This phase of building at the castle appears to be associated with economic and population expansion at Tattershall. This expansion may have required the excavation of the series of pits and a barrel well recorded on the site. A series of postholes may also have been associated with a building dated to this phase. The post-medieval period saw decreased activity on site with cattle burials suggesting pastoral farming was occurring in the locality. Little activity dated to the Victorian period or later was observed on the site.

Overall, a low density of archaeological features was identified during the course of the excavation from three periods dating to the Roman medieval and post-medieval periods. As a whole, the site is thought to be of regional significance with the potential to inform on the development of Tattershall in the Late Medieval period. It also informs on the agricultural activity during the Roman period.

Further specialist work has been recommended in the form of conservation on the corroded metalwork, and further analysis of the metalwork, animal bone and medieval pottery. A publication text should be produced for the Society for Lincolnshire History and Archaeology Journal; this will require further research, reporting, illustration and editing. The archive will be prepared and deposited with Lincolnshire County Council Guidelines.

1 INTRODUCTION

1.1 The Site

- 1.1.1 This document aims to summarise the results of the archaeological strip, map and sample, conducted by AOC Archaeology, at land at Blacksmith's Corner, Tattershall, Lincolnshire.
- 1.1.2 The site is centred on National Grid Reference (NGR) TF 2120 5803 and is located central to Tattershall town centre. The site is bound to the north and west by residential properties, to the east by open ground, and to the south by Blacksmith's Corner.
- 1.1.3 The site was previously occupied by a warehouse, facilities and yards of McCombe Coachwork Ltd; a commercial vehicle body works. The current development scheme comprises the construction of a new Tesco superstore with associated car parking facilities.
- 1.1.4 This report details the results and recommendations on the fieldwork conducted on the site.

1.2 Planning Background

- 1.2.1 The local planning authority is East Lindsey District Council. Archaeological advice to the council is provided by Jan Allen, Planning Archaeologist for Lincolnshire County Council.
- 1.2.2 The site was bound to the south by Tattershall Conservation Area; otherwise, the site did not lie within any designated area of archaeological potential and did not contain any Scheduled Monuments or Listed Buildings.
- 1.2.3 An archaeological condition was attached to planning consent (Planning Ref. S/175/1649/09), in order that the archaeological implications of the development could be fully considered. Condition 4 stated:

No development shall take place until a scheme specifying the methods of recording or preserving and archaeological deposits which may be affected by the approved works, including a timetable for such recording, has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out then in accordance with the approved scheme.

This was in keeping with Planning Policy Statement (PPS5), Policy HE12: Policy principles guiding the recording of information related to heritage assets, which states that local planning authorities should require the developer to record and advance understanding of the significance of the heritage assets before it is lost (DCLG 2010).

- 1.2.4 The development scheme comprised the demolition of all existing structures and the construction of a two storey Tesco retail store in the southern and central section of the site, with associated service yard area to the east; hardstanding for above ground car park facilities and access roads were to be located to the north and west.
- 1.2.5 The initial stage of the project consisted of the production of a desk-base assessment (AOC 2009) for the site. This study identified a low potential for prehistoric, and Roman remains, with a medium potential for medieval remains and a medium to high potential for post-medieval remains. The study recommended a programme of archaeological investigation in the first instance.
- 1.2.6 A brief was issued by Lincolnshire County Council recommending a programme of strip, map and sample (LCC, 2011)

- 1.2.7 The next stage was the production of a Written Scheme of Investigation (WSI) detailing the methodology for the programme of strip, map and sample (AOC 2011). This WSI conformed fully with the brief issued by Lincolnshire County Council.
- 1.2.8 This post-excavation assessment report conforms to the requirements of PPS 5 (Department for Communities and Local Government 2010). The subsequent fieldwork and reporting was conducted in accordance with the Written Scheme of Investigation (AOC 2011), current best archaeological practice and local and national standards and guidelines:
- English Heritage – Management of Archaeological Projects (EH 1991).
 - Institute for Archaeologists – Standard and Guidance for Archaeological Field Excavations (IFA 2008).
 - Institute for Archaeologists – Code of Conduct (IFA 2010).
 - Lincolnshire County Council – Archaeology Handbook (LCC 2009).
 - Lincolnshire County Council – 22 Market Place, Blacksmith's Corner, Tattershall; Archaeological Brief (LCC 2011).

2 GEOLOGY AND TOPOGRAPHY

- 2.1 Tattershall is situated c. 27km south-east of Lincoln on the west bank of the River Bain. The town lies on a spur of land formed by the confluence of the Rivers Bain and Witham. The natural topography of this spur differs from the surrounding areas of Amphill Clay, with Witham Fens to the west, and the foothills of the Lincolnshire Wolds to the north and north-east.
- 2.2 The Engineering Site Appraisal (Pinnacle, 2009) identifies that the application site is underlain by a superficial geology of River Terrace Deposits (First Terrace) overlying a bedrock of Amphill Clay Formation (Ancholme Group) of Jurassic (Oxfordian) age.
- 2.3 The site was relatively flat with a gradual decline in height from the north to south, lying at a height of approximately 5m Above Ordnance Datum (AOD).
- 2.4 Geo-technical site investigations were conducted within the bounds of the development site in 2007, with six trial pits excavated (AOC 2009).
- Trial Pit 1 in the north of the site encountered made ground comprising limestone fragments c.0.25m in depth overlying a 'silty topsoil' of c. 0.20m thickness. This was underlain by 'medium-dense light brown sand' to the extent of the trial pit (1.4m bgl).
 - Trial Pit 2, in the north-west of the site encountered similar made ground and topsoil deposits to Trial Pit 1, overlying a 'sandy gravel'. These deposits were also recorded in Trial Pit 3 in the west of the site.
 - Trial Pit 4, located to the south-west of Dorma Cottage, encountered c.0.10m of topsoil overlying 'dark brown silty fill' material to a depth of 1.10m bgl, which in-turn overlay a 'dry light brown sand / silty material' of c.0.70m thickness. This was underlain by natural sand.
 - Trial Pit 5, in the south-east of the site, encountered made ground (limestone scalplings) to a depth of 0.15m bgl, overlying 'silty topsoil / fill material' to a depth of 1.05m bgl overlying natural sand.
 - Trial Pit 6, in the north-east corner of the site, recorded made ground (limestone scalplings) to a depth of 0.30m over 'silty topsoil' 0.40m in thickness. This was underlain by natural sand.

- A further trial pit was excavated to the rear of the main works building, Trial Pit 7, in an area where potentially contaminated remnants / waste from the sand blasting in the adjacent workshop has been swept out and built up overtime. The Trial Pit encountered 'Black Sandy Fill' to a depth of c.1.3m bgl, overlying natural sand. A gravel bed was encountered at the bottom of the trial pit at c.1.6m bgl.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 The following background is taken from the desk-based assessment of the site produced by AOC Archaeology (AOC 2009).

The Prehistoric Period (c. 500,000 BP – AD 43)

- 3.2 No Palaeolithic activity has been recorded within 1km of the centre of the proposed development site. However, evidence of this period has been found during gravel extraction in the wider locality, with Palaeolithic reindeer and bison bones found in the Tattershall Castle gravel pit, c. 1.5km to the south of the site, a Palaeolithic hand axe was also recovered from a gravel pit, c. 2.8km to the north-east.
- 3.3 Neolithic activity within the 1km study area is possibly indicated by evidence of an enclosure and linear features identified on aerial photographs, c. 630m to the north-west of the proposed development site. A number of Neolithic stone axes were found c. 880m to the south-east of the site, on the banks of the River Bain. A possible Neolithic / Bronze age settlement site has also been recorded in the Tattershall Thorpe area, c. 3.7m to the north-east of the site.
- 3.4 Evidence of Bronze Age activity within the 1km study area is attested through the finding of a palstave, c. 740m to the north-west of the site, while evidence of ritual activity is suggested by the site of a round barrow, c. 820m to the north-west. Further Bronze Age barrow sites have been recorded in the surrounding landscape, c. 1.6km to the west of the proposed development site and c. 2.6km to the north-east.
- 3.5 There are no known sites of Iron Age date within the 1km study area; however, Iron Age activity has been recorded c. 3.7m to the north-east of the site, while an Iron Age enclosure has been identified on aerial photographs c. 1.2km to the north-east of the proposed development site.

The Roman Period (AD 43 – 410)

- 3.6 There is no known evidence of substantial Roman activity within Tattershall itself and only one site of possible Roman date lies within the 1km study area. This relates to cropmark evidence recorded on aerial photographs, representing potential enclosures c. 850m to the north of the proposed development site.
- 3.7 Within the wider area of Lincolnshire, the Roman presence is attested by a number of known settlements, including major settlements at Lincoln, Horncastle, Sleaford and Ancaster; villas at Haebly, North Stoke, Denton, Norton Disney and Scampton and a saltworks at Spalding. Recently a possible pottery industry and settlement of Roman date has been identified at nearby Tattershall Thorpe (Jane Young, conversation on 27th October 2011), to the west of the site. Finds included quantities of 3rd to 4th century pottery and fired clay.
- 3.8 Within the vicinity of Tattershall a probable Roman enclosure (thought possibly to be a marching camp) has been identified at Tattershall Park, c. 3.7km to the south of the development site. In addition a coin hoard of over 5,000 coins was found c. 2.2km to the north-east of the site, while a

possible Romano-British settlement site (including pottery kiln site and pottery finds of 3rd – 4th century) was recorded c. 1.8km to the north-west.

The Early Medieval (Saxon) Period (AD 410 - 1066)

- 3.9 The assessment has identified no known early medieval sites within the 1km study area. Within the wider area there has been little evidence of early medieval archaeological activity recorded, apart from the recovery of a male inhumation of 6th or 7th century date, c. 3.7km to the north-east of the development site.
- 3.10 However, numerous villages in the surrounding locality contain Danish elements in their place names (e.g. 'by' as in Coningsby and Kirkby, or 'Thorp' as in Laythorpe), which suggest an early medieval origin for these settlements related to the Danish invasion and migration of the 9th and 10th centuries. It is very probable that this reflects a renaming of settlements that were already in existence prior to the Danelaw).
- 3.11 The place-name elements of Tattershall is also thought to derive from the Old English personal name 'Tathere's', and the word 'Halh', meaning valley or flat alluvial land next to a river. This suggests that Tattershall has an early medieval origin; though it is not known where this settlement at Tattershall was specifically located.

The Medieval Period (AD 1066 - 1536)

- 3.12 Tattershall is recorded in the Domesday Book of 1086 when it comprised of two manors; Tateshale and Torp; Tattershall is then recorded in the Lindsey Survey of 1115.
- 3.13 The medieval settlement would have been undoubtedly dominated by Tattershall Castle, located c. 320m to the south-east of the development site. The castle was originally founded in the 13th Century by Robert de Tattershall and then later rebuilt by Ralph, Baron Cromwell at the beginning of the 15th century. The present castle remains are that of Cromwell's castle, with only fragments surviving of the earlier structure. The castle is a Scheduled Monument and includes the Grade I listed ruins of a 15th century stable block and the former Guard House. The remains of Cromwell's college are also a Scheduled Monument located to the southwest of the site.
- 3.14 Evidence of medieval activity has been noted in and around the castle site through a number of archaeological investigations and chance finds including a medieval pottery and animal's head in fields to the south of the castle and a French jetton on the site of Tattershall College.
- 3.15 It is probable that medieval settlement in Tattershall would have been focused around the Market Place; the Grade II Listed No. 60 Market Place, the Fortescue Arms, the brick wall to the rear of No.2 Market Place and the Grade II * Listed Old College (part of the Cromwell's college, located 10 metres south of No. 3 Market Place) are all of 15th century origin and demonstrate settlement activity in this area.
- 3.16 The Butter Cross, a Scheduled Monument located c. 60m south of the development site, sits in the centre of the Market Place and also dates to 15th century. It is probable that the Market Place would have been the location for the local market, for which a charter was granted in AD 1210 and the annual fair, which was granted in AD 1315.
- 3.17 There may have been medieval settlement activity within the vicinity of the Castle (possibly related to the earlier use of the site); this is indicated by cropmarks seen on aerial photographs, however, the cropmarks' provenance has not been confirmed by excavation and they might instead be enclosures, associated with the 15th century college.

- 3.18 Further archaeological evidence for medieval activity within the vicinity of the Market Place has been recorded through a pottery scatter at No. 14 Market Place, c. 60m to the south-west of the site, as well as medieval / post-medieval boundary ditches, c. 200m to the south-west.
- 3.19 In the wider area, evidence of medieval activity and land use is indicated by a number of findspots including a bronze escutcheon c. 970m to the north-east of the proposed development site; a coin of Henry VII c.900m to the east; a pottery jesters head found c.800m to the south of the site and medieval pottery noted through field walking c. 910m to the south-east of the site.

The Post-Medieval (AD 1536 – 1900) & Modern Periods (1900+)

- 3.20 Unlike other nearby market towns, such as Horncastle or Sleaford, Tattershall did not experience a rapid expansion in settlement size and population through the post-medieval period. While it has undoubtedly increased in size it never expanded in to what we would recognise today as a market town, instead becoming a large sized village.
- 3.21 A number of sites of post-medieval date lie within 1km of the site. Within the vicinity of the market place a number of Listed buildings have been recorded, which indicated the continued settlement activity in this area of town through the 17th, 18th and 19th centuries. In the wider area post-medieval activity is noted through findspots, c. 580m to the south-west of the site, while archaeological evidence of this period has been encountered in the area of Tattershall Castle.
- 3.22 A geophysical survey recorded a late post-medieval trackway passing through the field adjacent to the east of the development site. This trackway / footpath linked onto the end of Blacksmith's Corner and appears to head in a north-easterly direction, across the fields, roughly towards Tattershall Carr; an ancient semi-natural woodland.
- 3.23 The Tattershall Enclosure map of 1798 identifies the development site as consisting of approximately five separate plots of land. Three buildings are shown within the boundaries of the site; one in the south-east corner of the site, fronting onto what later becomes Blacksmith's Corner, a second similarly drawn building to the west of this fronting on to Blacksmith's Corner and a further L-shaped building in the south-west corner of the site.
- 3.24 The 1867 estate map of Earl Fortescue, a major landowner in the Tattershall area, shows the site in greater detail. The site is shown to comprise eight separate plots of land, the boundaries of which have been altered since the earlier Enclosure map. The map shows what appears to be a triple terraced building fronting on to modern day Blacksmith's Corner in the south of the site, a smaller building marked in the adjoining plot to the north-west of this and a further small building in the north of the site. A large building is shown on the corner of the Market Place.
- 3.25 The trade directories list Mr. James Gray as the blacksmith in the 'Market Place' in 1849, though it can not be certain this refers to the proposed development site. The 1867 estate map labels Blacksmith's Corner along the south of the site, which would suggest a blacksmith is likely to have been located there (possible in the south-west corner of the site, on the very corner of the Market Place) for sometime prior to that for the name to have become established; though this cannot be confirmed at this stage.
- 3.26 The 1889 Ordnance Survey map shows the site in greater detail. The majority of the buildings on site have remained unchanged, with the majority of the remaining area of the site identified as undeveloped and likely to be agricultural land (e.g. the northern half and part of the southern half of the site). In and around the buildings in the southern half of the site the land is likely to have been in use as yard and garden areas.

- 3.27 A sale catalogue detailing the sale of part of the proposed development site in 1905, records that the building shown on cartographic evidence in the south-west corner of the site comprised four cottages; the sale also included detached garden grounds in the south-east and west of the proposed development site.
- 3.28 Photographic evidence shows the nature of the site in the mid – late 20th centuries. The original McCombe Vehicle body workshop was present during the 1950s – 1960s, located in the south of the site, with adjacent terraced cottages to the west – as shown on the 1889 and 1905 OS Maps. These buildings are labeled as 'Smithy' on the 1889 OS map.
- 3.29 Aerial photographic evidence indicates how the site developed in the mid-late 20th century. By c.1960 the terrace buildings in the south of the site had been demolished, though the workshop was retained and an extension constructed to the rear. The coach repair garage is shown in the south-west corner of the site and the large main warehouse / assembly building in the east. By the 1970s, a new large extension has been constructed upon the north of the main warehouse building and the surrounding area covered with hardstanding. By the late 1980s / early 1990s the modern two storey extension has been constructed on the south of the main warehouse building.

4. STRATEGY

- 4.1 The work was carried out under the site code (BCT 11), a museum accession number LCNCC:2011.77 was also provided by the recipient museum.
- 4.2 The research aims outlined prior to excavation are discussed with reference to the results, and the further work to enable full interpretation and publication are outlined. Quantification of the resources needed to fulfil this work has been undertaken in the light of the revised research objectives.

5 ORIGINAL RESEARCH AIMS

- 5.1 The aims of the fieldwork were defined as being:
- To establish the presence/absence of archaeological remains within the site.
 - To determine the extent, condition, nature, character, quality and date of any archaeological remains encountered.
 - To map any archaeological remains encountered and sample excavate targeted features.
 - To assess the ecofactual and environmental potential of excavated archaeological features and deposits.
 - To determine the extent of previous truncations of the archaeological deposits.
 - To enable Jan Allen, archaeology advisor to East Lindsey District Council, to make an informed decision to satisfy that condition.
 - To make available to interested parties the results of the investigation.
- 5.2 The specific aims of the fieldwork were:
- To determine the presence of any remains which could inform on the medieval development and chronology of Tattershall.
 - To determine the presence any post-medieval features on site. Establish if the structures known from the post 18th century cartographic evidence still survive on site.
- 5.3 The final aim was to make public the results of the investigation, subject to any confidentiality restrictions through the ADS OASIS website.

6 METHODOLOGY

- 6.1 The strip, map and sample was targeted on the footprint of the new foodstore. A programme of monitoring was also carried out on the removal of the concrete foundations of the previous building prior to the start of the programme of strip, map and sample.
- 6.2 The stripping was conducted using a 16 tonne 360 tracked excavator with a flat blade toothless bucket. All machining was done under the supervision of a project supervisor. The area was reduced to the first archaeological significant deposit encountered. The features within the site were then mapped and sample excavated.
- 6.3 The full methodology can be found in the Written Scheme of Investigation (AOC 2011).
- 6.4 In this report cuts and structural remains are shown in square brackets '[000]' and fills and layers are shown in rounded brackets '(000)'.
- 6.5 The fieldwork was supervised by Ian Hogg and Catherine Edwards and managed by Alan Ford (Project Manager) for AOC Archaeology. The fieldwork was monitored by Jan Allen, Planning Archaeologist at Lincolnshire County Council who gives archaeological advice to East Lindsey District Council.

7 SUMMARY OF RESULTS

During the course of the fieldwork, four different periods of activity were recognised; the natural horizon, Roman, medieval and post-medieval.

7.1 Period 1 Natural

- 7.1.1 Natural orangey yellow sands gravels (4) were observed across the area at heights between 4.32mOD in the southeastern corner and 3.72mOD in the northwestern corner of the site. The natural deposit was overlain across the site by mid brownish grey silty sand subsoil (3) 0.10m thick.

7.2 Period 2 Phase 1 – Early Roman AD 43 – 150 (Figure 3 and 5)

- 7.2.1 The earliest form of activity recorded on the site was possibly part of a coaxial field system of early Roman date. The field system comprised of a single linear ditch on a northwest-southeast alignment and five further linears on a northeast-southwest alignment.
- 7.2.2 The single ditch on a northwest-southeast alignment [8] was 23.50m long, 0.70m wide and 0.17m deep with steep sides and a concave base; it terminated in the centre of the site. The fill (7) was a dark orangey brown sandy silt, it contained a single tiny CBM fragment thought to be intrusive.
- 7.2.3 The southernmost of the northeast-southwest aligned ditches [6] (Sections 55 and 56) was 35.00m long, 0.90m wide and 0.33m deep with steep sides and a concave base. The primary ditch fill (168) was only observed in the very southwest of the site, this was a mid brownish grey sandy silt 0.20m thick containing no finds. The upper ditch fill (5) was a firm, pale greyish brown sandy silt which contained only a small fragment of residual CBM. A second extremely similar ditch [20] ran parallel to [7] 3.00m to the northwest; this was heavily truncated by a later recut ditch [18]. The ditch measured 11.00m in length, 0.40m in width, 0.62m in depth and was similar in profile to [6]. The ditch fill (19) was very similar to (5) and again contained no finds.
- 7.2.4 Another parallel ditch [28] was recorded 16.00m to the northwest; this ditch was 35.00m long 1.00m wide and 0.20m deep, it had steep sides and flat based. The ditch fill (27) of pale yellowish grey silty sand contained a single small sherd of local sandy ware dated to the 1st to 2nd centuries AD.

- 7.2.5 To the northwest of ditch [28] was a parallel ditch [93] which terminated after running northeast for 11.20m from the western edge of site. The ditch had moderately sloping sides and a flat base; it was 0.70m wide and 0.17m deep. The primary ditch fill (92) consisted of mid brownish grey sandy gravel 0.09m thick and contained no finds. The upper ditch fill (91) was a very firm, mid brownish red sandy clay 0.11m thick; fill again contained no finds. Fill (91) was unusual in its reddish colour and also its firmness.
- 7.2.6 A second linear feature (110) ran southwest from the eastern edge of site for 13.50m before terminating. This feature had gently sloping sides and undulating base; it was 1.00m wide and 0.08m deep. The fill (109) was a loose mid greyish brown sandy silt containing no finds. This feature has been interpreted as a possible hedgeline due to its shallowness and uncertain edges. Together with ditch [93] there does seem to be a possible entrance, with a 18.50m gap between the terminals.

7.3 Period 2 Phase 2 Late Roman AD 200 – 400 (Figure 3 and 5)

- 7.3.1 The late Roman activity on the site appears to have remained fairly similar to the Earlier Roman agricultural activity, with only ditches and two pits being recorded and a paucity of finds noted.
- 7.3.2 Ditch [18] (Sections 6, 55 and 56) was linear with a v-shaped profile with steep sides. The ditch was aligned southwest-northeast but on a slightly different alignment to the previous field system, represented by ditches [5] and [20], which it truncated; the ditch measured 35.00m in length and was up to 1.87m and 0.48m deep. The ditch was at a height of 4.07mOD in the northeast and 3.83mOD in the southwest. The primary ditch fill (17) was a dark greyish brown sandy silt 0.18m thick and contained no finds. The secondary fill (16) consisted of pale greyish brown sandy silt 0.37m thick; this fill contained a single rimsherd of 3rd to 4th century Greyware.
- 7.3.3 A second ditch [86] (Section 30 and 49) has been assigned to this period on stratigraphic grounds. This ditch ran southeast-northwest for 25.00m before turning southwest and running a further 7.50m. The ditch was v-shaped with steeply sloping sides and was 1.30m wide and 0.52m deep. The ditch fill (85) was a pale brownish grey silty sand and contained a single cattle radius. This ditch ran roughly along the same axis as the previous earlier field system.
- 7.3.4 Two shallow pits [148] and [157] in the southern corner of the site have also been assigned to this phase on stratigraphic grounds; Both pits were sub-circular with gently sloping sides and flat bases and both were heavily truncated by later medieval ditch [139]. Pit [148] measured 1.20m x 1.20m x 0.20m. The fill (147) was a mid greenish grey sandy silt containing no finds. Pit [157] measured 1.00m x 0.80m x 0.40m. The pit fill (156) consisted of mid greyish brown sandy silt and contained no finds.
- 7.3.5 In addition to the possible Roman features, two fragments of residual Roman tegula were also found in medieval well fill (34) and post-medieval pit fill (29).

7.4 Period 3 Phase 1 Earlier Medieval AD 1066 – 1200 (Figure 4 and 5)

- 7.4.1 The earliest medieval activity on the site dates to the Saxon-Norman period; a single ditch [139] (Sections 47, 48, 53, and 55) was excavated in the southern corner of the site. The ditch was aligned northnorthwest-southsoutheast and was linear with steep sides and a concave base; it measured 11.20m in length, 1.00m in width and 0.60m in depth and was encountered at a height of 3.91mOD. The primary ditch fill (138) consisted of soft, dark grey sandy silt up to 0.50m thick, which contained two sherds from a Lincolnshire Fine-shelled Ware bowl dated to the 11th or 12th centuries, it also contained cattle, horse and unspecified large mammal bone. This was partially overlain by fill (151),

a dark grey silty sand 0.25m thick, this deposit contained no finds. The upper ditch fill (137) consisted of mottled yellowish grey sandy silt, 0.25m thick and containing no finds.

7.5 Period 3 Phase 2 Medieval AD 1200 – 1440 (Figure 4 and 5)

- 7.5.1 A very low level of activity dated to AD 1250-1440 was noted on site. A single large shallow pit [102] (Section 42) was recorded in the centre of the site; this was oval with gently sloping sides and a flat base. The pit measured 4.35m in length, 2.26m in width and 0.24m in depth and was observed at a height of 3.89mOD. The pit fill (101) consisted of pale greyish brown silty sand, with CBM flecks. This fill contained fragments of roof tile which can broadly be dated to the 13th to 16th centuries.
- 7.5.2 On the western edge of site a large pond [66] (Sections 24 and 33) was recorded; this measured 6.00m x 3.80m x 0.68m and was observed at a height of 3.68mOD. The pond had gently sloping sides with a slightly undulating base. The primary fill (65) consisted of 0.15m of very loose grey gravel and contained no finds. This was sealed by a deposit of dark brownish black peat (64) 0.30m thick which did not contain any finds but has been dated to AD 1280 – 1400 by radiocarbon dating. The environmental sample taken from this feature also included waterlogged wood and seeds; the seeds came from species such as knotweed, sorrel and dock which are prevalent in wet conditions. The presence of these species and the low level of archaeological activity seen in this phase suggests the area may have been relatively undisturbed with wild plants growing freely. The peaty fill was overlain by a deposit of mid brown sandy silt (79) 0.40m thick and containing no finds; this fill was sealed by a deposit of mid reddish orange gravel 0.10m thick (80). The pond was cut by later medieval pit [98].

7.6 Period 3 Phase 3 Later Medieval AD 1440 – 1536 (Figure 4 and 5)

- 7.6.1 The later medieval phase was the most intense period of activity on site and was typified by the excavation of discreet features across the site.
- 7.6.2 The most notable of these features were a series of large pits; these were generally found in two areas, on the eastern edge of the site and in the western corner. The pits were initially interpreted as cess pits due to their shape. However, the lack of any macrofossils in their fills, which is usually associated with cess pits calls this interpretation into question. These pits could be associated with some industrial activity occurring on the site and possibly associated with the rapid construction (including the castle) occurring in Tattershall in the 15th century. A number of the pits contained significant amounts of charcoal and especially roundwood charcoal; this may indicate it derived from coppiced woodland. Coppiced rods were often used for fuel and for wattling. They may have been gravel extraction pits, later filled with dumps of waste material.
- 7.6.3 The pits excavated in the east of the site [22], [84], [90], [118] varied slightly in size and shape but almost all had vertical sides and flat bases.
- 7.6.4 Pit [22] (Section 7) was the largest of the pits; it was rectangular with slightly flared corners, probably signs of some form of post structure covering the pit. The pit measured 2.15m x 1.75m and was 1.15m deep. The pit was observed at a height of 4.12mOD. The primary pit fill (26) consisted of a greyish black clayey sand 0.36m thick, the fill contained sherds of mid 15th to early 16th century pottery, animal bone and CBM. This primary fill was overlain by a mixed deposit of mid greyish brown clayey sand (25) which was 0.35m thick, no finds were retrieved from this deposit. The tertiary fill (24) consisted of soft, mid grey silty sand 0.25m thick, this fill also contained no finds. This was overlain by a very dark grey, silty sand fill (23) which contained frequent inclusions of mollusc shell;

the fill was 0.10m thick and contained no finds. The upper pit fill (21) consisted of mid grey sandy silt 0.32m thick; this fill also contained no finds.

- 7.6.5 To the southeast of pit [22] was a second large, rectangular pit [118] (Section 41); this pit measured 2.19m x 1.70m x 0.85m and was seen at a height of 4.14mOD. The primary fill (117) consisted of loose, mid yellowish orange sandy gravel 0.28m thick and was probably naturally accrued through slumping; this contained no finds. The secondary fill (116) consisted of dark grey brown silty clay with very frequent inclusions of wood chippings and reed, probably discarded matting; this was 0.11m thick, but again no finds were retrieved. This deposit may represent the discarding of reeds or chippings used as flooring. The tertiary fill (115) consisted of pale yellowish green sandy clay 0.30m thick with no finds; this fill was overlain by a deposit of dark bluish grey clayey silt (114) 0.12m thick, this fill contained sherds of mid 15th to mid 16th century pottery, animal bone, CBM and possible worked stone.



Plate 1. Pit [118] Looking northeast

- 7.6.6 Fill (114) was sealed by a pale yellowish grey sandy silt fill (113) 0.35m thick, this fill contained CBM and sherds of mid 15th to mid 16th century pottery. This fill was overlain by a pale yellowish grey sandy silt fill (113) 0.35m thick which contained sherds of pottery dated to the mid 15th to mid 16th centuries and fragments of CBM. Fill (113) was sealed by a deposit of mid orangey yellow sandy gravel 0.14m thick; this deposit did not contain any finds. The upper fill of the pit consisted of loose, dark bluish grey sandy silt with frequent charcoal inclusions, this fill was 0.37m thick and contained pottery dated to the mid 15th to mid 16th centuries, it also contained fragments of roof tile.
- 7.6.7 To the southwest of pit [118] were two smaller pits [84] and [90]. Pit [84] (Section 28) was oval in shape with steeply sloping sides and a concave base; it was 2.10m long, 1.25m wide, 0.63m deep and was observed at a height of 4.17mOD. The primary pit fill (83) consisted of firm, dark bluish grey sandy silt 0.28m thick, it contained animal bone and pottery dated to the late 15th to Mid 16th centuries. The secondary pit fill (82) consisted of mid yellowish brown sandy silt and was 0.17m thick; the fill did not contain any finds. The upper pit fill (81) was a dark brownish grey sandy silt 0.28m thick which contained oyster shell, fragments of roof tile and handmade brick.

- 7.6.8 Pit [90] (Section 31) was oval shaped, with vertical sides and a flat base; this measured 2.10m in length, 1.20m in width, 0.76m in depth and was observed at a height of 4.12mOD. The primary pit fill (89) was a firm dark bluish grey silty sand 0.14m thick, no finds were retrieved from this context. The secondary fill (88) consisted of mid greenish grey clay 0.47m thick, this fill contained sherds of pottery dated to the 13th to 16th centuries. The upper pit fill (87) was a firm mid orangey brown sandy silt and was 0.29m thick; this fill contained roof tile and pottery dated to the mid 15th to mid 16th centuries.
- 7.6.9 Another pit [11] was also excavated to the southeast of these pits; this pit was subrectangular in shape with vertical sides and a concave base; the pit was 3.20m long, 1.90m wide and 0.43m deep at a height of 4.32mOD. The primary pit fill (10) consisted of soft mid orangey brown sandy silt 0.24m thick and contained no finds. The upper pit fill (9) was a dark greyish brown sandy silt and contained sherds of pottery dated to the 15th to 16th centuries as well as animal bone and two fragments of the same red brick, the fill was 0.43m thick.
- 7.6.10 A second group of three very similar pits [136], [142], and [155] were recorded in the southwest of the site. Pit [136] (Section 46) was oval in shape with vertical sides and a flat base, it measured 2.50m in length, 1.54m in width and 0.90m in depth; the feature was seen at a height of 3.87mOD. The primary pit fill (135) consisted of dark brownish grey sandy silt 0.45m thick containing pottery dated to the mid 15th to 16th centuries, roof tile, brick, animal bone and an iron hinge this fill also contained a waster of Toynton/Bolingbroke ware. The secondary fill (134), a loose, dark brownish grey sandy silt 0.25m thick contained roof tile, brick, floor tile, animal bone and pottery dated to the late 16th to 17th centuries, this is thought to be intrusive. The upper pit fill (133), a dark greyish black sandy silt, was 0.25m thick; this fill contained animal bone, CBM and pottery of mid 16th century date. This fill also contained seven iron objects, these included nails, possible tines, a knife, an awl or punch and a vessel handle.
- 7.6.11 Pit [142] (Section 50) was oval in shape, with vertical sides and a flat base; it measured 1.90m x 1.20m x 0.36m at a height of 3.88mOD. The primary pit fill (141) was a mid brown sandy clay containing no finds and was 0.21m thick. The upper pit fill (140) was a dark brownish grey clayey silt containing pottery dated to the mid 15th to mid 16th centuries, this fill was 0.15m thick.
- 7.6.12 Pit [155] (Section 54) was oval with vertical sides and a flat base; it was 2.40m long, 1.11m wide, 0.42m deep and was observed at a height of 3.84mOD. The primary pit fill (154) consisted of soft, greyish black sandy silt 0.07m thick, the fill contained no finds. The secondary pit fill (153) was a dark grey sandy silt 0.16m thick and containing animal bone, roof tile, an unidentified iron object and pottery dated to the late 15th to mid 16th centuries. The upper pit fill (152) consisted of blackish grey sandy silt and was 0.20m thick; this contained animal bone, CBM, and pottery of 19th century date thought to be intrusive and three metallic objects including an iron nail, an iron drop handle and copper wire.
- 7.6.13 To the northeast of these pits was a single feature interpreted as a barrel well [39] (Section 14); the well was oval with very steep sides and a flat base. This well measured 2.10m in length, 1.55m in width and 1.15m in depth and was observed at a height of 3.94mOD. A single coopered barrel [36] had been placed into the well, the base of the barrel had been removed. The barrel consisted of 13 staves secured with a wooden hoop, all constructed from oak heartwood. The barrel measured 0.47m in diameter, with the individual staves measuring between 0.46m and 0.61m in length. The top of the staves were not extant due to decomposition, the barrel is thought to have had an original height of 1.37m. The staves included evidence for multiple vent holes, some of which have been banded. Two of the staves were incised, these marks are thought to be from the barrel construction.

While the feature has been interpreted as a barrel well, its fill was extremely sterile which could point to a different use for the feature. It could, for instance, represent a water tank for use in industrial or construction activities.

- 7.6.14 Surrounding the well were seven rough wooden off cuts used as chocks to hold the barrel in place [35], [37], [38], [73], [74], [75], [76], [119] and [163]. This material has not been identified to species and had mostly been tangentially cleft. The fragments measured between 0.70m and 0.24m in length, 0.52m and 0.04m in width and 0.40m and 0.04m in thickness. Occasional stone fragments and bricks had also been used to support the barrel.



Plate 2. Barrel Well [39] looking southeast.

- 7.6.15 A deposit of loose pale brownish orange sandy gravel (162) had been placed around the barrel to support its weight, this fill was 0.50m thick and contained medieval Brick. The barrel was filled by loose mid brownish grey gravelly sand (34) 0.50m thick; this fill contained fragments of a small Toynton Ware jug dated 1250 – 1450, brick and roof tile dated 1450-1550, and a complete horse skull.
- 7.6.16 The barrel and its fill were sealed by dark greyish brown sandy clay fill (33); this fill was 0.48m thick and contained cattle and other large mammal bone, CBM, pottery dated 1450 – 1550. It also contained a socket iron tool with a flat toothed blade of undetermined function.
- 7.6.17 In the northwest of the site was a single large pit [98] (Section 34), this feature was 3.20m long, 2.30m wide and 0.90m deep; it was observed at a height of 3.64mOD, it was oval in shape, with steep sides and a flat base. The primary fill (97) consisted of mottled yellowish grey gravelly sand 0.40m thick, this deposit contained sherds of pot dated to the mid 15th to mid 16th centuries. The upper pit fill (96) was a mottled brownish grey sandy silt containing pottery dating to the 15th to 18th centuries, horse, cattle and large mammal bone, and CBM; the fill was 0.55m thick. This pit had a very different profile to the large pits across the south of the site and may have had a different function.

- 7.6.18 This pit was cut by a second smaller pit of broadly similar date [95]; this pit was oval, with gently sloping sides and a flat base; it measured 3.00m in length, 1.40m in width and 0.35m in depth. The pit fill (94) consisted of dark greyish black clayey silt; it contained cattle and sheep bones, and pottery of 13th to mid 16th century date. The fill also contained a heavy iron ring which was probably part of a bridle fitting.
- 7.6.19 In the north of the site were two parallel lines of postholes. The northern line of six postholes, was assigned the group number [61], and comprised of individually numbered postholes [49], [51], [53], [55], [57] and [59] (Sections 19 and 21). These were aligned southwest-northeast and were subcircular, steep sided with concave bases. The postholes varied in size between 0.27m and 0.48m in diameter, and between 0.12m and 0.30m in depth. The larger postholes [51], [53], [55], [59] were evenly spaced at around 1.20m apart, the smaller postholes [49] and [57] were situated directly next to [51] and [55] respectively and probably provided additional support to the posts. The posthole fills (48), (50), (52), (54), (56), and (58) respectively, all consisted of mid brownish grey silty sand; a single sherd of Toynton Late Medieval Ware, dated AD 1450 – 1550 was retrieved from fill (58).
- 7.6.20 The southernmost line of postholes, assigned the group number [60] consisted of six postholes of slightly varying size [41], [43], [45], [47], [78], and [68]. These postholes were all subcircular, with steep sides and concave bases and varied in height from 4.04mOD at the eastern end to 3.90mOD at the western end. The postholes varied in size from 0.25m to 0.47m in diameter, and 0.14m to 0.37m in depth, the larger and deeper postholes were all excavated at the eastern end of the line, this is probably due to the slightly higher ground in this area. The posthole fills (40), (42), (44), (46), (77) and (67) respectively; all consisted of mid brownish grey silty sand and contained no finds.



Plate 3. Posthole groups [60] and [61] looking west.

- 7.6.21 These two lines of postholes were parallel and 1.00m apart, they are likely to have formed a structure or possibly a fence line, however, the baulk obscured the course of the lines it is hard to say what form this structure took.
- 7.6.22 Immediately to the south of posthole [78] were two further postholes [70] and [72]; these features were extremely similar to the other postholes being subcircular with steep sides and concave bases. Posthole [70] was 0.22m in diameter and 0.13m deep, while posthole [72] was 0.28m wide and 0.10m deep. They both contained fills of mid greyish brown sandy silt (69) and (71) respectively, no finds were retrieved from these features and they have been assigned to this phase because of their proximity and similarity to the lines of postholes.
- 7.6.23 To the south of the postholes were a series of isolated subcircular pits; [100], [104], [106], [108]; these features were all very similar in shape and also all had steep sides and concave bases, the small pits varied in size from 0.40m to 0.90m in diameter and 0.11m to 0.20m in depth. The fills of these features (99), (103), (105), (107) respectively, were all very similar, being mid brown grey silty sand. A single sherd of Toynton/Bolingbroke Ware was retrieved from fill (107); this can be dated to AD 1450-1740. These pits may have been associated with the structure to the north.
- 7.6.24 Another feature possibly associated with the structure was an elongated pit excavated close to the northern boundary of the site [63], this pit was oval and measured 2.80m in length, 0.90m in width and 0.30m in depth, the pit was recorded at a height of 3.89mOD. The fill (62), a mid grey sandy silt contained a single fragment of Bourne Ware dated 1450-1550, as well as a cattle femur.
- 7.6.25 In the centre of the site small subcircular pit [121] cut through earlier medieval pit fill (101); the pit was circular and measured 1.45m in diameter and 0.38m in depth; the pit has gently sloping sides and a flat base. The primary pit fill (120) was a moderately compacted, pale brownish grey clayey sand 0.20m thick which contained two sherds of Cistercian Ware, a single sherd of Toynton-Bourne type pottery, CBM as well as cattle and sheep/goat bones. The upper pit fill (122), a pale brownish grey silty sand 0.17m thick contained no finds.

7.7 Period 5 Phase 1 – Post-Medieval 1536 – 1800 (Figure 4 and 5)

- 7.7.1 The post-medieval period appears to have seen a lessening in the intensity of the activity on the site. Only four pits have been assigned to this period. Pit [15] was excavated in the south of the site; this pit was subcircular, with steep sides and an undulating base; the pit measured 1.60m in length, 1.20m in width and 0.20m in depth. The pit fill (14) consisted of mid orangey brown sandy silt and contained three sherds of a glazed red earthenware drinking vessel, dated to between the mid 17th and 18th centuries. The fill also contained CBM, and a large variety of animal bone including sheep/goat, chicken, Woodcock and Wood Pigeon, evidence of a varied diet.
- 7.7.2 Two square pits were excavated on the southeastern boundary of the site [30] and [32]; both pits were square, with vertical sides and flat bases, they measured 1.60m in diameter and were 0.18m and 0.14m deep respectively. The pit fills (29) and (31) both consisted of dark greyish brown silty clay; both contained semi complete cattle skeletons which were only partially articulated but showed no signs of butchery. Fill (29) also contained CBM, clay tobacco pipe and Black Glazed Earthenware dated AD 1650-1750. Fill (31) contained CBM and Tin Glazed Ware date AD 1660 – 1740.
- 7.7.3 In the southeast of the site a single pit was excavated [13]; this was sub-rectangular with steep sides and a flat base and measured 2.30m in length, 1.20m in width and 0.19m in depth. The pit fill (12), a mid greyish brown sandy silt contained large and medium sized mammal bones as well as a brick dated to the 15th to 18th centuries.

7.8 Period 5 Post Medieval and Modern 1800 – Present (Figure 4)

- 7.8.1 A single brick lined Victorian pit was recorded in the south of the site [161], only the very base of the feature remained, it was circular and measured 1.30m in diameter and was 0.07m deep with vertical sides and a flat base. The brick lining [160] consisted of a single course of unfrosted, unmortared red bricks measuring 225mm x 110mm x 70mm and laid in stretcher pattern. The fill between the cut and the brickwork (159) consisted of loose pale grey sandy silt 0.07m thick and contained no finds. The cess pit fill (158) was a dark grey sandy silt 0.07m thick and containing CBM, and pottery including 19th century Buffware, English Stoneware and Pearlware all of which can be dated to the 19th century. This feature was probably a cess pit associated with the former blacksmiths workshop and associated dwelling in the southern corner of the site.
- 7.8.2 To the north of the cess pit was a small posthole [146], which had steep sides and a concave base; it measured 0.33m x 0.25m x 0.09m. The pit fill (145) contained pottery date to the late 17th to 20th centuries.
- 7.8.3 Features dated to the 19th and 20th centuries were noted across much of the site and were investigated to rule out the possibility of their being earlier features. Many of these were related to the coach factory which previously occupied the site, and included a chimney base and inspection pit. These features were not recorded.

7.9 Undated features

- 7.9.1 A number of features across the site remain undated and do not tie into any particular phase. The largest of these features was pit [128] (Section 43) in the north of the site. This pit was subcircular, steep sided with a flat base and measured 2.80m in length, 2.60m in width and 0.90m in depth. The primary pit fill (127) was a loose, mid brownish grey sandy gravel 0.40m thick which contained no finds. The secondary fill (126) consisted of dark grey silty sand 0.20m thick, again no finds were retrieved from this context. The tertiary fill (125) was a pale mottled orangey grey silty sand 0.20m thick and containing no finds. The upper pit fill (124) was a dark brownish grey sandy silt 0.35m thick, once again this fill contained no finds. The function of this pit is hard to discern, it may have been a small gravel extraction pit unknown date.
- 7.9.2 A second undated pit [132] lay immediately to the east. This was oval, with steep sides, and a concave base; it was 1.60m long, 0.90m wide and 0.70m deep. The pit fill (131) was a mid orangey brown sandy silt which did not contain any finds. A second sterile pit [13] lay to the west; this pit was subcircular, with gently sloping sides and a flat base; it measured 2.20m in length, 2.00m in width and 0.20m in depth. The pit fill (129) consisted of pale orangey grey sand.
- 7.9.3 Two further undated pits were located to the south; pit [165] was circular, with a v-shaped profile; it measured 0.90m in diameter and 0.18m in depth. The pit fill (164) was a pale brownish grey silty sand which contained no finds. Pit [167] was oval in shape, with gently sloping sides and a flat base; it was 1.35 long, 1.30m wide and 0.30m deep. The pit fill (166) was a very pale grey silty sand containing no finds.
- 7.9.4 A single isolated posthole [144] was also excavated in the south of the site; this was circular with a 0.20m diameter, 0.15m deep and had a concave profile. The posthole fill (143) was a dark greyish brown sandy silt and contained no finds.
- 7.9.5 The archaeological features were sealed by a thick deposit of dark brownish grey sandy silt (2) which has been interpreted as an agricultural soil; it varies in depth between 0.10m in the north and

0.40m in the south. The soil was overlain by deposit of greyish brown rubbly made ground (1), which varied in thickness from 0.70m in the north to 0.10m in the south.

8 SUMMARY OF SITE ARCHIVE AND WORK CARRIED OUT

8.1 Stratigraphic Site Archive

Stratigraphic Site Archive	Quantity
Context Sheets	168
Context Register Sheets	5
Plans	18
Plan Register Sheets	1
Sections	56
Section Register Sheets	2
Levels Sheets	3
Small Finds Register	1
Photographic Register Sheets	8
Environmental Sample Register Sheets	1
Environmental Sampling Sheets	13
Photographs, Black & White	76
Digital Photos	153

8.2 Work Carried Out On the Stratigraphic Archive

The site records have been completed and checked. A context register has been completed (Appendix A). The stratigraphic matrix has been compiled for the site. Contexts have been placed into preliminary phases using stratigraphic information and dating provided by specialists (Appendix B). Several illustrations have been constructed to accompany the results showing the location of the features that have been phased. The photographic archive has been checked, marked and referenced. The receiving museum is to be The Collection: Art and Archaeology in Lincolnshire.

9 SUMMARY OF FINDS AND ANALYSIS OF POTENTIAL

9.1 Quantification of Finds

All of the finds have been washed, catalogued and marked where appropriate. The archive boxes have been ordered and listing ready for deposition with The Collection: Art and Archaeology in Lincolnshire. The evaluation archive has also been assessed by specialists in accordance with the guidance laid down in MAP 2 (EH 1991).

Find Type	Quantity
Roman Pottery	87g- 2 sherds
Medieval Pottery	5363g- 122 sherds
Post Medieval Pottery	732g - 31 sherds
Ceramic Building Material	28415g - 117 fragments
Metalwork	14 pieces
Clay Tobacco Pipe	21g- 2 fragments
Geological material	5653g – 6 pieces
Animal Bone	457 pieces

Find Type	Quantity
Environmental residues	13 samples
Preserved Wood	21 pieces

9.2 Finds (Appendix C)

Roman Pottery

- 9.2.1 A total of two sherds of pottery weighing 87g from two individually numbered contexts were examined. Each sherd represents the only dating evidence for an entire phase. Both sherds of pottery are probably of local manufacture and may originate from the pottery production at Tattershall Thorpe, the neighbouring village.

Medieval Pottery

- 9.2.2 A total of 122 sherds of pottery, weighing 5363g, from 16 individually numbered contexts were examined. Some 71 different vessels are represented. Sherd size tends to be largest for the 15th and 16th century material with the earlier pottery generally being represented by small sherds. Overall the medieval pottery is from local sources, much of the assemblage originating from the Kirkstead, Toynton/Bourne and Toynton/Bolingbroke industries; the pottery having moved to Bolingbroke in the mid to late 15th century. The only imported wares noted were sherds from two Dutch Red Earthenware bowls. A single waster of Toynton/Bolingbrooke fabric from a pit indicates the site's close proximity to a pottery industry, possibly associated with the recent discovery of a multi period pottery industry at Tattershall Thorpe (Jane Young, pers. Comm.).
- 9.2.3 Overall the small assemblage consists mainly of domestic cooking and table wares and is of local significance with moderate potential for further work.

Post-Medieval Pottery

- 9.2.4 A total of 31 sherds weighing 732g were recovered from eight individually numbered contexts. This small assemblage consisted of 17th and 18th century table wares and also 19th and 20th century industrially produced wares. Many of the wares were produced fairly locally.
- 9.2.5 The assemblage is of only limited significance with no potential for further work.

Ceramic Building Material

- 9.2.6 A total of 117 fragments of ceramic building material (CBM) weighing 28415g were recovered from 15 contexts. With the exception of two residual Roman tegula fragments, the CBM assemblage is of medieval and post-medieval date. The majority of the assemblage consists of roof tile and brick of local manufacture and from a wide variety of sources, including brick of the fabric type seen in the Holy Trinity Church, Tattershall. Much of the brick is very similar to that found at Tattershall College and Castle and broadly similar varieties of roof tile have been found in local excavations.
- 9.2.7 The assemblage is of local significance and has limited potential for further analysis.

Clay Tobacco Pipe

- 9.2.8 A small assemblage of two clay tobacco pipe fragments weighing 21g from two individually numbered contexts. An incomplete bowl and stem dated 1700-1770. The second stem fragment was not diagnostic. The assemblage is of very limited significance with no potential for further work.

Geological Material

- 9.2.9 A total of six stone fragments with a total weight of 5653g were recovered from four individually numbered contexts across the site. All of the material was limestone of local extraction. None of the material showed signs of working and only a single fragment of the material showed evidence of crude splitting. The assemblage is of limited significance and no further work is recommended.

Animal Bone

- 9.2.10 The assemblage contains 457 fragments of bone from 19 contexts. The majority of the assemblage derives from features dating to medieval and post-medieval periods. The assemblage is in a mixed condition with some large fragments remaining although a number of specimens display signs of weathering and degradation. The vast majority of the assemblage is of cattle bone from two post-medieval pits. Much of the remaining assemblage comes from large medieval pits, with a complete horse skull being retrieved from the fill of the barrel well. The assemblage is of local significance with moderate potential for further analysis.

Environmental Samples

- 9.2.11 Flots from eight bulk samples as well as charcoal, uncharred material and mollusca from the residues from five samples were submitted for post-excavation assessment. With the exception of samples from the large, medieval pits each sample produced a small flot. The ditch samples produces flots containing mainly uncharred plant remains with rare charcoal and charred wheat seeds, other cereals and a single common pea, as well as small mammal bones. The sample from the barrel well contained surprisingly little with only uncharred seeds found.
- 9.2.12 The residues from the later medieval pits produced larger flots, again mainly of uncharred remains as well as mollusc remains. The lack of charred remains was initially surprising as cess pit fills are frequently rich in these remains. The presence of uncharred remains may be post-depositional but is more likely to be contemporary as many of the samples were taken from deposits on the water table, the waterlogging ensuring good preservation. A notable lack of fly puparia and coprolites from these features brings into question their initial interpretation as cess pits, they may have been gravel extraction pits or pits of some other industrial nature. These pits contained large assemblages of charcoal with significant amounts of roundwood present; this may indicate that it derived from coppiced woodland. Coppiced rods were frequently used for wattling and for fuel.
- 9.2.13 The assemblage is of limited significance, the charcoal assemblage requires further work to characterise the charcoal and also study woodland management.

Metalwork

- 9.2.14 Fifteen metal objects were recovered (14 iron and one copper alloy) from four individual contexts. Identified objects include three nails. The remaining finds came mainly from two medieval pits and including a number of tools including a knife, a punch or awl, a possible serrated scraping tool and tines. Two handles a possible bridle ring, a hinge and two unidentified object made up the remaining iron objects. A single piece of copper wire was also found. All of the finds originated from medieval contexts. The assemblage is of local significance with moderate potential for further analysis.

Preserved Wood

- 9.2.15 A total on 21 pieces of preserved wood were retrieved from the site. The majority of the pieces were oak heartwood from the coopered barrel; the remaining seven pieces were off cuts used to secure the barrel in place; these pieces were of undetermined species.
- 9.2.16 The assemblage is of local significance; the assemblage has no potential for further analysis, illustration of the two incised barrels is however recommended, after which the wood can be discarded. A sample of the assemblage would, however prove suitable for dendrochronological dating, but considering the relatively tight dating of the feature this is not thought to be necessary.

10 SIGNIFICANCE OF THE DATA

10.1 Summary of Results

- 10.1.1 During the course of the excavation dispersed archaeological features were recorded across the full area of the site. The features excavated date to three distinct periods; the Roman, medieval and post-medieval periods.
- 10.1.2 The earliest phases of activity recorded dated to the 1st to 2nd centuries AD and form a possible coaxial field system seen across the entire site. The ditches were typified by being linear and shallow with very sterile fills; only a single sherd of pottery was retrieved from these features. This field system is indicative of some form of agriculture taking place, probably some distance from any settlement activity.
- 10.1.3 The second phase of Roman activity was dated to the 3rd to 4th centuries AD. This consisted of alterations to the previous field system in the form of the excavation of larger ditches, two shallow pits have also been assigned to this phase. The ditches again contained very few finds suggesting the site was still some distance from the nearest settlement. The alignment and slight curve of the southwest-northeast ditch from this phase appears to be mirrored by Blacksmith's Corner to the south, suggesting a possible continuation in the use of this boundary alignment into the medieval period.
- 10.1.4 The site seems to have been completely abandoned after the Roman period and the next phase of activity observed dates to the 11th and 12th centuries. The activity is limited to a single ditch on a northwest-southeast alignment. The function of the ditch is undetermined but it does not follow the alignment of the earlier ditches.
- 10.1.5 During the second medieval phase of activity, dated 1200 – 1440, the site does not appear to have undergone a change of land use. The macrofossil remains in the pond deposits show the presence of weeds and wild plants, while the only cut feature was a wide shallow pit of unknown function. Throughout this period the site appears to have been located outside of Tattershall in a little used area of land.
- 10.1.6 The later medieval Phase 1440 – 1550 was far better represented on the site with a series of pits being excavated across the site and a possible structure in the north of the site. These pits were initially thought to be cess pits may have been gravel extraction pits or pits of some other industrial function. The presence of a probable barrel well in this phase along with the pits suggests the site was located on edge of the settlement of Tattershall, within easy walking distance to access the pits or well. The two lines of postholes in the northeast of the site would probably have formed a timber building or a fence line.

- 10.1.7 The post-medieval activity can be divided into two phases; the first phase dated 1550 – 1800 shows a definite decline in activity on the site with only isolated pits being recorded. Two of these pits contained complete but semi articulated cattle skeletons and could indicate pastoral agriculture.
- 10.1.8 The later post-medieval and modern phase, date 1800 – present, consisted of a single brick lined cess pit probably associated with the nearby blacksmiths. A number of unrecorded 19th century and modern pits were also observed across the site, most of these were associated with the coach works which previously occupied the site.

10.2 Discussion of Significance

Roman

- 10.2.1 Roman remains were not anticipated on site and as such were not specifically highlighted in the original aims for the excavation. The results of the fieldwork appear to show that the site was utilised throughout the Roman period although not intensively. Despite the lack of dating evidence for either Roman phase, the stratigraphic relationships of the features of this period reinforce their Roman date.
- 10.2.2 The earlier Roman activity is part of a probable coaxial field system; this type of system is typical of Roman arable farming. The lack of finds is likely to indicate that the field system was some distance from the associated settlement. A known settlement was located 1.8km from the site; this settlement is thought to have produced pottery of a similar type to the single sherd dated to this phase.
- 10.2.3 The later Roman activity consisted of the alteration of the existing field system, indicating the continuation of land use from the previous phase. Despite the slight changes of ditch alignment, the activity is very similar, with very few finds being retrieved.

Medieval

- 10.2.4 During most of the medieval period the site seems to have occupied a position on the periphery of Tattershall; very little activity occurred during the 11th and 12th centuries, a time when, despite having two manors, Tattershall was a small settlement without a market.
- 10.2.5 Tattershall expanded during the 13th and 14th centuries when the original castle was constructed and the settlement was granted a market charter. Despite this, there was no increase in the intensity of activity on the site; the only features of this date were a single shallow pit and a pond. The reason for this lack of activity may have been the low lying nature of the site discouraging any potential activity.
- 10.2.6 The site and Tattershall itself underwent a marked change during the mid 15th century when Ralph Cromwell rebuilt the castle, and also constructed the church and college. This injection of money and industry would have led to economic and population growth. This growth is clearly reflected on the site. The low lying nature of the site was probably the reason why it was used for pits rather than for permanent inhabitation. The influx of workers to help construct the numerous buildings of this time would certainly have led to a shortage of accommodation, of wells and of areas for industrial use. The site contained some evidence for a drive to meet these shortages, with a probable barrel well in the centre of the site and numerous large pits, probably connected with the medieval construction industry. People may have been living and working on the site in a transient settlement directly connected to the work opportunities provided by the construction occurring in Tattershall.
- 10.2.7 The function of the possible building or structure in the north of the site is harder to discern; the structure could again have been related to the industries required at the time.

Post-Medieval and Modern

- 10.2.8 The post-medieval period marks a clear drop in activity on the site. The fortunes of Tattershall itself waned during this period as the castle was passed to successive landowners until in 1693 it was abandoned.
- 10.2.9 The presence of semi articulated cattle burials probably indicates pastoral farming on the site until the 19th century. A single brick lined cess pit, and a number of unrecorded pits represent the Victorian and Modern activity, much of which relates to the former coach works.

General Significance

- 10.2.10 In summary, assessment of the excavation results from the Blacksmith's Corner site has shown that the results have limited potential for further work. The results of the excavation confirm the presence of Roman, medieval and post-medieval remains on site. The presence of Roman remains, while known in the Tattershall area, was not expected on the site. The medieval activity in Tattershall has been well documented; however the on site remains clearly reflect the changing land use of the site and this part of Tattershall in general, they also hint towards a relationship with the large scale construction taking place at Tattershall during the mid 15th century. Although the remains are low in density, they do have the potential to add to the growing knowledge of the Tattershall area and how the area was utilised during those periods. As such the results are of at least local significance.

11 Review of the Research Aims

11.1 Realisation of the Research Aims

- 11.1.1 This section examines the extent to which preliminary assessment of the results of the excavation indicates that the original research aims outlined in the Written Scheme of Investigation (AOC 2010) have been or can be answered.

Determine the presence/absence of Remains on the site.

- 11.1.2 Archaeological remains were present across the site, with most features dated to the medieval period.
- 11.1.3 Two phases of Roman activity were also observed. The first consisted of a coaxial field system from the 1st to 2nd centuries AD, dated on a single sherd of pottery. The lack of finds seems to indicate the field system was some distance from the associated settlement.
- 11.1.4 The second phase of activity involved the recutting and alteration of the field system during the 3rd to 4th centuries AD. Large ditches on slightly different alignments as well as two shallow pits were recorded.

Determine the presence of any remains which could inform on the medieval development and chronology of Tattershall.

- 11.1.5 The medieval activity on site can be divided into three phases. The earliest phases dated 1066 – 1200 consists of only a single ditch terminating in the south of the site. The lack of further evidence suggests Tattershall was a very small settlement with little activity extending as far as the site. This is unsurprising considering the settlement did not have a market at this time and the castle was yet to be built.
- 11.1.6 The second medieval phase of activity dated 1200 – 1440 again shows sporadic activity, with only a pond feature and a single pit being excavated. Tattershall Castle was constructed during this period

and the settlement obtained a market charter. The site appears to have remained relatively undisturbed with environmental evidence from the pond showing the no evidence for cereal remains. This may have been due to the low lying nature of the site.

- 11.1.7 The later medieval phase 1440 – 1550 is marked by more intense activity on the site, mainly in the form of large pits and possible structures. The reconstruction of Tattershall Castle, Church and College would have required a large number of workers and would have led to economic and population growth reflected in the temporary expansion of the settlement. The fence line or structure in the northeast of the site could also be related to this activity.

Determine the presence any post-medieval features on site. Establish if the structures known from the post 18th century cartographic evidence still survive on site.

- 11.1.8 Activity on site became markedly less intense in the early post-medieval period, possibly reflecting the declining fortunes of Tattershall Castle and village. The burial of partially articulated animals indicates possible pastoral farming on the site with the activity in the southeast of the site probably being related to the Smithy in the area.
- 11.1.9 The 19th century saw some expansion in Tattershall with cartographic evidence showing buildings on site. A large number of 19th and 20th century pits were excavated on site, as well as a brick lined cess pit and a possible chimney base. Much of this evidence relates to the coach works, while no evidence of any of the buildings seen on the maps was found.

11.2 Revised Research Aims

- 11.2.1 Following the completion of the fieldwork and the initial post-excavation assessment of the site, it is apparent that some of the original research aims are no longer valid, whereas others require reviewing on the basis of the evidence collected. For those research aims that are valid it is possible to identify additional research questions which will be addressed as part of the work undertaken in preparation for the publication of the site. These are listed below.

- 11.2.2 One of the key research aims of the site is to relate it to other archaeological remains which have been identified locally, which includes other evaluations and excavations of Roman and medieval date in the surrounding area. It is important that we understand how the evidence from the excavation fits into the known activity in the local area.

- 11.2.3 Additional questions relating to 11.1.2 are:

- What is the relationship between the Roman remains recorded on site to the remains recorded on nearby sites? How do the remains on site compare to the sites found nearby?
- Why was the site seemingly abandoned at the end of the Roman period?

- 11.2.4 Additional questions relating to 11.1.3 are:

- How do the remains on site inform on the size and nature of Tattershall in the 11th to 15th centuries?
- How do the remains on site compare to the sites found nearby?
- Can the results inform on the construction and industry taking place in Tattershall in the mid 15th century and associated with Ralph Crowell's building work at the Castle, College and Church?

- 11.2.5 Additional research relating to 11.1.4 is:

- Why did the land use on site change in the mid 16th century?

12 SUMMARY OF FURTHER WORK

Task	Description	Resource	Days
General			
1	Documentary research	IH	1
2	Checking and integration of digital drawn and contextual data	IH	0.25
3	Checking and integrating the matrix and the checking and completion of site phasing and digital plans	IH	0.25
Analysis			
4	Medieval pottery: Short publication text	JY	0.5
5	Metalwork: Further analysis and reporting	TC	2
6	Conservation	EY	3
7	Illustration of waster and barrel staves	LC	0.5
8	Animal bone: Further analysis and reporting	GA	2
9	Charcoal assemblage: Further analysis and reporting	KH	2
Report, Publication and Archiving			
9	Integrating specialist reports	IH	1
10	Liaison with specialists	MM	0.5
11	Completion of drawings for publication	JM	2
12	Liaison with illustrator	IH	0.5
13	Preparation of publication text	IH	2
14	Editing and review of publication text	IH	0.5
15	Amendments resulting from external editor's comments to publication text and figures	IH	0.5
16	Proof reading	MM	0.5
17	Archive preparation	TF	3
18	Archive microfilming	TF	2
19	Liaison with publication editor	MM	0.25
20	Project management and editing: overall	MM	2

13 CATALOGUE OF FURTHER WORK

13.1 Documentary Analysis

Research of primary sources and documents concerning the site, including cartographic evidence. Research into possible comparison sites. Time has been set aside to integrate any digital or contextual information.

13.2 Specialist Reports

Medieval Pottery

- Short Publication Text
- Illustration of Waster

Metalwork

- Further detailed cataloguing

- Research into local parallels
- Short Publication Text

Conservation

- Conservation of iron
- Reporting
- Packing and Archiving

Animal Bone

- Further analysis of horse skull
- Reporting

Preserved Wood

- Illustration of staves

Environmental Samples

- Further analysis of charcoal assemblage
- Reporting

13.3 Illustrations

Plans and Sections

- 13.3.1 The digitised plans produced for the publication will require checking and correcting to ensure it is linked correctly with the contextual database. In the course of the analysis extra drawings may be needed, so time has been given to allow for extra work to aid the structural analysis.
- 13.3.2 The digitised site plans will be used to produce publication illustrations. These will accompany the site narrative, being annotated to identify the features discussed in the text, at an appropriate scale.

13.4 Overall Publication, Archiving and Project Management

- 13.4.1 Following specialist analysis, the reports will be integrated into the publication report. Time has been allocated for consultation and amendments to be made during this phase of work, involving both the editor and specialists. Time has been allocated for proof reading and editing of the publication report prior to submission. Time has been allocated for liaison with the publication editor with regard to, submission of material and a summary of content.
- 13.4.2 The archive will be prepared in accordance with the Lincolnshire County Council Guidelines (2010), Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990) and Archaeological Archives; A guide to best practice in creation, compilation, transfer and Curation (Brown & AAF 2007). On completion of the project, the Developer/Landowner will discuss arrangements for the archive to be deposited with the appropriate museum.
- 13.4.3 A digital copy of the report will be lodged in association with the online OASIS form (Appendix D).
- 13.4.4 The management of the project includes monitoring task budgets, programming tasks, editing drafts production of the final report and publication for submission, and liaison with all members of the project team.

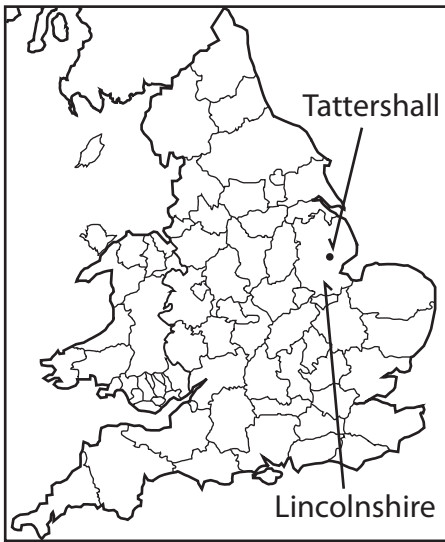
Potential for Publication

- 13.4.5 It is anticipated that an article of approximately five pages will be produced, including site drawings, site location, plan of excavation area showing the main features with additional illustrations where

needed. The publication will be submitted to the 'Society for Lincolnshire History and Archaeology Journal'. Publication of the site data will also be made through the Archaeological Data Service OASIS form (Appendix D).

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Approximate Site Location
Within England & Wales

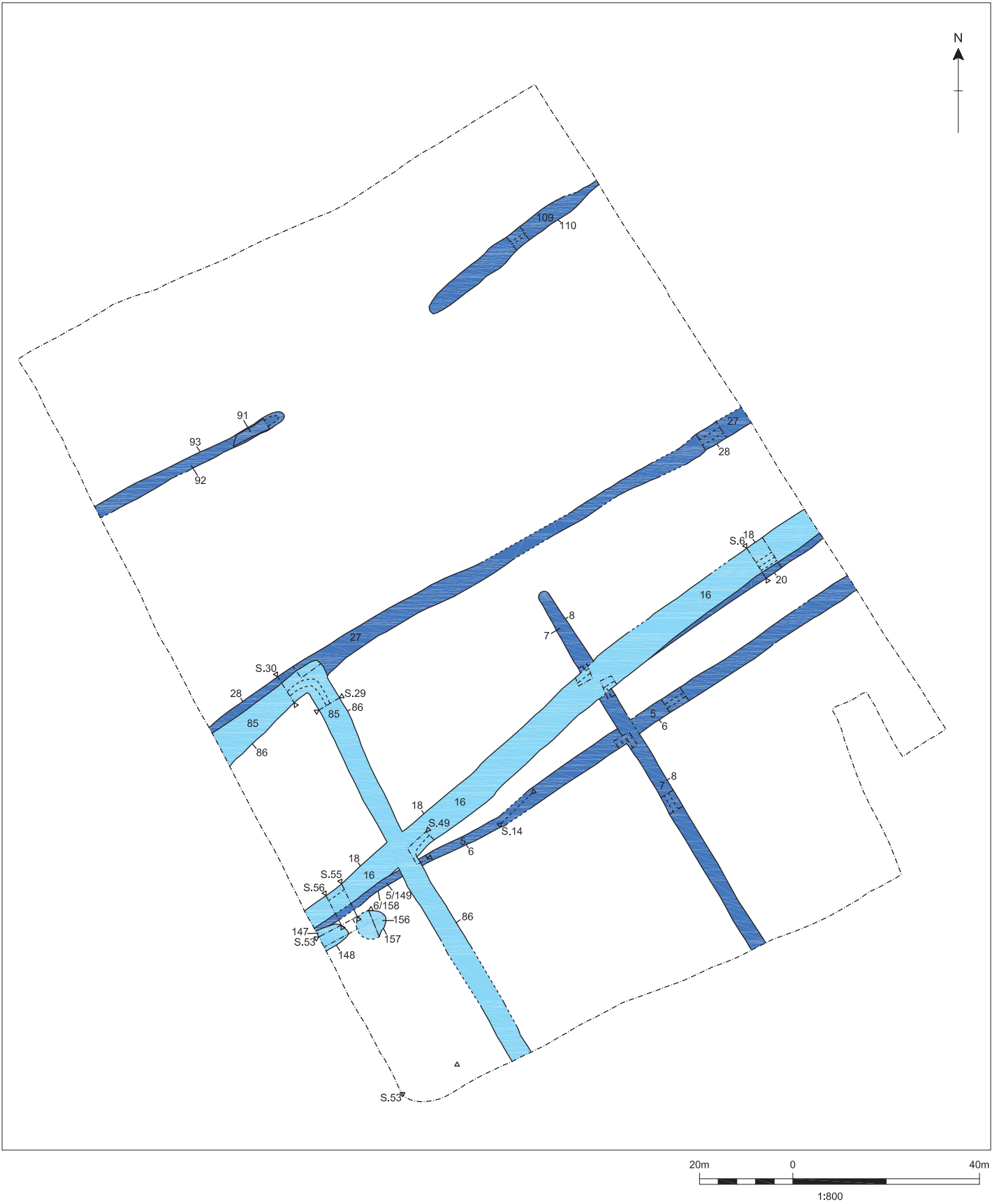


Based on the Ordnance Survey's 1:50 000 Landranger map of 1993 with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Licence No. AL 100023757

500m 0 2 km

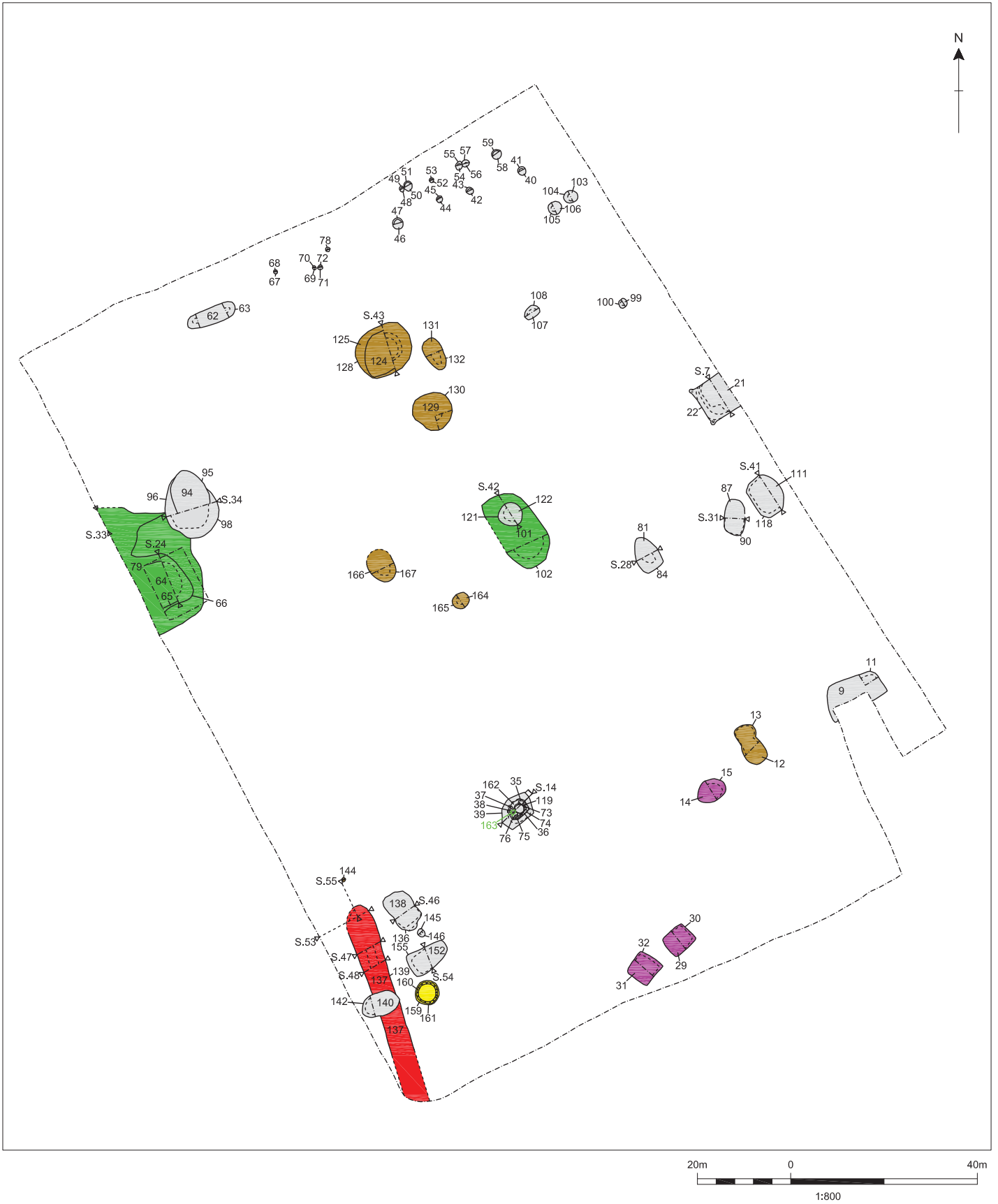
1:50 000

Figure 1: Site Location



■ Period 2: Phase 1 – Early Roman AD 43–150 ■ Period 2: Phase 2 Late Roman AD 200 – 400

Figure 3: Plan of Period 2 Roman



- Period 3: Phase 1 - Earlier Medieval AD 1066-1200
- Period 3: Phase 2 - Medieval AD 1200-1440
- Period 3: Phase 3 - Later Medieval AD 1440-1550
- Period 4: Phase 1 - Post-Medieval AD 1550-1800
- Period 4: Phase 2 - Late Post-Medieval and Modern
- Undated

Figure 4: Plan of Period 3 Medieval and Period 4 Post-Medieval

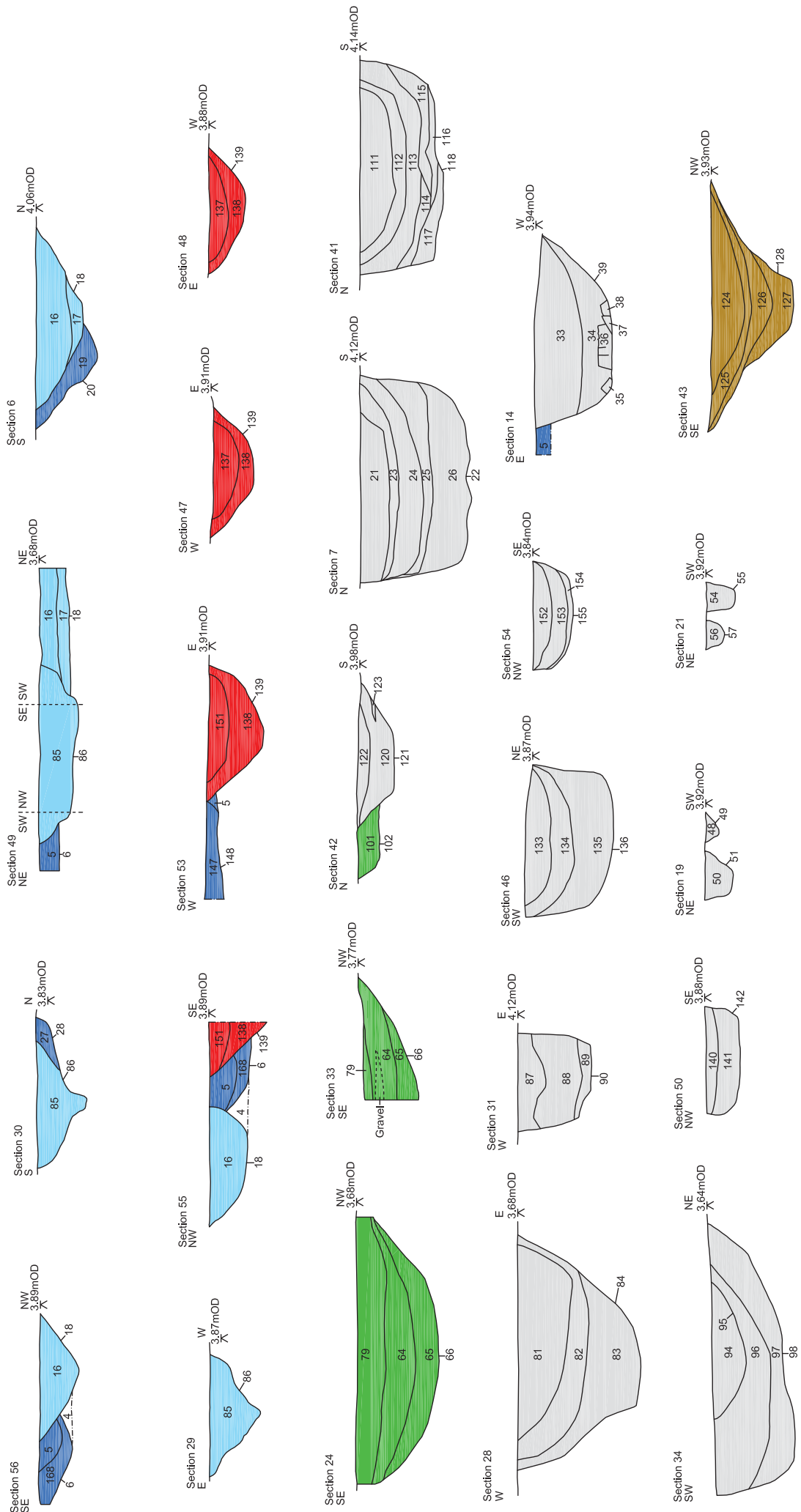


Figure 5: Sections

- Period 2: Phase 2 - Late Roman AD 200-400
- Period 3: Phase 1 - Early Medieval AD 43-150
- Period 3: Phase 2 - Medieval AD 1200-1440
- Period 4: Phase 1 - Post-Medieval AD 1550-1800
- Period 4: Phase 2 - Late Post-Medieval and Modern

Figure 5: Sections

Appendices

Appendix A – Context Register

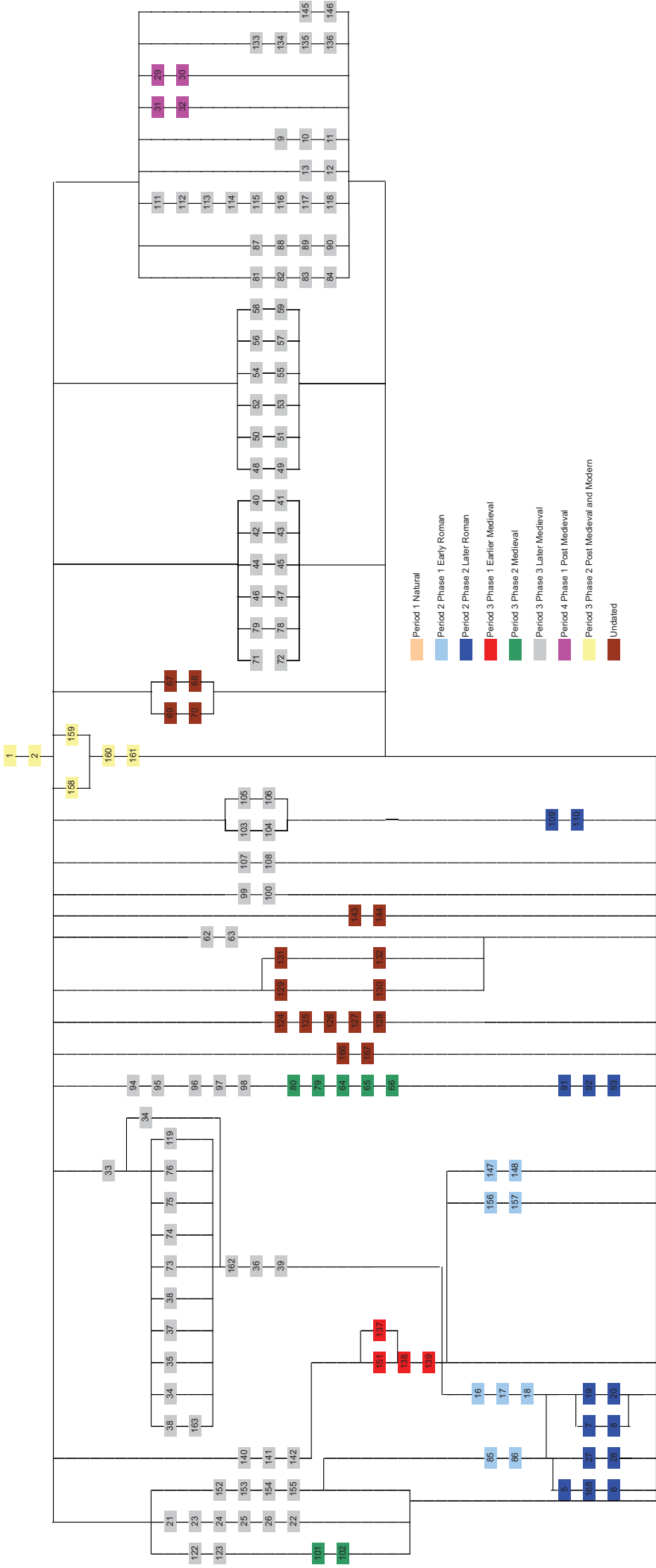
Context No.	Context Description	Length	Width	Depth
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2	Agricultural Soil	55.00m	35.00m	1.10m
3	Subsoil	55.00m	35.00m	0.10m
4	Natural Sand	55.00m	35.00m	0.10m
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6	Ditch Cut	21.00m	0.90m	0.33m
7	Ditch Fill	23.50m	0.70m	0.17m
8	Ditch Cut	23.50m	0.70m	0.17m
9	Pit Fill	3.20m	1.90m	0.43m
10	Pit Fill	3.20m	1.90m	0.24m
11	Pit Cut	3.20m	1.90m	0.43m
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13	Pit Cut	2.30m	1.30m	0.19m
14	Pit Fill	1.60m	1.20m	0.20m
15	Pit Cut	1.60m	1.20m	0.20m
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18	Ditch Cut	35.00m	1.87m	0.48m
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20	Ditch Cut	35.00m	0.40m	0.62m
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28	Ditch Cut	23.00m	1.00m	0.20m
29	Pit Fill	1.60m	1.60m	0.18m
30	Pit Cut	1.60m	1.60m	0.18m
31	Pit Fill	1.60m	1.53m	0.14m
32	Pit Cut	1.60m	1.53m	0.14m
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34	Well Fill	2.10m	1.55m	0.33m
35	Wooden Support	0.31m	0.21m	0.15m
36	Wooden Barrel	0.52m	0.52m	0.40m
37	Wooden Support	0.24m	0.12m	0.04m
38	Wooden Support	0.39m	0.32m	0.22m
39	Well Cut	2.10m	1.55m	1.15m
40	Posthole Fill	0.50m	0.48m	0.26m
41	Posthole Cut	0.50m	0.48m	0.26m
42	Posthole Fill	0.40m	0.40m	0.40m
43	Posthole Cut	0.40m	0.40m	0.40m
44	Posthole Fill	0.30m	0.30m	0.26m
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49	Posthole Cut	0.30m	0.30m	0.15m

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61	Posthole group			
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75	Wooden Support	0.38m	0.14m	0.09m
76	Wooden Support	0.40m	0.34m	0.30m
77	Posthole Fill	0.25m	0.25m	0.20m
78	Posthole Cut	0.25m	0.25m	0.20m
79	Pond fill	6.00m	3.80m	0.40m
80	Pond fill	4.00m	3.00m	0.10m
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83	Pit Fill	2.01m	1.01m	0.63m
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135	Pit Fill	1.54m	1.12m	0.46m
136	Pit Cut	1.54m	1.12m	0.90m
137	Ditch Fill	11.20m	1.00m	0.25m
138	Ditch Fill	11.20m	1.00m	0.50m
139	Ditch Cut	11.20m	1.00m	0.60m
140	Pit Fill	1.90m	1.10m	0.50m
141	Pit Fill	1.90m	1.10m	0.21m
142	Pit Cut	1.90m	1.10m	0.36m
143	Posthole Fill	0.20m	0.20m	0.15m
144	Posthole Cut	0.20m	0.20m	0.15m
145	Posthole Fill	0.33m	0.25m	0.09m
146	Posthole Cut	0.33m	0.25m	0.09m
147	Pit Fill	1.20m	1.20m	0.25m
148	Pit Cut	1.20m	1.20m	0.25m
151	Ditch Fill	1.00m	0.80m	0.25m
152	Pit Fill	1.23m	1.11m	0.20m
153	Pit Fill	1.11m	1.00m	0.16m
154	Pit Fill	0.90m	0.85m	0.07m
155	Pit Cut	1.23m	1.11m	0.42m

156	Pit Fill	1.00m	0.80m	0.40m
157	Pit Cut	1.00m	0.80m	0.40m
158	Pit Fill	1.20m	1.20m	0.07m
159	Pit Fill	1.20m	1.20m	0.07m
160	Brick Pit Lining	1.20m	1.20m	0.07m
161	Pit Cut	1.20m	1.20m	0.07m
162	Pit Fill	1.20m	1.05m	0.50m
163	Wooden Support	0.32m	0.23m	0.26m
164	Pit Fill	0.90m	0.90m	0.18m
165	Pit Cut	0.90m	0.90m	0.18m
166	Pit Fill	1.35m	1.30m	0.30m
167	Pit Cut	1.35m	1.30m	0.30m
168	Ditch Fill	0.50m+	0.70m	0.20m

Appendix B - Matrix



- Period 1 Natural
- Period 2 Phase 1 Early Roman
- Period 2 Phase 2 Later Roman
- Period 3 Phase 1 Earlier Medieval
- Period 3 Phase 2 Medieval
- Period 3 Phase 3 Later Medieval
- Period 4 Phase 1 Post Medieval
- Period 3 Phase 2 Post Medieval and Modern
- Undated

Appendix C – Specialist Reports

Report on the pottery from blacksmith's corner, Tattershall, Lincolnshire (bct 11)

Jane Young and Ian Rowlandson

Introduction

An assemblage of one hundred and forty-five sherds, representing no more than ninety-two vessels in total, was submitted for examination. The pottery ranges in date from the Roman to the early modern period. The pottery has been fully archived to the standards for acceptance to the Collection in Lincoln in accordance with Lincolnshire County Council's Archaeological Handbook (sections 13.4 and 13.5) and within the guidelines laid out in Slowikowski, *et al.* (2001) and the minimum archive by *The Study Group for Roman Pottery* (Darling 2004). Visual fabric identification of the non-local pottery was undertaken by x20 binocular microscope. The assemblage was quantified by three measures: number of sherds, weight and vessel count within each context. Every effort was made to identify cross-context joins, of which only one definite example was found. The pottery data was entered on an access database using post-Roman fabric codenames (see Table 1) developed for the Lincoln Ceramic Type Series (Young, Vince and Nailor 2005) and Roman codes developed by the City of Lincoln Archaeological Unit- CLAU (see Darling and Precious *forthcoming*).

Condition

The pottery is mainly in a slightly abraded to fairly fresh condition. Sherd size mainly falls into the medium to fairly large size range (between 20 and 100 grams) but includes a few smaller sherds. Twenty-five vessels are represented by more than one sherd and there is one definite cross-context joining vessel. A few sherds are discoloured due to deposition in water-lain deposits.

Overall Chronology and Source

Twenty-one different post-Roman pottery ware types and two Roman sherds were recognised. The assemblage includes local, regional and imported types. The post-Roman material ranges in date from the Saxo-Norman to early modern periods and spans the period between the 11th to 12th and 19th to 20th centuries. A range of identifiable vessel types was recovered, mainly various types of jug, bowl and jar but also including several drinking vessels (cups, drinking jugs and a mug), plates, bottles and urinals.

Table 1 Pottery types with total quantities by sherd and vessel count

Codename	Full name	Earliest date	Latest date	Total sherds	Total vessels
BL	Black-glazed wares	15	1750	2	2
BOU	Bourne D ware	13	1650	14	5
CIST	Cistercian-type ware	14	1650	14	10
CMP	Coal Measures Purple	14	1600	1	1
CREA	Creamware	17	1830	1	1
DUTR	Dutch Red Earthenware	12	1650	2	2
ENGS	Unspecified English Stoneware	17	1900	2	2
FREC	Frechen stoneware	15	1680	2	2
GRE	Glazed Red Earthenware	15	1650	3	1
GREY	Roman Greyware	40	400	1	1
IAGR	Native Tradition (Roman)	40	150	1	1
LERTH	Late earthenwares	17	1900	9	3
LFS	Lincolnshire Fine-shelled ware	97	1200	2	1
LMLOC	Late Medieval local fabrics	13	1550	8	7
MEDLOC	Medieval local fabrics	11	1450	1	1
NCBW	19 th -century Buff ware	18	1900	6	4
PEARL	Pearlware	17	1900	4	2
TB	Toynton/Bolingbroke wares	14	1750	23	11
TGW	Tin-glazed ware	16	1770	1	1
TOY	Toynton Medieval Ware	12	1450	3	3
TOYBT	Toynton Bourne-type	13	1500	1	1
TOYII	Toynton Late Medieval ware	14	1550	42	29
TPW	Transfer printed ware	17	1900	2	1

Roman

Two Roman sherds were presented for study. From context 16 the single rim sherd from a wide mouthed bowl in a greyware fabric (GREY, BWM3) should be dated to the late 3rd to 4th century. An abraded rim sherd from a large bowl in a sandy native tradition fabric (IAGR, BNAT) from context 27, dates to the mid 1st to mid 2nd century AD. Both of these sherds may be from a multi period pottery production centre in the nearby parish of Tattershall Thorpe currently being studied by the author (IR).

Saxo-Norman to Medieval

Five vessels are of Saxo-Norman or medieval type. Two sherds from a single Lincolnshire Fine-shelled ware bowl (LFS) were recovered from deposit (138). This vessel can only be generally dated to the 11th or 12th centuries, although the wall thickness suggests a post-conquest date. Three medieval-type Toynton ware (TOY) sherds were recovered from the site. Two of the sherds come from either medium-sized jugs or jars and can only be generally dated to between the late 13th and mid 16th centuries. These two sherds come from deposits

(113) and (136). The third sherd was recovered from deposit (34) and is from a small jug of late 13th to 15th century date. This basal sherd exhibits wear marks along the basal angle. The body sherd of a jug in a local fabric (MEDLOC) found in deposit (88) might be a local Medieval Toynton-type. Similar vessels occur at nearby Kirkstead.

Late Medieval to early Post-Medieval

One hundred and five sherds representing sixty-six vessels are of late medieval to early post-medieval type. The majority of these vessels are of Late Medieval Toynton-type (TOYII) or Toynton/Bolingbroke-type (TB). These two types appear in the archaeological record from the mid 15th century and are known to have been produced in nearby Toynton All Saints and at Old Bolingbroke, although an increasing number of other sites are producing waste material. Late Medieval Toynton ware peaks in early to mid 16th century assemblages and is often a 'fossil-type' in dissolution deposits across central Lincolnshire and occasionally also in North Lincolnshire. It does not appear to survive far into the second half of the 16th century as it is rarely found stratified with the Glazed Red Earthenwares that dominate later 16th century assemblages. The twenty-nine vessels from this site include a range of different fabrics suggesting that they were not all manufactured at the same centre. Identifiable vessels are mainly jugs but two bowls and at least one urinal also occur in the assemblage. Only one vessel, a large jug or jar found in deposit (83), appears to be decorated. This vessel has an applied and pressed strip around the neck, just below the lid-seated rim and could have had a bung-hole. The side-handled urinal found in deposit (114) is of a type commonly found in dissolution deposits in the county. A second vessel represented by a large rim sherd has lost the handle, but may also be a urinal as the upright rim is of a type uncommon on jugs. This vessel was recovered from deposit (133). Two bases from jugs or jars have worn basal angles from usage.

Eleven vessels are of Toynton/Bolingbroke type (TB) which was manufactured at Toynton All Saints and Toynton St. Peter's from the mid 15th century through to at least the mid to late 16th century. Potters are thought to have moved to Bolingbroke from Toynton from about the mid/late 15th century onwards where production of the ware probably continued into the mid 17th century. Other centre such as Ingoldmells produced similar types and it is difficult to easily distinguish the products of each production centre. Amongst the Toynton/Bolingbroke type vessels from this site is a large bowl that is most definitely a waster (DR1). It has cracked during firing and distorted post-breakage in the kiln. Most of the sherds were recovered from deposit (26) but two further large joining fragments were found in deposit (114). Wasters of late medieval to early post-medieval date have recently been discovered at a nearby quarry site at Tattershall Thorpe, but these have not yet been examined. Fragments from four further bowls were recovered from the site of which one is identical in shape to the waster vessel. Another bowl found in deposit (87) is low-fired and could represent a firing failure. Three of the other vessels are jugs, one of which has wear marks on the base and three are large jugs or jars. A single large jug or jar of Toynton Bourne-type (TOYBT) was recovered from deposit

(121). This type was possibly made at Ingoldmells and is usually found in early to mid 16th century deposits.

Eight sherds from seven of the pottery vessels submitted for examination are of late medieval to early post-medieval local type (LMLOC) and can be dated to the period between the mid 15th and mid 16th centuries. One vessel, a bowl from deposit (135), appears to be a waster. The vessel is under-fired and is badly spalled. Three vessels have an abundant quartz-tempered fabric similar to that used for some of the bricks (Fabric 1) and tiles (Fabric 4) found on the site and also used for late 16th to early 17th century and earlier vessels produced at nearby Kirkstead. These Kirkstead vessels have a fabric that contains a characteristic 'white sand', occasional flint and very occasional fine calcareous grains.

Fourteen sherds from five vessels are of Late medieval to early post-medieval Bourne-type (BOU). These vessels include jugs, a jar and a probable urinal. The base and body sherds of the possible urinal found in deposit (153) all have a thick internal white deposit, probably caused by uric acid. This ware type first appears in the mid 15th century and has probably died out by the mid 16th century. A single regional coarseware jug or jar sherd was recovered from deposit (140). The sherd is of Coal Measures Purple-type (CMP) and was probably produced in South Yorkshire between the 15th and mid 16th centuries.

Fourteen sherds from ten small Cistercian ware cups (CIST) were recovered from the site. Most of the vessels are in slightly sandy or fine purple to orange fabrics that could have been produced in Yorkshire or Derbyshire between the mid 15th and mid 16th centuries, but one base is in a coarse orange-red fabric that appears to be of local type. The shape of this base, which was recovered from deposit (33), is unusual and has not been noted in the area before. No obvious decoration is present on the cups although the over-fired and slightly distorted vessel from deposit (152) may have an impressed design.

Two imported Dutch Red Earthenware (DUTR) cooking pots or pipkins of general 14th to 16th century type were recovered from the site.

Post-Medieval

Seven vessels are of post-medieval mid/late 16th to 18th century date. Three sherds from a single Glazed Red Earthenware (GRE) tall-necked mug found in deposit (14) appear to be a copy of German Stoneware drinking jugs of the late 16th to early/mid 17th centuries. The vessel, which has a thick dark green, almost black internal and external glaze, may have been made at Boston.

Two Black-glazed Earthenware (BL) vessels are of Staffordshire or Derbyshire type and date to between the mid 17th and 18th centuries. One sherd comes from a cup and the other from a jug or jar. An unglazed earthenware sherd (LERTH) found in deposit (152) is probably from a black or brown-glazed jar of late 17th to 18th century date.

A small and discoloured rim sherd found in deposit (31) is from a Tin-glazed Earthenware bowl with blue-painted decoration. This vessel is of mid 17th to 18th century date. Two sherds

appear to be from two different Frechen (FREC) drinking jugs. It is probable that these vessels are early and date to between the mid/late 16th and early/mid 17th centuries.

Early Modern

Ten industrially produced vessels and two earthenware vessels are of late post-medieval to early modern type and include stonewares (ENGS), industrial coarsewares (NCBW) and industrial finewares (CREA, PEARL and TPW). Vessels are mainly tablewares include a range of plates, jars and bottles. The latest of these vessels (TPW) probably belongs to the period between the mid and late 19th centuries. Of note are two unusual unglazed Earthenware (LERTH) vessels found in deposit (145). The vessels are in a fine orange sandy fabric with red surfaces. These vessels could be jars or garden pots of late 17th to 20th century date.

Site Sequence

All of the pottery was recovered from cut features, most of which are pits. Both Roman sherds came from ditch fills with the earliest mid 1st to mid 2nd century vessel being found in Ditch (28) and the later late 3rd to 4th century vessel coming from Ditch 18. Most groups are very small and can only be generally dated to within a span of the mid 15th to mid 16th centuries, but a few features produced slightly larger groups.

A small group of eighteen fairly fresh sherds from a total of eight vessels was recovered from Pit (22). The group includes the greater part of a wasted large Toynton/Bolingbroke bowl of probable mid 16th century date. This vessel has cracked and distorted during firing and strongly suggests the presence of a nearby production site or kiln. Further sherds of this bowl were recovered from Pit [118] (fill 114). Two other Toynton/Bolingbroke vessels and three Late Medieval Toynton-type jugs also occur in this mid 16th century group. The other two vessels are a Cistercian ware cup and a jug or jar in a fabric similar to that produced at nearby Kirkstead Abbey.

Two fills of Well [39] (Fills 33 and 34) produced a small group of ten vessels each represented by a single sherd. Most of the vessels are Late Medieval Toynton-type jugs, jars or bowls but the group also includes a Toynton/Bolingbroke bowl and an imported Dutch Red Earthenware cooking pot or pipkin. This group could date to anywhere between the late 15th and mid 16th centuries. Two Cistercian ware cups and a Toynton Bourne-type large jug or jar of similar date are attributed to Wooden support (121).

Pit [118] produced a small group of fifteen vessels from three different fills (deposits 111, 113 and 114). Vessels are mainly of Late Medieval Toynton or Toynton/Bolingbroke type but the group also includes a late medieval to early post-medieval Bourne ware jug and a small Cistercian cup. This group is of mid 16th century date and the presence of joining sherds with Pit [22] suggests they were open at the same time.

Most of the vessels recovered from Pit [136] are likely to be of mid 16th century date, although the Frechen ware drinking jugs recovered from fills (133) and (134) are unlikely to pre-date

the second half of the 16th century and are more probably of mid/late 16th to early/mid 17th century date. The group mainly comprises Late Medieval Toynton-type and locally made vessels including a possible urinal, but also includes two Cistercian ware cups and two Frechen ware drinking jugs.

Summary and Recommendations

This is a small group of pottery of mainly late medieval to early post-medieval date, but also including Roman, Saxo-Norman, medieval and early modern vessels. The composition of the assemblage suggests that most of the material was deposited between the late 15th and mid 16th centuries and includes both domestic vessels and production waste. The material is of a similar nature to other domestic groups found in the area but does include one definite waster and several other mis-fired vessels.

The waster bowl should be illustrated. The early modern material has been discarded in agreement with the Collection and the potential local Cistercian ware cup has been added to the County Type Series. The remaining assemblage should be kept for future study, especially as part of any further characterisation of the Lincolnshire post-medieval fabrics.

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Report on the ceramic building material from blacksmith's corner, Tattershall, Lincolnshire (bcl 11)

Jane Young Ceramic Consultant

Introduction

One hundred and seventeen fragments of ceramic building material weighing 28.415 kg were submitted for examination. The material ranges in date from the Roman to the early modern period. The fragments were examined both visually and at x 20 binocular magnification. The resulting archive was then recorded using Lincolnshire codenames in an Access database and complies with the guidelines laid out in Slowikowski, *et al.* (2001) and complies with the Lincolnshire County Council's *Archaeological Handbook* (sections 13.4 and 13.5). Nine different brick and ten different tile fabrics have been identified amongst the material examined and descriptions of these based on x20 binocular magnification are given below. These fabrics should be used as the basis for a Tattershall brick and tile Fabric Type Series.

Condition

The material recovered is mainly in a fairly abraded to slightly abraded condition. Few fragments have mortar adhering. Several brick and tile fragment have heat-altered surfaces.

The Ceramic Building Material

A limited range of ceramic building, medieval to post-medieval flat roof tile and brick, was examined. The types are shown in Table 1.

Table 1: Ceramic Building material codenames and total quantities by fragment count and weight

Codename	Full name	Total	Total weight in grams
BRK	Brick	57	21896
FLOOR	Floor tile	8	2000
NIB	Nibbed tile	2	488
PNR	Peg, nib or ridge tile	48	3814
TEG	Tegula	2	217

The Roman tile

Two Tegula fragments in different fabrics were recovered from the site.

Fabric 1

This fabric is reduced with thin oxidised surfaces and has common medium-sized (most 0.2-0.4mm but up to 0.6mm) subround quartz grains together with moderate iron-rich grains of slag. A single Tegula recovered residually from deposit (29) is in this fabric. The tile is very highly fired or has been burnt and is between 21 and 24mm thick.

Fabric 2

This fabric is oxidised to a dull orange-red colour and has abundant round to subround quartz (most 0.2 to 0.5mm) with occasional larger well-rounded white grains up to 15mm together with moderate fine to medium-sized (0.2-0.6mm) iron-rich grains, sparse to moderate

calcareous grains and moderate laminated shale or mudstone pellets. A single Tegula recovered residually from deposit (34) is in this fabric. The tile is 24mm thick.

The Medieval to Post-Medieval roof tile

Fifty fragments from forty-one different roof tiles were examined. The tiles were divided into eight different fabric types (Table 2) which may suggest a number of different sources for the material, or chronological differences in local production.

Table 2: roof tile fabrics and total quantities by tile count

	Total tiles
Site Tile Fabric 3	21
Site Tile Fabric 3/4	1
Site Tile Fabric 4	8
Site Tile Fabric 5	1
Site Tile Fabric 6	2
Site Tile Fabric 7	1
Site Tile Fabric 8	1
Site Tile Fabric 9	1
Site Tile Fabric 10	5
Totals	41

A range of eight different visual fabrics is present and the descriptions given below are based on a x20 binocular microscopic examination. Individual variations within these fabrics are described in the archive. One tile exhibits a mixed fabric (Fabric 3/ 4) possibly suggesting that these two fabrics may have been produced in the same area if not the same workshop.

Fabric 3

This fabric is usually oxidised to a dull orange to orange-red colour and has abundant medium-sized (mainly 0.2-0.4mm but up to 0.8mm) subround to round quartz grains (often appearing cloudy or white), together with sparse to moderate laminated shale or mudstone up to 2.0mm, sparse iron-rich grains, sparse rounded calcareous inclusions, probably limestone and occasional fragments of flint up to 13mm. Occasional streaks and pellets of inclusion-free clay may also occur. This is the most common fabric to occur on the site with twenty-one examples being recovered. A single suspension nib is of the central applied and folded type. Tile thickness ranges between 14mm and 19mm centring on 16mm. These tiles are most probably of late medieval to early post-medieval type.

Fabric 4

This fabric is usually oxidised to a dull orange to dull red-brown colour and has abundant mixed (most 0.4 to 0.8mm but up to 1.0mm) round to subround quartz grains (often appearing cloudy or white), together with moderate angular iron-rich grains up to 5mm, sparse to moderate flint, sparse laminated shale/mudstone, mainly sparse rounded calcareous inclusions, probably limestone (although patches of common grains can occur) and occasional pebbles up to 17mm. Occasional lumps of white clay with abundant quartz grains

as above may also occur. This fabric appears to be similar to one (Fabric 1) occurring at the nearby site of Holy Trinity Church, Tattershall (Young 2011) and used for medieval-type tiles (including a decorated ridge tile) of 13th to 15th century date. Part of an applied and folded central nib is present on one tile. Tile thickness on the eight examples found is variable between 13mm and 20mm

Fabric 5

The single tile in this fabric is a dark reduced colour with light orange surfaces. This fabric has moderate mixed (0.2-0.6mm) subround quartz grains, together with sparse iron-rich grains and moderate fine calcareous inclusions that appear to include mineral calcite. There are also moderate flattened vesicles within the matrix. The single tile is 20mm thick and has a possible paw print on the upper surface. The tile dates to between the medieval and early post-medieval periods.

Fabric 6

This fabric fires to a dull-orange-brown colour and has common mixed (0.4-0.8mm but up to 1.0mm) round to subround quartz together with sparse to coarse-sized (up to 1mm) iron-rich grains and occasional calcareous grains. The fabric also has common organic voids. The single measurable fragment in this fabric is 18mm thick. The tile dates to between the medieval and post-medieval periods.

Fabric 7

The single tile in this fabric is reduced with oxidised surfaces and has common mixed (most 0.2-0.6 mm but up to 0.8mm) round to subround quartz grains, together with common fine black iron-rich grains and sparse calcareous inclusions, probably limestone. The single tile fragment in this fabric is quite thin at 13mm. The tile dates to between the medieval and early post-medieval periods.

Fabric 8

The single tile in this light firing fabric has abundant mixed (most 0.2-0.6mm but up to 0.8mm) round to subround quartz grains and moderate fine iron-rich grains. The tile is fired to a pale reduced colour and has light oxidised surfaces. This tile is 15mm thick and is typologically of medieval to late medieval date.

Fabric 9

This reduced fabric has moderate medium to coarse-sized (0.2-0.8mm) round to subround quartz grains together with moderate rounded iron-rich grains (some up to 3.0mm and possibly including slag) and sparse white clay pellets and flint. The single tile in this fabric is 15mm thick and is likely to be of medieval to late medieval date.

Fabric 10

This fabric is oxidised to a dull orange colour but may have a reduced core. It contains common mixed (mainly 0.1-0.4mm but up to 0.8mm) subround to round quartz grains (often appearing cloudy or white), together with common laminated shale or mudstone up to 13mm, and sparse angular iron-rich grains up to 2.0mm. The five roof tiles in this fabric vary between 14mm and 20mm in thickness. A single unglazed floor tile also occurs in this fabric (see below).

The Late Medieval to Post-Medieval Brick

Fifty-seven fragments from forty-four handmade bricks were found on the site. Ten of these are in an oxidised fabric almost identical to Tile Fabric 4 (Brick Fabric 1) and are similar to bricks found at the Holy Trinity Church site (*ibid.*). These bricks are quite low-fired and the abundant quartz filler can often be rubbed away from the surface. No complete late medieval to early post-medieval bricks are present in the assemblage, but one complete early modern brick handmade brick was recovered. Many of the bricks are in such a poor condition that little of the methods of manufacture can be seen, although the edges of most examples appear to be sanded. It is not possible to date these bricks closely but they mainly appear to be of 15th to 16th century type.

Table 3: brick fabrics and total quantities by brick count

	Total bricks
Site Brick Fabric 1	23
Site Brick Fabric 2	5
Site Brick Fabric 3	1
Site Brick Fabric 4	1
Site Brick Fabric 5	4
Site Brick Fabric 6	5
Site Brick Fabric 7	1
Site Brick Fabric 8	2
Site Brick Fabric 9	2
Totals	44

Fabric 1

This fabric mainly fires to a dull red-brown colour and has abundant mixed (0.4-0.8mm) round to subround quartz grains (often appearing cloudy to white), together with moderate angular iron-rich grains up to 5mm but mainly below 0.2mm, sparse rounded calcareous inclusions, probably limestone, sparse to moderate fragments of flint up to 15mm and occasional pebbles up to 17mm. Several of the bricks are 'salt-surfaced'. This is the most common fabric to be recovered from the site. Bricks are sand-moulded and occasionally bedded on straw. No complete bricks are present in the assemblage but measurable widths vary widely from 98mm to 120mm. The bricks seem to be narrower the harder they are fired with the smallest width at 98mm coming from a near-vitrified brick. Brick thickness varies between 45mm and 56mm but centres on 50mm. One of the bricks has been 'rubbed' to form a rounded end. A number of

the bricks have sunken margins or sunken upper surfaces. These bricks are characteristically of late medieval to early post-medieval 15th to 16th century type.

Fabric 2

This fine calcareous fabric fires to reds, greys and purples. It contains only rare quartz, iron-rich and calcareous grains above 0.1mm. The calcareous grains include fossil or marine shell. Visually this fabric is similar to tiles produced at Boston. The five examples recovered from this site are fairly abraded and fragmentary. The three examples with original side surfaces all appear to be sand-moulded and one example has been laid or bedded on straw. A single fragment is measurable and this is 122mm wide and 50mm thick. This type of brick in Boston dates from the 14th to 16th centuries.

Fabric 3

A single brick in this fabric has fired to a dull orange colour. This poorly mixed fabric mainly has common mixed (0.2-0.6mm but up to 0.8mm) round to subround quartz grains, together with sparse to moderate fine iron-rich grains (mainly below 0.8mm but some larger) and sparse rounded calcareous inclusions. Patches with abundant quartz and common calcareous grains occur throughout the brick. A single brick in this fabric was recovered from the site. The brick is sand-moulded and has salt-surfacing. The brick measures 106mm by 55mm. This fabric is also used for an unglazed floor tile (see below). The brick is of late medieval to early post-medieval type.

Fabric 4

This fine silty fabric has rare visible inclusions even at x20 magnification. The single brick in this fabric is fired to an orange-red colour. The fragment in this fabric is not measurable but is definitely slop-moulded. The brick is of late medieval to early post-medieval type.

Fabric 5

The bricks in this fabric are a dull orange-brown to red-brown colour. This fabric has abundant to very mixed (0.4-0.8mm) mainly cloudy round to subround quartz grains, together with moderate fine iron-rich grains and variable but mainly common calcareous inclusions including fossil shell. Lenses and pellets of clean light firing clay and sparse to moderate laminated shale or mudstone pellets also occur. The four bricks in this fabric are all slop-moulded and mainly salt-surfaced'. The two measurable bricks are both 50mm thick and the single width present is 110mm. Five unglazed floor tiles are also in this fabric (see below). The bricks are of late medieval to early post-medieval type.

Fabric 6

This coarse calcareous fabric fires to oranges and reds and has moderate to common mixed (0.4-0.6mm but up to 0.8mm) round to subround quartz grains together with moderate to common iron-rich grains up to 0.8mm and very mixed but mainly common rounded calcareous inclusions up to 1.0mm, probably limestone. Occasional straw voids can be seen

in the fabric. The five bricks in this fabric are sand-moulded with depths of between 50mm and 58mm. The bricks are of late medieval to early post-medieval type.

Fabric 7

The single yellow brick in this fabric has moderate very mixed round to subround quartz grains between 0.2 and 1.0mm (but up to 1.5mm) together with rare iron-rich grains, sparse calcareous grains and sparse flint (up to 10 mm). The brick in this fabric has been sand-moulded and roughly struck. It has uneven bedding with possible cloth and finger marks and measures 104mm by 70mm. This brick is from deposit (152) and is likely to be of 18th to 19th century date.

Fabric 8

This yellow brick fabric has common fine quartz below 0.1mm with rare larger quartz grains and rare iron-rich grains. Occasional straw voids and oxidised clay pellets can be seen in the fabric. One complete brick and one partial brick occur in this fabric. Both bricks are from deposit (152) and appear to have been used upside-down as flooring bricks as the undersides are heavily worn. The complete brick measures 225mm x 107mm x 40+mm. The other fragment is not quite so worn and suggests a thickness of 45mm. These bricks are of 18th to 19th century date.

Fabric 9

This fabric is similar to Fabric 1. One overfired brick has fired to a purple colour whilst the other brick is a dull orange-red colour. The fabric has abundant mixed (0.4-0.8mm) round to subround quartz grains (often appearing cloudy to white), together with moderate angular iron-rich grains up to 5mm but mainly below 0.2mm including moderate slag, sparse rounded calcareous inclusions, probably limestone, sparse to moderate fragments of flint up to 15mm and occasional pebbles up to 17mm. Both bricks are sand-moulded but otherwise are unlike due to differential firing. The vitrified brick measures 98mm by 48mm and the lower-fired brick 105 x 50mm. The brick is of late medieval to early post-medieval type.

The Late Medieval to Post-Medieval floor tile

Eight fragments from seven unglazed late medieval to early post-medieval floor tiles in three fabrics (Table 4) were recovered from the site. None of the tiles provide complete measurements but the thickness of the tiles suggests that they might be of a larger type.

Five of the tiles are in Brick Fabric 5 which is also used for slop-moulded bricks. All of the tiles have cut chamfered edges and three have well-worn upper surfaces. The thickness of these tiles varies between 38mm and 44mm. They appear carefully made and are reminiscent of tiles made at Stixwold Abbey but it has not been possible to directly compare them.

Single floor tiles also occur in Brick Fabric 3 and Tile Fabric 10. The tile in Brick Fabric 3 has at least one chamfered edge and is 44mm thick. Unlike the tiles in Brick Fabric 5 this example

is poorly made with sunken margins to the tile. The example in Tile Fabric 10 is much thinner at 26mm but has carefully cut chamfered edges.

Table 4: floor tile fabrics and total quantities by tile count

	Total tiles
Site Brick Fabric 3	1
Site Brick Fabric 5	5
Site Tile Fabric 10	1
Totals	7

Summary and Recommendations

The ceramic building material recovered probably dates between 13th and 18th centuries and is mainly typical of types found on other sites in the Coningsby and Tattershall area. A wide range of fabrics was found within the tile and brick suggesting a variety of workshops for the material. It is known that the brick used for Tattershall Castle was obtained from several sources including production sites at Edlington Moor and Boston as well as reusing earlier bricks from Revesby Abbey (Smith 1985). The bricks are likely to be contemporary with those used for the nearby College and Castle in the mid to late 15th century, but there has been no opportunity to directly compare them as part of this assessment.

Small featureless fragments have been discarded in agreement with the Collection. Little is known about the ceramic building material sequence in this area and therefore all of the retained material should be kept for future analysis.

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Blacksmith's Corner, Tattershall Lincolnshire (BCT11)
Specialist Post-Excavation Assessment Report prepared by Archaeology
South-East on behalf of AOC Archaeology Group

The Bulk Metalwork by Trista Clifford

Three iron nails were recovered from the excavation, from two individual contexts of 15th century date. Nails were assigned Registered Finds numbers on site but have been deaccessioned for the purposes of this report.

Pit fill (133) contained two general purpose nails with flat, circular heads and square sectioned stems, length 44mm. A similar nail was also recovered from pit fill (152).

Significance and potential

The nails have been fully recorded for the site archive and are considered to hold local significance only. As such the assemblage has no potential for further study.

Further Work

No further work is proposed. Information for the site narrative can be taken from this report.

The Registered Finds by Trista Clifford

Introduction

All objects were assigned a unique Registered Finds number (RF <00>) and recorded individually on pro forma sheets and digitally for archive. Metal objects were x-rayed and will be conserved as required.

A total of 11 registered objects, predominantly fittings and tools, were recovered. The majority derived from pit fills of 15th century date. The following overview is organised by functional category. Finds are considered within each category by type, in chronological order, i.e. earliest first. A summary of the Registered Finds assemblage can be found in Table 5.

RF no.	Cxt	Object	Material	Wt (g)	Period	Comments
1	33	TOOL	IRON	54	LMED	socketed; toothed
2	94	RING	IRON	118	LMED	
4	133	?TINE	IRON	12	LMED	
5	133	?TINE	IRON	8	LMED	
7	133	UNK	IRON	38	LMED	?vessel handle
8	133	KNIF	IRON	38	LMED	scale tanged
9	133	TOOL	IRON	22	LMED	Awl or punch
10	135	HING	IRON	36	LMED	
11	152	WIRE	COPP	4	LMED	
13	153	HAND	IRON	46	LMED	Drop handle
14	153	UNK	IRON	20	LMED	

Table 5: The Registered Finds

Fixtures and Fittings

Pit fill (94) contained a large iron ring, RF<2>. The size of the ring, diam. 93.8mm, possibly suggests use as a structural or bridle fitting. An iron hinge with rectangular straps was recovered from pit fill (135), RF<10>. The hinge is similar in form to examples from Abbots Lane, London, dated to the mid 16th century (Egan 2005, 68 5.2). The Tattershall example exhibits three holes for attachment on one strap.

An iron drop handle, RF<13> came from pit fill (153). The handle is formed from a square sectioned rod, bent at right angles at both ends, with hooked terminals (l. 123mm). A similar smaller example was found at Coppergate, York (Ottoway and Rogers 2002, 2845 Fig 1423).

Tools

Pit fill (133) contained RF<8>, a scale tanged knife blade (total length 165mm). The blade back is in line with the tang, which partially remains with two rivet holes present. A copper alloy shoulder plate separates blade and tang. Similar knives exist from late 14th century contexts in London (E.g. Cowgill et al 1987, 94: 122, 123)

A metalworking punch, RF<9>, was also recovered from [133] (l. 104.5mm). Similar examples exist from Coppergate (Ottoway and Rogers 2002, 2721) dating from 13th-16th century.

A socketed tool of uncertain function came from late medieval well fill (33). The blade (w. 34.5mm) is flat and spatula shaped, with a row of small teeth visible along the edge. No parallel has been found for the object however it is clear that it functioned as a combing or keying tool in some capacity.

Objects of uncertain function

A number of objects were recovered for which a function could not be established. These include RF<14> from pit fill (153), a narrow iron strip with several notches cut out of one side; RF<11> from pit fill (152), two lengths of copper alloy wire and RF<7> from pit fill (133), possibly a handle from a small vessel or bucket. Additionally, two small possible tines from a tool also came from (133), RFs <4> and <5>.

Significance and potential

This small assemblage consists of a small number of artefacts, representing a limited range of activity contemporary with the Castle and therefore is of local significance.

Further work

Further work for the analysis/publication stage should consist of research into local parallels, particularly for RF<1> and <7>, production of a short text and catalogue for the publication. Illustration of the most notable finds is recommended.

Estimated time for further work: **2 days**

The Animal bone by Gemma Ayton

Introduction

The animal bone assemblage contains a total of 457 fragments of mammal, bird and fish bone recovered from medieval contexts including pit fills, ditches and wells. The assemblage is in a mixed state of preservation with a number of complete bones alongside some degraded and weathered fragments. The assemblage has been both hand-collected and retrieved from sample residues.

Methodology

The assemblage has been recorded onto an Excel spreadsheet and according to the zoning system outlined by Serjeantson (1996). Wherever possible the fragments have been identified to species and the skeletal element represented. In order to distinguish between the bones and teeth of sheep and goats a number of criteria were used including those outlined by Boessneck (1969), Boessneck *et al* (1964), Halstead *et al* (2002), Hillson (1995), Kratochvil (1969), Payne (1969, 1985), Prummel and Frisch (1986) and Schmid (1972).

Elements that could not be confidently identified to species, such as long-bone and vertebrae fragments, have been recorded according to their size with the larger fragments being recorded as large mammal and the smaller fragments as medium mammal.

Tooth wear has been recorded according to Grant (1982) and all metrical data has been taken in accordance with Von den Driesch (1976).

The state of fusion has been noted and each fragment has then been studied for signs of butchery, burning, gnawing and pathology.

Assessment

The assemblage contains 376 identifiable fragments of mammal, bird and fish bone (Table 6).

TAXA	NISP
CATTLE	162
SHEEP	7
SHEEP/GOAT	15
PIG	2
HORSE	6
HARE/RABBIT	1
LARGE MAMMAL	150
MEDIUM MAMMAL	24
CHICKEN	3

GREYLAG /DOMESTIC GOOSE	1
WOODPIGEON	3
WOODCOCK	1
SALMONID	1
TOTAL	376

Table 6: NISP (Number of Identifiable Fragments) by taxa

The majority of the assemblage derives from pit fills (31) and (29) which produced 116 and 119 identifiable fragments respectively. The assemblages from these pits were similar in composition comprising primarily of cattle bones that are in a good state of preservation. All elements of the carcass are represented and no butchery marks have been noted. This suggests that complete animals were buried and will allow us to analyse the age-at-death and stature of the cattle.

The remaining assemblages derive from pits, ditches and wells and contain both domestic and wild animals. A near-complete horse skull was recovered from context (34), the lower fill of a well and may have a ritualistic significance. A small number of sheep/goat mandibles and epiphyseal fusion data will allow a brief analysis of age-at-death which will provide further insight into husbandry regimes.

Significance and Potential

Further analysis of the assemblage will provide locally significant information regarding the animal husbandry regimes with particular reference to the age-at-death of cattle and sheep. The well preserved cattle skeletons from contexts (31) and (29) have provided metrical data which will allow us to examine and compare biometrical variation. Further investigation into the deposition of horse skulls will help to shed light on the possible ritualistic significance of the skull from the well.

Estimated time required for further work = **2 days**

The Geological Material by Luke Barber

The excavations produced just six pieces of stone, weighing 5653g, from four different contexts. Although all the fragments are fresh, none show any definite signs of having been humanly worked. However, it is likely that at least the piece from (135) was deliberately, if crudely, split into a block that could be used in construction. All of the stone consists of limestone though three different variations were noted: a cream coloured coarse oolite was recovered from (135) (a 2520g rough block measuring 175 x 125 x 60mm), another cream coloured, but less dense/finer oolite from (33) (172g) and an off-white fine limestone with occasional oolitic seams (context (82) 3/2925g and (136) 1/36g). The source for all of these limestones is likely to be in the Middle Jurassic series that contains a number of beds of similar types including the Lincolnshire Limestone series and the Great Oolitic Limestone. These would have been available fairly locally a little way to the west of the site.

Significance and Potential

As the material can be considered quite local to the site, and shows no signs of having been modified, it is not considered to hold any potential for further analysis.

Further Work

No further work is recommended and the assemblage is recommended for discard.

Environmental Samples Karine Le Hégarat and Lucy Allott

Introduction

Bulk soil samples were taken by AOC Archaeological Group during the archaeological work at Tattershall to establish evidence for environmental remains such as charcoal, macroplant remains, bones and shells. Flots from eight bulk samples as well as charcoal, uncharred material and mollusca from five residues and the entire residue from sample <1> were submitted to Archaeology South-East for post-excavation assessment. Samples <3, 4, 5 and 7> were extracted from ditch fill contexts. Samples <1>, <10> and <11> came from pit fills, two of which were initially interpreted on site as cesspits (026), <1> and (136), <11> dating possibly to the 15th century and sample <13> came from the lower fill of a late medieval barrel/well [039].

Methods

The residue from sample <1> was passed through graded sieves (8, 4 and 2mm) and each fraction sorted for environmental and artefact remains. The remains from the six residues were weighed and the contents recorded (Table 7). Flots were scanned under a stereozoom microscope at x7-45 magnification and an overview of their contents was recorded in Table 8. Preliminary identifications of macrobotanical remains have been made using modern comparative material and in reference texts (Cappers *et al.* 2006, Jacomet 2006, NIAB 2004).

Nomenclature used follows Stace (1997). Abundance and preservation of the macrobotanicals have been recorded to establish their potential for further analysis.

Wood charcoal fragments were fractured and viewed under a stereozoom microscope at x7-45 for preliminary grouping and an incident light microscope at x50, 100, 200 & 400 magnifications for identification. Identifications were made through comparison with reference atlases (Hather 2000, Schweingruber 1990, Schoch *et al.* 2004).

Results

Ditches <3, 4, 5 and 7>

Four samples were taken from ditch fill contexts: sample <3> from ditch [008] fill (007), sample <4> from ditch [006] fill (005), sample <5> from ditch [028] fill (027) and sample <7> from ditch [093] fill (091). These samples produced small flots (<12ml in size) dominated by uncharred material including sediment and uncharred vegetation. Uncharred botanical remains included small uncharred woody debris, leaf fragments as well as uncharred seeds and fruits such as elder (*Sambucus nigra*), blackberry/raspberry (*Rubus fruticosus agg/idaeus*), sun spurge (*Euphorbia helioscopia*), sow-thistles (*Sonchus* sp.), cinquefoils (*Potentilla* sp.) and birch (*Betula* sp.). A small quantity of wood charcoal fragments was present in the flots and residues. The assemblage contained infrequent fragments principally <4mm in size although occasional larger pieces were also present. Several fragments were concreted with iron/metallic material. Macrobotanical remains were similarly infrequent. They were recorded only in two samples. Sample <5> (027) contained three charred grains of wheat (*Triticum* sp.) and two indeterminate cereal caryopses (Cerealia) as well as a single possible common pea (cf. *Pisum* sp.) cotyledon. Sample <3> (007) contained charred wild/weed seeds from the goosefoot (Chenopodiaceae) family as well as some indeterminate charred seeds and four very fragmented indeterminate charred plant remains (CPR). Fragments of elder seeds possibly preserved by mineralisation were also noted in this flot. The sample contained also a small unburnt mammal bone and some possible industrial which consisted of vesicular material.

Sample <7> contained fragments from the Common Mussel, *Mytilus edulis* (MNI 7).

Pit <10>

A very small quantity of environmental remains was present in sample <10> extracted from pit [128], fill (126). These were limited to a small mammal bone fragment and infrequent small-sized charred wood fragments. Only two pieces >4mm in size were recorded in the flot which was dominated by sandy sediment.

Pits (interpreted as cesspits) <1 and 11>

Two samples were extracted from pits interpreted on site as cesspits dating provisionally to the 15th century. Sample <1> came from the primary fill (026) of pit [022] and sample <11> originated from fill (135) of pit [136]. Both samples produced large flots measuring 1300ml and 225ml respectively. These flots were dominated by uncharred vegetation. The uncharred botanical component in the flot from sample <1> comprised roots, twigs, leaves, bark, an amalgam of broken down plant matter and infrequent uncharred seeds of the goosefoot family. Uncharred hazelnut (*Corylus avellana*) shell fragments were also recorded in the residue from sample <1>. Although the uncharred botanical remains in the flot from sample <11> consisted also of roots and twigs, uncharred seeds were more numerous and diverse including elder, blackberry/raspberry, dock/knotgrass (*Polygonum/Rumex* sp.) buttercup (*Ranunculus* sp.), possible sun spurge, marshwort (cf *Apium* sp.), sedge (*Carex* sp.), rushes (*Juncus* sp.) as well as seeds from the goosefoot and pink (Caryophyllaceae) families.

There was a general paucity of charred macroplant remains in these samples. Infrequent charred cereal remains and weed seeds were only recorded in the flot from sample <11>. They comprised four currently unidentified cereal (Cerealia) grains, two currently unidentified grass (Poaceae) caryopses, a single tare/vetch/vetchling (*Vicia/Lathyrus* sp.) seed and two charred plant remains (CPR).

A mixture of uncharred and charred wood fragments were present in both samples. The charred wood assemblage was particularly abundant in the residue from sample <1> including large fragments >25mm. Much of this assemblage is well preserved and contains fragments of broom/gorse (Leguminosae taxa), oak (*Quercus* sp.) and hazel/alder (*Corylus/Alnus* sp.). Round wood fragments are particularly common.

The residue from sample <1> contained infrequent burnt and unburnt bone fragments as well as some marine mollusca (Common cockle *Cerastoderma edule* (MNI 1) and Common mussel *Mytilus edulis* (MNI 4)). A single small sherd of pottery was also noticed.

Barrel/well <13>

Sample <13> taken from the lower fill (034) of well [039] produced a very small flot (<2mm) which contained only three uncharred unidentified seeds. The charred and uncharred wood assemblage from the residue was equally surprisingly small.

Significance and potential

Sampling has confirmed the presence of environmental remains such as charred and uncharred wood fragments, macroplant remains, bones and mollusca.

The small assemblage of macroplants contained remains preserved through charring, with also some seeds and fruits which may have been preserved through waterlogging. Some evidence of possible preservation through mineralisation was also noted.

Several flots were dominated by uncharred vegetation. The presence of uncharred plant remains is likely to suggest post-depositional disturbances within the deposits. However, sufficiently moist conditions at the time of burial combined with anoxic burial environment such as well sealed deposits or a high water table can ensure the survival of uncharred vegetation. When such conditions are encountered, the assemblage of uncharred plant remains might be contemporary the infilling of the features. Such conditions are likely to be encountered in well deposit and the position of barrel/well [039] partially below the water table was favourable to such preservation. Unfortunately, sample <13> from the lower fill of barrel well [039] was almost devoid of environmental indicators. Nonetheless sample <11> taken from possible cesspit [136] produced a moderate assemblage of uncharred wild/weed seeds. If considered contemporary, the assemblage of uncharred plant remains in pit [136] could provide evidence for the vegetation in the vicinity of the excavated feature. The uncharred weed taxa so far recorded indicates the presence of plants growing on disturbed/waste grounds (blackberry/raspberry, sun spurge) as well as plants associated with wetland environment (sedge, rushes and marshwort). Elder occurs as a hedgerow plant and produces edible berries.

Cesspits are characterised by the presence of remains preserved by soluble phosphates and carbonate replacement such as fly puparia or mineralised plant remains (for example fruit stones, pips, seeds) and/or by the presence of coprolites (Green 1979, EH 2011). Samples <001> [026] and <011> [136] contained no remains indicating that the pits contained cess. During the medieval period, not only human waste but also animal dung and all kinds of household rubbish were deposited within these pits (Greig 1992). The pits could have been regularly cleaned and the apparent absence of cess material within pits [022] and [136] doesn't exclude the possibility that both these features were used as cesspits. The presence of hazelnut shell fragments in sample <1> provides further evidence for the use of wild plants. Large assemblages of charcoal are also relatively common in cess pit deposits. Charcoal may have been used to neutralise odours or it could simply reflect domestic refuse in this instance, fuel, dumped in the feature. Although it is not possible to determine the exact nature of the woodland/s from which this wood assemblage derives the prominence of roundwood is interesting and may indicate that much of the fuel was from coppiced woodland. Coppiced rods were favoured for tasks for which flexible wood was required (such as for use in wattle). It was also made into charcoal in charcoal burners to provide cost effective and efficient fuel.

Other evidence for the diet of the population is based solely on the infrequent remains of charred crop remains. Samples have produced a single charred common pea and a very small quantity of charred grains including wheat. However, the overall poor preservation of the caryopses prevented any identification beyond the genus level.

Overall the samples contained small assemblages of macroplant remains. They have provided limited evidence for the diet of the population as well as the natural vegetation in the vicinity of the site. However, due to the small and fragmentary nature of the macroplant

remains, the samples hold no potential to provide further significant information regarding the vegetation environment, the diet of the population or the infilling of the features.

Further work

Macroplant remains

No further work is suggested for the macroplant remains.

Charcoal

Analysis of the large charcoal assemblage from cess pit feature could be used to fully characterise the assemblage and to explore the questions regarding fuel and woodland management further.

Table 7: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Context / deposit type	Charcoal >4mm	Charcoal <4mm	Weight (g)	Bone and Teeth	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Other (eg ind, pot, cbm)
3	7	Fill of ditch [008]	* (2)	*	<2		<2							
4	5	Fill of ditch [006]	*		<2									
5	27	Fill of ditch [028]	*		<2									
7	91	Fill of ditch [093]												
10	126	Fill of pit [128]												

Sample Number	Context	Context / deposit type	Charcoal >4mm	Charcoal <4mm	Weight (g)	Bone and Teeth	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauuna	Weight (g)	Marine Molluscs	Weight (g)	Other (eg ind, pot, cbm)
1	26	Primary fill of pit [022]	***	214 +	250 +	*	6	*	<2	*	<2	**	18	Uncharred <i>Corylus avellana</i> shell frags. */ <2g Uncharred wood >4mm ***/224g +; Pottery */<2g – Broken down plant matter **/250g +
11	--	? Fill ? of pit [136]	**	4										Uncharred wood **/22g
13	34	Lower fill of well [039]	*	<2										Uncharred wood */4g

Table 8: Flot quantification (*=1-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds / fruits uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation	Min botanicals	Identifications	Preservation	Fish, amphibian, small mammal bone	Land Snail Shells	Industrial debris	
3	7	2	<2	<2	-	40		* (1)	**	**			+ to ++	*	Chenopodiaceae, indet. seed (2)											
4	5	<2	<2	<2	30	45	<i>Sambucus nigra</i> (1), <i>Potentilla</i> sp. (1), <i>Asteraceae</i> (2), <i>Sonchus</i> sp. (1), <i>Betula</i> sp. (*) (fruit)	**	**	**																
5	27	22	12	12	2	53	<i>Sambucus nigra</i> (1), <i>Rubus fruticosus</i> agg./ <i>Idaeus</i> (*), <i>Euphorbia helioscopia</i> (1)	*** (3)	***	***		<i>Triticum</i> sp. (3), <i>Cerealia</i> (2), cf. <i>Pisum</i> sp. (1 cotyledon)	+ to ++											*		
7	91	<2	2	2	12	86	<i>Sambucus nigra</i> (1), <i>Apiaceae</i> (1)	*	*	*													*			
10	126	32	13	13	2	90		*	*	*																

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Assessment Report For The Conservation Of Tattershall Metal Small Finds

Summary

The following assessment of conservation needs for the accessioned metal small finds from the excavations at Tattershall. Work outlined in this document is needed to produce a stable archive in accordance with MAP2 (English Heritage 1992) and the Museum of London's Standards for archive preparation (Museum of London 1999).

Wherever possible preventative rather than interventive conservation strategies are implemented. Procedures aim to obtain and retain the maximum archaeological potential of each object.

Condition

Iron.

The objects are in a stable condition. The surfaces are covered by a thin layer of corrosion.

Copper alloy

The copper alloy find is stable.

List of artefacts:

Site	SF No	Context	Description	X-ray No.
BCT 11	1	33	Iron tool	001
BCT 11	2	94	Iron Ring	001
BCT 11	3	133	Iron Nail	001
BCT 11	4	133	Iron Nail	001

BCT 11	5	133	Iron Nail	001
BCT 11	6	133	Iron Nail	001
BCT 11	7	133	Iron Handle	001
BCT 11	8	133	Iron Knife	001
BCT 11	9	133	Iron Object	001
BCT 11	10	135	Iron Hinged bracket	001
BCT 11	11	152	CuA wire	001
BCT 11	12	152	Nail	001
BCT 11	13	152	Iron Handle	001
BCT 11	14	153	Iron Object	001

X-ray catalogue:

X-Ray No	Volts(KeV)	Time (mins)	Finds no.
001	110	3.5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14
	80	3	11

Recommended treatment

Iron

Some small finds may be cleaned to clarify details; these may be seen in clearer detail on the x-ray. The finds that would be cleaned if required would be, SF 1, 8, 10, 14.

The cleaning of the selected iron finds should be carried out using an air-abrasive machine and 53µ aluminium oxide powder. If active corrosion is noted during cleaning, stabilisation should be carried out using a 2% aqueous solution of sodium hydroxide, followed by rinsing in deionised water and drying. Objects that have been stabilized should then be lacquered with a 10% solution of Paraloid B72 in acetone with the addition of Gasil as a matting agent. Any adhering required should be carried out using 40% Paraloid B72 in acetone.

Copper Alloy

Object is stable.

Estimated time

	No. hours
LABOUR	
Person (ey) and job:	
Assessment used	3
Conservation	15
Reporting	4
Total hours	22

Conservator: Emily Yates

Date of report: 03/10/11

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An Assessment of clay tobacco pipe from Blacksmiths Corner, Tattershall

Site code:LCNCC:2011.77

Paul Fitz
AOC Archaeology

Summary

Only two pieces of tobacco pipe were retrieved from a single context (29) during excavations at the Tesco site, Blacksmiths Corner. An incomplete bowl and stem, weighing 18 grams and a stem piece weighing 3 grams.

The bowl is a plain type 25 (Oswald & Atkinson) common in the south east of England from 1700-1770, with feint milling around the top of bowl.

The stem does not appear to be from the same pipe being fresher in colour and abrasion. It is not diagnostic.

Discussion/Recommendations

These two pieces have little significance on a local or national level. It would be worth comparing the date of any pottery from the context with the suggested date from the bowl but nothing else.

The pipe will be amalgamated with the finds archive and hopefully deposited at the Lincoln Collection museum in the not too distant future.

Material for illustration

None

Analysis of potential

The pipe provides broad dating evidence for the features in which it occurs.

Significance of the data

International and national

The assemblage is not of International or National significance.

Regional and Local

The assemblage is not of Regional or Local significance.

Further work required

No further work is required.

Preparation for deposition in the archive and conservation

None

ENVIRONMENTAL ARCHAEOLOGICAL INVESTIGATION OF BLACKSMITH'S CORNER, TATTERSHALL, LINCOLNSHIRE (SITE CODE: BCT11)

D.S. Young

Quaternary Scientific (QUEST), School of Human and Environmental Sciences, University of Reading, Whiteknights, PO Box 227, Reading, RG6 6AB, UK

INTRODUCTION

This report summarises the findings arising out of the environmental archaeological investigation undertaken by Quaternary Scientific (QUEST), University of Reading in connection with archaeological excavations at Blacksmith's Corner, Tattershall, Lincolnshire (Site Code: BCT11; National Grid Reference: TF 2120 5803). The site lies at a height of approximately 5m OD and is mapped by the BGS (1:50,000 sheet 115) as underlain by superficial geology of River Terrace Deposits (sand and gravel) overlying Amphill Clay Formation bedrock. During excavation of the site, one bulk sample was collected from an organic horizon (sample <6>; context (64)), described as a pond fill within a depression measuring 2.5 by 2.8m and 0.3m deep. The aim of the assessment was to quantify the organic content and, if suitable plant macrofossil material is present, to radiocarbon date the sample.

METHODS

Organic matter determinations

Three sub-samples from sample <6> were taken for determination of the organic matter content (Table 9). The organic matter content was determined by standard procedures involving: (1) drying the sub-sample at 110°C for 12 hours to remove excess moisture; (2) placing the sub-sample in a muffle furnace at 550°C for 2 hours to remove organic matter (thermal oxidation), and (3) re-weighing the sub-sample to obtain the 'loss-on-ignition' value (see Bengtsson and Enell, 1986).

Macrofossil assessment

A one litre subsample was extracted from sample <6> for the recovery of macrofossil remains including waterlogged plant macrofossils, waterlogged wood, insects and Mollusca. The extraction process involved the following procedures: (1) removing a subsample and measuring one litre of volume by water displacement, and (2) processing the sample by wet sieving using 300µm and 1mm mesh sizes. The sample was scanned under a stereozoom microscope at x7-45 magnifications, and sorted into the different macrofossil classes. The concentration and preservation of remains was estimated for each class of macrofossil (Table 10).

Preliminary identifications of the seeds within the sample, have been made using modern comparative material and reference atlases (e.g. Cappers *et al.* 2006; Martin & Barkley, 2000). Nomenclature used follows Stace (2005).

Radiocarbon dating

Persicaria sp. seeds were extracted from sample <6> for radiocarbon dating. The selected seeds were submitted for AMS radiocarbon dating to Beta Analytic INC, Radiocarbon Dating Laboratory, Florida, USA. The results have been calibrated using OxCal v4.0.1 Bronk Ramsey (1995, 2001 and 2007) and IntCal04 atmospheric curve (Reimer et al., 2004). The results are displayed in Table 3.

RESULTS OF THE ORGANIC MATTER CONTENT DETERMINATIONS

Quantification of the organic matter content by Loss-on-Ignition allowed an assessment of the organic content of sample <6> (context (64)) (Table 9). The results revealed that organic matter values were between 12 and 25% in the three replicate subsamples, indicating that the mineral content of context (64) is high. The relatively broad variation in % organic content between the three subsamples may be indicative of the mixing of sediment within the archaeological feature.

Table 9: Results of the Loss-on-Ignition analysis of three replicate subsamples from sample <6>. Blacksmith's Corner, Tattershall, Lincolnshire (Site Code: BCT11)

Sample number	Organic matter (%)
<6> A	12.63
<6> B	15.54
<6> C	24.50

RESULTS OF THE MACROFOSSIL ASSESSMENT

A subsample measuring one litre in volume was extracted from sample <6> for the recovery of macrofossil remains including waterlogged plant macrofossils, waterlogged wood, insects and Mollusca (Table 10). The results of the assessment indicated that sample <6> contained no charred plant remains (charcoal or wood), Mollusca, insects, magnetic particles or artefacts. Waterlogged wood was present in moderate quantities in the larger (>1mm) fraction of the sample, while waterlogged seeds were present in moderate to high quantities within both fractions (>300µm and >1mm). Preliminary identifications of the waterlogged seeds indicate that the assemblage is dominated by herbaceous taxa including *Persicaria* sp. (knotweeds), cf. *Bidens* sp. (bur-marigolds), *Rumex/Polygonum* sp. (dock/sorrel/knotweed), *Ranunculus repens* (creeping buttercup) and *Carduus* sp. (thistles). One fragment of bone was found within the larger fraction (>1mm).

RESULTS OF THE RADIOCARBON DATING

Persicaria sp. seeds from sample <6> have been radiocarbon dated to AD 1280 to 1400 (670 to 560 cal BP). The $\delta^{13}\text{C}$ (‰) value for the sample is consistent with that expected for organic sediment, and there is no evidence for mineral or biogenic carbonate contamination. The dates indicate that the organic horizon accumulated during the High to Late Middle Ages.

Table 11: Results of the radiocarbon dating of sample <6>. Blacksmith's Corner, Tattershall, Lincolnshire (Site Code: BCT11)

Laboratory code / Method	Sample number	Context number	Material	Uncalibrated radiocarbon years before present (yr BP)	Calibrated age BC/AD (BP) (2-sigma, 95.4% probability)	$\delta^{13}\text{C}$ (‰)
Beta-307142 AMS	<6>	(64)	<i>Persicaria</i> sp. seeds	650 +/- 30	AD 1280 to 1400 (670 to 560 cal BP)	-29.0

CONCLUSIONS

The aim of the environmental archaeological assessment was to quantify the organic content of sample <6> (context (64)) and to determine the presence of plant macrofossils suitable for radiocarbon dating. Loss-on-ignition analysis demonstrated that organic matter values were between 12 and 25% in three replicate subsamples, indicating that the mineral content of context (64) is high, but that sufficient organic material may be present for radiocarbon dating. Macrofossil assessment of the sample confirmed that waterlogged seeds were present in high quantities, and thus *Persicaria* sp. seeds were sent for radiocarbon dating. The results of the radiocarbon dating indicated that the organic horizon accumulated during the High to Late Middle Ages (AD 1280 to 1400 (670 to 560 cal BP)).

RECOMMENDATIONS

No further work is recommended on the sample from Blacksmith's Corner, Tattershall unless the context is deemed of sufficient archaeological interest to necessitate a full analysis of the waterlogged macrofossils (seeds and wood) within the sample.

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Waterlogged Wood Assessment Report: Blacksmiths Corner, Tattershall. Lincolnshire

Michael Bamforth BSc Alfa (October 2011)

INTRODUCTION

This report has been compiled by Michael Bamforth on behalf of AOC Archaeology Group (London).

This document aims to assess the potential of the waterlogged wood assemblage in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology and conservation and retention.

A total of 21 discreet items of waterlogged wood were recovered during an archaeological excavation undertaken by AOC Archaeology at Blacksmiths Corner, Tattershall, Lincolnshire, under site code BCT 11 in autumn of 2011. Michael Bamforth recorded the material at the offices of AOC during September 2011. The material had all survived due to waterlogging and was recovered from a single feature:

Well [039]

A single coopered vessel, consisting of thirteen staves (036.1 – 036.13) and a wooden hoop (036.14) was recovered from the base of the feature. The vessel was 'chocked' in place by a further seven pieces of wood (035, 038, 074, 075, 076, 119 & 163). The primary fill around the wooden vessel has been dated to between the 15th and 18th centuries (pers. comm. I. Hogg, AOC, 2011).

METHODOLOGY

This document has been produced in accordance with English Heritage guidelines for the treatment of waterlogged wood (Brunning 2010) and recommendations made by the Society of Museum Archaeologists (1993) for the retention of waterlogged wood.

Several items were double numbered. In these cases it was possible to identify the correct numbers for the items from the field records.

Each discreet item was recorded individually using a pro forma 'wood recording sheet', which is based on the sheet developed by the Fenland Archaeological Trust for the post excavation recording of waterlogged wood.

Every effort was made to refit broken or fragmented items. However, due to the nature of the material, the possibility remains that some discreet yet broken items may have been processed as their constituent parts as opposed to as a whole.

The metric data were measured with hand tools including rulers and tapes; the tool marks were measured using a profile gauge.

The system of categorisation and interrogation developed by Taylor (1998, 2001) has been adopted within this report.

Features and classifications of coopered vessels and staves have been adopted from Morris (2000).

Items identifiable to species by morphological traits visible with a hand lens (oak - *Quercus* sp. and ash – *Fraxinus excelsior*) were noted. Other items were sub-sampled to allow later identification to taxa via microscopic identification as necessary.

CONDITION OF MATERIAL

Condition scale developed by the Humber Wetlands Project (Van de Noort *et al.* 1995: Table 15.1) will be used throughout this report (Table 1). The condition scale is based primarily on the clarity of surface data. Material is allocated a score dependent on the types of analyses that can be carried out, given the state of preservation. The condition score reflects the possibility of a given type of analysis but does not take into account the suitability of the item for a given process.

CONDITION SCORE	MUSEUM CONSERVATION	TECHNOLOGY ANALYSIS	WOODLAND MANAGEMENT	DENDRO-CHRONOLOGY	SPECIES IDENTIFICATION
5 excellent	+	+	+	+	+
4 good	-	+	+	+	+
3 moderate	-	+/-	+	+	+
2 poor	-	+/-	+/-	+/-	+
1 very poor	-	-	-	-	+/-
0 non-viable	-	-	-	-	-

Table 1: Condition scale

If preservation varies within a discreet item, the section that is best preserved is considered when assigning the item a condition score. Items that were set vertically in the ground often display relatively better preservation lower down and a relatively poorer preservation higher up.

CONDITION SCORE	FREQUENCY	% OF ASSEMBLAGE
5	0	0.0
4	16	76.2
3	5	23.8
2	2	9.5
1	0	0.0
0	0	0.0

Table 2: Condition of material

The upper portions of the staves have all been truncated by the 'preservation horizon', the point above which waterlogged wood will not have survived on a given site. There is a low occurrence of fragmentation and breakage.

Using the above condition scale, the majority of the material scores a 4 (Table 2). This condition score reflects a well-preserved assemblage. Technological analysis, an assessment of possible woodland management practices and species identification is possible throughout the assemblage.

The material is in a suitable condition to allow the consideration of dendrochronological analysis. The oak is slow grown, straight grained and has few knots. When considered in conjunction with the presence of sapwood on one of the staves, this vessel represents a good candidate for dendrochronology.

RANGE AND VARIATION

Staves

A total of thirteen barrel staves (036.1 – 036.13) (Table 3) and a securing hoop (036.14) forming a single coopered vessel, were recovered from this context. The staves, set in the base of well [036], form the base of a stave built vessel. The staves were vertically set, shoulder to shoulder in a circle with a diameter of 0.47m at the base and 0.54m at the widest point, the middle of the vessel.

The lower c. 0.5m of the vessel was relatively well preserved. The staves are all in good condition, the majority scoring a 4 for condition, with two staves scoring a 3. Above this point the barrel staves had degraded. The height to which the staves have survived represents the preservation horizon for waterlogged wood in this feature. There is a tendency for the back (outer) faces of the staves to have evidence of woodworm (circular holes, c.1-2mm in diameter) towards the base. The bases of all but one of the staves display evidence of having broken in antiquity, generally across the croze groove. This is unsurprising as the groove represents a naturally weak point in the staves.

Table 3: Catalogue of staves

CONTEXT	LENGTH (mm)	BREADTH (mm)	THICKNESS (mm)	DECAYED AT TOP?	BROKEN AT BASE?	CHIV AT BASE?	CROOZE GROOVE?	CHME AT BASE	WOODWORM	SHAPE	NOTES
36.1	615	146 Dbase 160 Dtop	8 D10	Y	Y	N	Y	?		Curved outw ards. Tapered	Incised on outside. 2 x sub-circular holes: 17x22 & 15x17
36.2	540	116 Dbase 130 Dtop	9 D12	Y	N	Y	Y	N	Outer face	Curved outw ards. Tapered	Incised on outside. Sapwood along one edge
36.3	510	89 Dbase 106 Dmiddle	6 D11	Y	Y	Y	?	?		Curved outw ards. Bellied	
36.4	523	122 Dbase 135 Dtop	7 D9	Y	Y	Y	Y	?		Curved outw ards. Tapered	2 x circular holes, bunged with split oak 10x10 & 7x6
36.5	538	95 Dbase 110 Dmiddle	6 D9	Y	Y	Y	Y	?	Outer face	Curved outw ards. Bellied	Chiv is on the outside. Croze groove is 20 wide. One edge broken
36.6	465	115 Dbase 135 Dtop	9 D5	Y	Y	Y	Y	?		Curved outw ards. Tapered	Chiv is on the outside.
36.7	460	110	10	Y	Y	Y	Y	?	Outer face	Curved outw ards.	One edge fragmented.
36.8	505	115	8 D9	Y	Y	?	?	?	Outer face	Curved outw ards.	Broken in half.
36.9	465	110 Dbase 125 Dmiddle	7 D10	Y	Y	Y	?	?		Curved outw ards. Bellied	2 x circular holes: 9x11 & 8x9
36.10	490	120 Dbase 136 -middle	6 D10	Y	Y	Y	Y	?	Outer face	Curved outw ards. Bellied	1 edge broken. 1 x circular hole: 22x23
36.11	495	110 Dbase 125 Dmiddle	6 D10	Y	Y	Y	?	?	Outer face	Curved outw ards. Bellied	Both edges broken
36.12	510	125 Dbase 144 Dmiddle	8 D10	Y	Y	N	Y	?	Outer face	Curved outw ards. Bellied	1 x circular hole with split wood bung: 16x17. 1 x circular hole with RW bung: 11x11. 1 x circular hole: 15x16

All of the staves are fashioned from good quality oak heartwood. A single stave (036.2) has sapwood remaining along one edge. The material is straight grained and slow grown, with ring widths varying between 1-5mm.

The staves are all radially aligned. The individual staves vary in length between 460-615mm, in breadth between 95-160mm and in thickness between 6-12mm. The majority of the staves are bellied

in the centre and curved outwards; several staves are also tapered from the base towards the top (Table 3).

The stave that remained intact at the bottom (036.2) shows clear evidence of the vessel's construction. A c.2mm thick groove (the croze groove) was present approximately 35mm from the inside bottom edge. The groove, square in profile, would originally have housed a caskhead (in this case, the base). Several of the staves displayed a chiv (internal bevel) above the croze groove to aid the insertion of the head. Unusually, several of the staves had the chiv on the outer face. In the single intact case, no chime (bevel) was seen on the bottom edge.

Small round holes passing from the inner to the outer face of the staves were recorded on five staves. Of these, four staves had multiple holes. Several of the holes contained bungs (Table 4).

STAVE	NOTES (dimensions in mm)
36.1	2 x sub-circular holes: 17x22 & 15x17
36.4	2 x circular holes, bunged with split oak: 10x10 & 7x6
36.9	2 x circular holes: 9x11 & 8x9
36.10	1 x circular hole: 22x23
36.12	1 x circular hole with split wood bung: 16x17. 1 x circular hole with RW bung: 11x11. 1 x circular hole: 15x16

Table 4: Holes through staves

Two of the staves (036.1 & 036.2) display incised lines/marks on the outer (back) face. Stave (036.1) has a series of six lines, five of which seem to comprise engraved tally markings (Plate 1). The grooves have a sub-rectangular profile, and are between 2-3mm wide. At their deepest point, they are 2mm deep. They fade out at the ends. Stave (036.2) has three lines, the lower two making a diagonal cross whilst the upper line crosses the stave horizontally above the cross (Plate 2). These grooves have a square cross section, being 2mm wide and 2mm deep. In both cases, the lines seen on the two incised staves do not appear on the staves adjacent to them.

Several of the staves were broken across the weak point represented by the internal groove (the croze groove). The lower sections of these staves are not present. Neither was any kind of base (caskhead). This suggests that the vessel base was broken prior to the staves' insertion in the well.

Hoop

Wooden hoop (036.14) ran around the outside of the staves for the complete circumference, towards the base of the vessel. The hoop is in good condition, scoring a 4. Upon lifting of the barrel, the hoop broke into twelve fragments. The hoop is formed of straight grained ash heartwood with growth rings varying between 2-5mm. This long, radially aligned baton has an elongated triangular cross section. Although the original length is hard to determine due to the fragmentation of the item, it has a maximum breadth of 56mm and a maximum thickness of 50mm. The ends taper and overlap for a 230mm length, where they are secured by a single split wood dowel with a diameter of 9mm. This dowel may originally have pegged the hoop to the barrel.

Chocks

Timber debris (035) remains unidentified to species and scores a 3 for condition. It is a tangentially cleft outer chord with bark, sapwood and heartwood all present. Both ends are cross cut. A clear, flat tool facet is visible on one end, measuring 110mm by 70mm. The item itself measures 185mm in length, is 320mm wide and 170mm thick.

Timber (038) remains unidentified to species and scores a 4 for condition. This item originated from the crux between the trunk and two limbs of a tree; bark, sapwood and heartwood are present. The proximal end and one edge of the trunk have been trimmed flat. The distal ends of the two side branches are very flat and appear to have been sawn. One edge of the trunk has been tangentially split away. The item is 230mm long, 400mm wide and 300mm thick. The two side branches have diameters of 180mm and 170mm.

Timber (074) remains unidentified to species and scores a 3 for condition. Bark, sapwood and heartwood are all present. The item is a radial 1/8 split, both ends of which have been trimmed. Broad, flat tool facets are present on the trimmed ends. The item measures 430mm by 370mm by 180mm. The original diameter of the item is c.400mm.

Timber debris (075) remains unidentified to species and scores a 4 for condition. Bark, sapwood and heartwood are all present. The item is a radial 1/8 split, both ends of which have been trimmed from one direction. No clear facets remain. The item measures 410mm by 135mm by 90mm.

Roundwood (076) remains unidentified to species and scores a 4 for condition. Bark, sapwood and heartwood are all present. Both ends have been cross cut. Flat facets are visible, with a single measurable stop mark measuring 65:6mm.

Debris (163) remains unidentified to species and scores a 4 for condition. It is formed of heartwood only. It has been tangentially split and with flat tool facets visible over much of the item. At least two different tools are represented, each of which is described by a stop mark measuring 110:19mm and 90:10mm respectively.

DISCUSSION

Open topped, stave built (coopered) vessels are first recorded in western Europe in the 2nd Millennium BC (Ashbee, Bell & Proudfoot 1989). The techniques of cask production (vessels closed at both ends) were introduced during the Roman period (Earwood 1993). Despite the length of the tradition, the techniques employed in the construction of stave built vessels have a strong continuity from Roman to recent times (Earwood 1993).

Coopered vessels are constructed from vertical staves, set edge to edge in a circle and held together with hoops of metal, wood or withies. Coopered vessels made in the wet, dry or white (open topped) traditions have been prevalent throughout the historic period and would be expected from an assemblage of this date if conditions for preservation allow (Morris 2000). Although they have been produced in a huge variety of sizes and forms, the following terms provide useful categories (Comey 2007; Morris 2000):

- Cask: Large, sealed container. Wet coopered examples generally more bellied than dry coopered examples.
- Keg: Medium to large sealed container. Straight sided. Dry coopered.
- Tub: Medium open topped container. Variety of forms. White coopered. Larger than a bucket. Opposed raised staves are used to lift, but are not joined by a handle
- Bucket: Small to medium open topped container. Straight sided. White coopered. Handle joined to two opposed raised staves.

Vessel

The use of radially cleft oak is typical of stave built vessels of this period, as are all the features of the recovered staves, including the chiv and the square cut croze groove (Morris 2000). The slight variation in the width of the staves is a feature common to coopered vessels (Comey 2007).

The broken ends of several staves, and the lack of any sealing caskhead at the base of the staves, points to the vessel having broken at the base in antiquity, prior to being deposited in the well.

The securing split wood hoop, secured with a single wooden dowel is also typical of coopered vessels. This may originally have been pegged into a stave.

The staves are generally bellied. The diameter of the vessel at the base is 0.47m, and is 0.54m at the widest point, approximately 0.32m up from the base of the vessel. The form of the staves and of the complete vessel suggests a cask (see above). This would be a bellied item, originally sealed at both ends. The form suggests a wet coopered vessel, used to store and transport liquids. As the upper segments of the staves are degraded, this is to some extent conjecture, but is considered likely.

The presence of multiple vent holes in the staves, some of which are bunged, supports the suggestion that this was a wet coopered cask (Morris 2000).

Marks present on stave built vessels generally represent one of three things: construction marks, makers / merchant marks or symbolic marks (Morris 2000). In both cases, the incised lines on the two incised staves reach the edge of the stave but do not continue onto the

adjacent stave. This suggests that the incisions were made before the vessel was assembled. It seems likely therefore, that the marks are either construction or makers marks.

Several of the staves appear tapered rather than bellied, which raises the possibility that the vessel was partially broken and that these staves were added from a separate vessel to facilitate the use of the item as a well lining (see below).

The seven 'chocks' have clearly been used as packing to secure the vessel in place in the well. They all seem to represent off-cuts and rubbish, utilised as packing.

Volume of the vessel

The potential volume of the vessel has been estimated using the following formula from Morris (2000). As the vessel is not complete, some of the data have been estimated:

$$\text{Volume} = \pi H/3 (R^2 + Rr + r^2)$$

H – Height. Estimated at 137cm, based on mean average height from base of staves to widest point of stave, doubled.

R – Maximum radius at centre of vessel. Estimated at 27cm, by adding all the maximum widths of the staves together to calculate the circumference. Where this value is not known for a stave, the mean average of the measured staves was substituted.

r – Minimum radius at base of vessel. Estimated at 23.6cm, by adding all the minimum widths of the staves together to calculate the circumference.

The volume is calculated as 137.87 litres, which is equivalent to 8413.44 cubic inches. Converting this to the wine gallon (216 cubic inches = 38.95 gallons), the Winchester gallon (269 cubic inches = 31.39 gallons) and the customary gallon (231 cubic inches = 36.42 gallons) places the vessel firmly in the category of a barrel.

It is noted that this equation tends to underestimate the volume of a barrel, and also that very small errors in the original measurements can lead to widely varying volume calculations (Morris 2000). As such, this calculation can only be described as an estimate.

Coopered Vessels as well linings

There are many examples of both complete and broken coopered vessels utilised as the linings of wells, both individually and stacked one atop another.

Excavations in York unearthed two, three-tiered cask lined wells: a 15th century example from Coppergate, and a 14th century example from the Bedern Foundry site (Morris 2000).

Similarly, the staves of a large tub were used to line a 15th century well at Covehithe in Suffolk (Durbridge 1977-8).

STATEMENT OF POTENTIAL

This document aims to assess the potential of the waterlogged wood assemblage in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology and conservation and retention.

There is not sufficient material to address the issue of woodland reconstruction. Decay analysis is not advised, as the author is not aware of any ongoing discussion of the preservation environment in this area. None of the material is of sufficient interest to warrant conservation and retention. Similarly, the woodworking technology is not of sufficient interest to warrant further analysis.

Dendrochronology – Ian Tyers

Dendrochronological analyses of medieval and post-medieval waterlogged barrel remains from London and elsewhere in the UK have identified a wide range of sources for the timbers. Most barrels from archaeological sites are in the second or more use; relatively few complete barrels are recovered. Typical re-uses for coopered vessels include well or pit linings, furniture, and also as a conveniently salvaged source of planking.

Barrels using local timber are relatively rare in the later medieval period, but wood from Scandinavia, northern Germany, the eastern Baltic, northern France, and Greece have been identified by the dendrochronological matching of the barrel stave sequences to reference data from these areas. Dendrochronologists working abroad, particularly in Denmark and Belgium, have identified similarly diverse ranges of source timbers in excavated barrels from these areas. Some barrels have been seen with timbers from more than one source.

There is some evidence to suggest barrels have an extensive re-use, or recycled life. Indeed some 19th century evidence suggests barrels were dismantled and returned to places of origin, or alternative locations, and even today whole industries rely on the availability of re-used barrels (e.g. the whisky, wine, and gardening industries are using a common pool of barrels). The vessel staves therefore have the potential to provide dating evidence for the site, with stratigraphic evidence constraining the dates of other features above or below.

The ability to potentially identify the use of timbers from the same tree, or from local or non-local woodland may assist in reconstructing construction techniques and choices, and illuminate resource availability. Because of the use of radially split planking, barrels have the potential to provide good dendrochronological reference series'.

RECOMMENDATIONS

Production of archive

It is suggested that, for the sake of completeness and to record the incised marks, staves (036.1) and (036.2) are illustrated at an appropriate scale.

Further analysis

No further analysis is advised. However, dating and possibly provenancing via dendrochronology is a possibility, should this be appropriate for the project.

Suggested timetable of works

Once removed from an anoxic burial environment, waterlogged wooden remains will begin to break down and decay. It is therefore essential that provisions for additional recording work and conservation take place as soon as possible.

Therefore, it is advised that the suggested illustration of staves (036.1) and (036.2) is carried out as soon as possible, preferably within six months.

PLATES



Plate 1: Detail of stave (036.1)

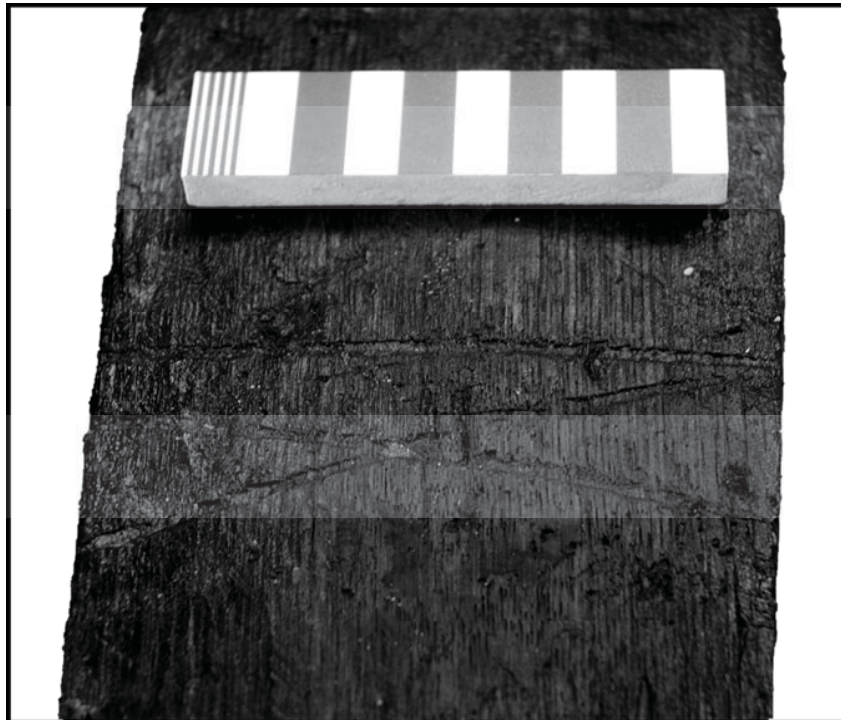


Plate 2: Detail of stave (036.2)

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Appendix D – OASIS Form

OASIS ID: aocarcha1-99270

Project details

Project name Blacksmith's Corner, Tattershall, Lincolnshire

Short description of the project A programme of strip, map and record, in addition to a watching brief, associated with the construction of a new superstore and car park was undertaken. The natural gravels were cut by Roman coaxial field systems. medieval activity was sparse until the mid 15th century with only isolated ditches, pits and a pond being found. Between 1450 and 1550 a series of pits and a barrel well were excavated, a possible wooden building was also dated to this phase. This activity probably related to the increase in construction in Tattershall at the time, with the castle, church and college all being built. The post-medieval activity was sparse, with only isolated pits and a brick lined cess pit recorded.

Project dates Start: 03-08-2011 End: 26-08-2011

Previous/future work Yes / Not known

Any associated project codes reference aocarcha1-60386 - OASIS form ID

Any associated project codes reference S/175/1649/09 - Planning Application No.

Any associated project codes reference BCT11 - Sitecode

Any associated project codes reference LCNCC:2011.77 - Museum accession ID

Any associated project reference 30906 - Contracting Unit No.

codes

Type of project Recording project

Site status None

Current Land use Industry and Commerce 3 - Retailing

Monument type DITCHES Roman

Monument type DITCH medieval

Monument type PITS Roman

Monument type PITS medieval

Monument type PITS Post medieval

Monument type POSTHOLES medieval

Monument type BARREL WELL medieval

Monument type POND medieval

Significant Finds POTTERY medieval

Significant Finds ANIMAL BONE medieval

Significant Finds METALWORK medieval

Significant Finds CBM medieval

Significant Finds POTTERY Post medieval

Significant Finds WOOD medieval

Investigation type 'Open-area excavation'

Prompt Direction from Local Planning Authority - PPS

Project location

Country England

Site location LINCOLNSHIRE EAST LINDSEY TATTERSHALL Blacksmith's Corner,
Tattershall, Lincolnshire

Postcode LN4 4LJ

Study area 0.80 Hectares

Site coordinates TF 2120 5803 53.1053681377 -0.189349986616 53 06 19 N 000 11 21 W
Point

Height OD /
Depth Min: 3.72m Max: 4.32m

Project creators

Name of
Organisation AOC Archaeology

Project originator brief Local Authority Archaeologist and/or Planning Authority/advisory body

Project originator design AOC Archaeology

Project director/manager Alan Ford

Project supervisor Ian Hogg

Type of
sponsor/funding body Developer

Name of
sponsor/funding body DPP LPP

Project archives

Physical Archive recipient The Collection: Art and Archaeology of Lincolnshire

Physical Archive ID LCNCC:2011.77

Physical Contents 'Animal Bones','Ceramics','Environmental','Metal','Wood'

Digital Archive ID LCNCC:2011.77

Digital Contents 'Stratigraphic'

Digital Media available 'Images raster / digital photography','Images vector','Survey','Text'

Paper Archive recipient The Collection: Art and Archaeology of Lincolnshire

Paper Archive ID LCNCC:2011.77

Paper Contents 'Animal Bones','Ceramics','Environmental','Metal','Stratigraphic','Wood'

Paper Media available 'Context sheet','Drawing','Matrices','Photograph','Plan','Report','Section','Unpublished Text'

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title BLACKSMITH'S CORNER, TATTERSHALL, LINCOLNSHIRE: A WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL STRIP MAP AND RECORD, AND WATCHING BRIEF

Author(s)/Editor(s) Clarke, C.

Date 2011

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Entered on 27 October 2011

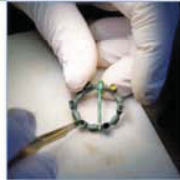
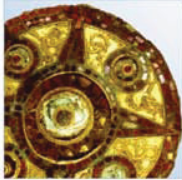
OASIS:

Please e-mail [English Heritage](#) for OASIS help and advice

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