



St Bartholomew's Way, Melton Mowbray, Leicestershire

Archaeological Excavation Report

November 2019

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David Wilson Homes

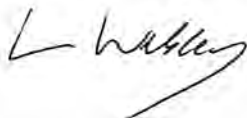
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St Bartholomew's Way, Melton Mowbray, Leicestershire

Archaeological Excavation Report

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Summary

Oxford Archaeology excavated a middle Iron Age settlement in advance of a residential development at St Bartholomew's Way, Melton Mowbray, Leicestershire. An initial phase comprising a boundary ditch with adjoining rectilinear enclosures was superseded by a settlement situated within a square ditched enclosure, which contained a sub-enclosure and evidence for a single roundhouse. Unusually, the enclosure had its entrance at the corner and was linked to a trackway by means of a short ditched passageway. Evidence for the farming regime that was practiced here was limited due to the small size of the animal bone and charred plant remains assemblages, but the community evidently cultivated both wheat and barley and reared sheep/goat and cattle with smaller numbers of horse and pigs. The excavation produced a moderately large pottery assemblage that belongs to the Scored Ware tradition, dated to the 3rd to 1st centuries BC, and radiocarbon dates were obtained with ranges of 365-200 cal BC and 360-120 cal BC (at 95% confidence). The latter date came from a human skull fragment that was recovered from the enclosure ditch, and which may be evidence for the deliberate manipulation and ultimate deposition of defleshed human remains within the settlement. Two quernstones placed at opposite corners of a subsidiary enclosure adjoining the trackway, one of them associated with a jar that was apparently smashed *in situ*, may also represent evidence for ritual deposition.

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1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) undertook an archaeological excavation at St Bartholomew's Way, Melton Mowbray, Leicestershire, in advance of a residential development. The investigation comprised the excavation of five additional evaluation trenches to supplement trial trenching that had been undertaken previously, followed by an area of open excavation. The excavation area, defined according to the results of the evaluation trenching, encompassed an area of 1.7ha. The main phase of excavation was undertaken between August and October 2018 with the exception of a limited zone at the north-western corner of the area, within which the excavation was completed in October 2019 following the removal of overhead power lines.
- 1.1.2 An edited version of this report will be submitted for publication in the county journal, *Transactions of the Leicestershire Archaeological and Historical Society*. The site archive will be submitted to Leicestershire Museums under accession code X.A83.2018 and the digital archive will be made available via the Archaeological Data Service.
- 1.1.3 The work was commissioned by CgMs Heritage (now RPS Group Ltd) on behalf of Barratt and David Wilson Homes. The work was undertaken in accordance with a written scheme of investigation (CgMs 2018) and a condition attached to the planning permission by Melton Borough Council (planning refs. 15/00593/OUT; 16/00281/OUT; 17/00281/OUT).

1.2 Location, topography and geology

- 1.2.1 The site is located on the north-western edge of Melton Mowbray, c 20km north-east of Leicester at NGR SK 7405 2105 (Fig. 1). It lies on the west side of the A606 Nottingham Road at its junction with St Bartholomew's Way, which extends west toward the 19th century Holwell Ironworks. Prior to excavation, the site was a pasture field for horses belonging to the adjacent Hill Top Farm.
- 1.2.2 The land is relatively flat with a gentle slope down towards the south, from 125m above Ordnance Datum (aOD) at the site's northern boundary to a lowest elevation of 120m aOD.
- 1.2.3 The underlying solid geology is mapped as mudstone of the Charmouth Mudstone Formation, which is overlain by diamicton belonging to the Oadby Member (BGS online viewer).

1.3 Archaeological and historical background

- 1.3.1 Geophysical survey of the site had identified two areas of activity, comprising a linear feature in the north-western part of the site which had a number of small enclosures running off it, and a larger area of sub-rectangular enclosures and connecting ditches in the south-eastern part of the site (Stratascan 2015). The morphology of the features suggested an Iron Age or Roman date and their alignment clearly differed from that of the adjacent remains of Sysonby Grange. University of Leicester Archaeological Services undertook a trial-trench evaluation of the cropmarks in 2016 (ULAS 2016a),

which confirmed the Iron Age date of the complex, as well as identifying additional features that had not been detected by the geophysical survey. A second tranche of trenches in 2017, which addressed the part of the development area to the north and west of the cropmarks, proved largely negative (ULAS 2017).

- 1.3.2 Other sites that have been identified as a result of development on the fringes of Melton Mowbray include a complex of enclosures likely to represent a settlement of Iron Age or Roman date that was revealed by a geophysical survey on the north side of Sysonby Farm, a little over 200m north-east of the site (ULAS 2014), and a Roman settlement with possible Iron Age origins that was excavated at Melton Country Park (Beamish 1990). Geophysical survey and trial trenching on land off Leicester Road has identified a Beaker Period pit, extensive Iron Age settlement and a rectilinear enclosure of late Roman date (ULAS 2016b).
- 1.3.3 Earthworks of the medieval Sysonby Grange occupy the field immediately to the west of the site and are a Scheduled Monument (List Entry 1016317). The earthworks define a well-preserved complex of enclosures around an inner court and represent the remains of a farm that belonged to the Cistercian Abbey of Garendon, Loughborough, from at least the early 14th century (Courtney 1980/1). The boundaries of the present field appear to preserve those of the grange and the earthworks do not extend into the field where the site lies.
- 1.3.4 The late post-medieval turnpike toll road, which later became the A606 Nottingham Road, runs to the east of the site. The 1845 Tithe map shows the site largely as it is today, with all boundaries extant with the exception of St Bartholomew's Way, which was constructed in the late 1870s to serve the newly constructed Holwell Ironworks.

2 EXCAVATION AIMS AND METHODOLOGY

2.1 Aims and objectives

- 2.1.1 The overall aim of the programme of archaeological works was to preserve by record the archaeological remains within the site impacted upon by the development.
- 2.1.2 The fieldwork comprised the open area excavation of an area that was defined according to the results of the evaluation trenching.
- 2.1.3 The objectives of the archaeological works were as follows:
- To ascertain the nature and extent of the archaeology identified by the geophysical survey and confirmed by the trial trenching;
 - To determine the date, character, function and significance of any features encountered;
 - To undertake a programme of post-excavation analysis assessing the potential of the remains to contribute to wider research agendas and the scope for dissemination of the project results to a wider audience;
 - To produce a site archive for deposition with an appropriate museum and to provide information for accession to the Leicestershire Historic Environment Record.

2.2 Research framework

- 2.2.1 The programme of archaeological investigation was conducted within the general research parameters and objectives as compiled on behalf of the region's historic environment community (Knight *et al.* 2012; Cooper 2006). With reference to the later document, a number of project-specific research aims were formulated:
- To understand the evolution of the enclosures on site and their chronology (Research Agenda 4.1.1 and 4.1.2);
 - To explore the function and range of activities undertaken on the site (Research Agenda 4.8.2 and 4.8.3);
 - To use the faunal remains recovered to understand the agricultural economy during the period of activity at the site (Research Agenda 4.8.2).

2.3 Methodology

- 2.3.1 The previous evaluation trenching had been targeted on the cropmarks and the area to the north and west, so a further five trenches (Tr 17-21, Fig. 2) were excavated in order to clarify the archaeological potential of areas to the north-east and south-east of the cropmarks. A gully (1907) was uncovered in Trench 19 and this area was therefore included within the excavation area, but the presence of a ditch (1703) in Trench 17 was not considered to be of a significance to justify extending the excavation to encompass the paddock.
- 2.3.2 The excavation area, defined according to the results of the evaluation trenching, encompassed an area of 1.7ha (Plate 1). The overburden, comprising the modern topsoil and subsoil, was removed by a mechanical excavator fitted with a toothless ditching bucket, working under close archaeological supervision. Stripping continued

until the first archaeological horizon was exposed, which in this instance corresponded with the surface of the underlying geology of diamicton. The site was cleaned as necessary and the archaeological features were planned and then excavated by hand following an iterative strategy designed to address the aims and objectives of the project. Upcast and spoil from both mechanical and hand excavation was scanned by metal detector to aid the recovery of artefacts

3 RESULTS

3.1.1 Three phases of activity were identified on the basis of stratigraphic relationships, spatial associations and chronometric dates provided by pottery and two radiocarbon determinations (Fig. 2). The first two phases, comprising a boundary ditch and rectilinear enclosures (Phase 1) superseded by an enclosed settlement (Phase 2) were both assigned to the middle Iron Age, while Phase 3, which consisted of a single pit, was of Roman or later date.

3.2 Phase 1 (middle Iron Age)

3.2.1 The earliest features comprised a ditch (137) that followed an approximate east-west alignment across the site, with a rectilinear arrangement of ditched enclosures adjoining its north side in the north-western part of the site. Ditch 137 extended for a distance of over 130m and was between 0.45-0.78m wide, with shallow sides and a concave base. Over the majority of its length it survived to a depth of 0.10-0.22m, though downslope at its most eastern point it was 0.59m deep. A large group of pottery (98 sherds, 861g) from two vessels of middle Iron Age date was recovered from an intervention near the western end.

3.2.2 Ditch 101 branched off ditch 137 and ran perpendicular to the north. It was very shallow, measuring between 0.07-0.09m in depth and varied in width from 0.32-0.52m. It terminated near the north edge of the site, about 2m south of an E-W ditch (106), the two ditches possibly forming the sides of an enclosure. A further and rather sinuous ditch (1018) extended from the north side of ditch 106, suggesting further enclosures to the north. Ditch 1018 was up to 0.85m wide and 0.43m deep with steep, slightly concave sides. At its junction with ditch 106 its fill comprised coarse stone rubble. The ditch contained small quantities of middle Iron Age pottery and animal bone throughout. The north end appeared to have been extended or recut, where it abruptly terminated (313).

3.2.3 Within the area thus enclosed was a smaller rectangular enclosure (310) that likewise abutted the north side of ditch 137. It measured c 15m north-south, and the western side lay beyond the edge of the site. Its eastern side was defined by a shallow, concave-profiled ditch up to 0.83m wide and 0.10m deep, and the north side was larger, measuring 1.20m wide and 0.46m deep, but had a similar profile. A break 2.6m wide at the north-eastern corner appeared to represent an original entrance, as may a second break, c 1.5m wide, at the south-eastern corner.

3.3 Phase 2 (middle Iron Age)

Main enclosure 312

3.3.1 Ditch 137 was overlain by a roughly square enclosure that measured 75 x 70m. The enclosure appeared to have been constructed in two phases, since the east side was recorded as cutting the south side at the south-eastern corner. The south ditch, which appeared to continue beyond the south-eastern corner of the enclosure, may therefore have been a pre-existing boundary that was utilised in the construction of the enclosure.

3.3.2 The enclosure ditch exhibited clear evidence for a single recut of the entire circuit. In its original form the enclosure ditch was up to 1.9 m wide and 0.9m deep with rounded sides and a concave base, and formed a single circuit that was complete except for the break that formed the entrance (Fig. 3, Sections 14 and 68; Plates 2 and 3). A steeper profile was recorded on the northern side, where it had a V-shaped profile. Typically, only the lower fill of the enclosure ditch survived later recutting and comprised yellowish brown/grey silty clay, probably deposited from weathering of the ditch sides. Middle Iron Age pottery was recovered from the enclosure ditch, largely from the southern side and the northern terminus of the entrance. The recut ditch was significantly narrower, mainly between 0.8-1.2m wide and was typically no more than 0.40m deep. The recutting of the ditch was accompanied by a significant re-organisation of the enclosure, with sub-enclosure 27 being inserted into the north-western corner and the western boundary south of this being recut as a discrete ditch that was not physically joined to the rest of the circuit. The pottery recovered from the recut ditch included a notable group of 35 sherds from five vessels recovered from the north side in an upper fill (250) that also contained two human parietal fragments from an older juvenile or adult individual, together with a significant quantity of animal bone including sheep, cattle, pig, and horse, some of them certainly butchered and some burnt. The skull fragment returned a radiocarbon date range of 360-120 cal BC (95% confidence, Table 7). In addition to this, sixteen fragments from a single human fibula were recovered from a soil sample collected from the south-eastern corner of the enclosure.

3.3.3 The enclosure was accessed at the south-west corner via a ditched entrance passage that was 11.5m wide and extended for c 20m. At the inner end of the passageway the terminals of the enclosure ditches defined an entrance c 3.0m wide. Between the ditch terminals the natural boulder clay appeared noticeably worn and a slight hollow had formed.

Penannular gully 100

3.3.4 Penannular gully 100 was located west of centre of the main enclosure and was probably part of the original layout of the enclosure, since it was cut by sub-enclosure 27, which was contemporary with the recutting of the enclosure ditch (Fig. 3, Section 55). The gully was sub-circular, with a diameter of c 13.7m, and was open on the east side, most likely as a result of truncation given the shallow depth of the ditch at this point. The gully was up to 1.1m wide on the west side but narrowed rapidly to about 0.40m at its eastern extent. It typically had shallow profile with moderate, straight sides with a slightly concave base, and was 0.28m deep at its deepest point. It had a single fill that contained middle Iron Age pottery throughout (totalling 85 sherds, 385g), together with some animal bone. No internal or other associated features were found, although it is probable that the ditch formed part of a roundhouse whose eastern extent, and therefore any entrance, did not survive.

Sub-enclosure 27

3.3.5 When the main enclosure ditch was recut, a small sub-square enclosure was inserted within the north-west corner, defined by a ditch that was integral to the recut ditch on the north side of the main enclosure. The sub-enclosure measured c 28m x 29m and

was defined by a steep-sided ditch that varied from 0.66-1.64m in width and between 0.22-0.92m deep, which cut the northern extent of penannular gully 100 (Fig. 3, Section 55; Plate 4). There was a narrow gap, c 1.1m wide on its south-east corner, allowing access from the main enclosure. The ditch was fairly rich in middle Iron Age pottery, animal bone and worked flint. Several small very shallow circular pits, possibly postholes, were recorded within the sub-enclosure, although there were not enough to define any coherent building plans and only one (176) produced any artefactual material, comprising a single sherd of middle Iron Age pottery.

Other features within the enclosure

- 3.3.1 Few other features were identified within the main enclosure, although an irregular ditch (311), only 0.09m deep, cut across penannular gully 100 on an approximate north-south alignment. It had a spur ditch projecting from its north side (197) that apparently terminated c 2m south of enclosure 27 and appears to have been a later addition. A large pit (70), was located close to the entrance to the enclosure. This pit was 1.24m in diameter and 0.30m deep and contained a large amount of animal bone and two charcoal-rich fills suggesting deliberate deposition. Several small sherds of middle Iron Age pottery were also recovered from its lower fill.

Trackway

- 3.3.2 Ditches 24 and 308, which defined the entrance to enclosure 312, splayed outward at their south-western end to form a linear boundary aligned NW-SE. Ditch 257, which was parallel to the south-west, may have been contemporary with this boundary and defined a trackway c 19m wide. The ditches were generally very shallow and often poorly defined, with widths varying from 0.50-1.65m with depths of 0.13-0.36m (Fig. 3, Section 3). Ditch 257 was particularly insubstantial and survived to maximum dimensions of only 0.25m wide and 0.04m deep. Its apparent terminus at its north end is likely the result of later truncation. There was some evidence for a recut of ditch 308, and later truncation may have removed similar evidence elsewhere.

Enclosure 87

- 3.3.3 Situated within the junction of the trackway and the entranceway into enclosure 312 was a small sub-rectangular enclosure, measuring 18.6 x 15.0m. It was formed by a ditch 1.2-1.5m wide that has a concave profile and was up to 0.68m deep (Fig. 3, Sections 46 and 59; Plate 5). There was no apparent entrance into the enclosure. A jar that appeared to have been broken *in situ* was recovered from its south-east corner. Charred residue from the outside of the vessel underneath the rim was radiocarbon dated to 365-200 cal BC (95% confidence, Table 7). A complete lower stone from a rotary quern (SF 1, Fig. 5) was recovered from a middle fill (152) of the opposite, north-western corner. The unusual character of these deposits compared to the small and fragmented assemblages from elsewhere on the site, and the apparently deliberate choice of location, suggests that both may have been deliberately placed.
- 3.3.4 The enclosure ditch was re-cut on at least one occasion on its north, south and east sides, forming a slightly smaller feature. No evidence for a recut was found along its west side, although it is possible that the single surviving phase of ditch on this side was in fact the recut and had completely truncated the original ditch. Part of the upper

stone from a beehive quern, which had been re-used as a hone (SF 2, Fig. 5), was recovered from the south-east corner of the re-cut ditch (208; Fig. 3, Section 59). This second quernstone was located directly above the smashed jar within the original cut of the ditch and may likewise have been deliberately placed.

Other boundary ditches

- 3.3.5 There was some evidence for other boundaries defined by ditches around the main enclosure, perhaps representing associated fields and paddocks. Ditch 1907 appears to form part of a possible small sub-rectangular enclosure abutting the north side of enclosure 312. Its relationship with the main enclosure was not established by excavation, but in plan it appeared to post-date the original enclosure ditch and it was therefore possibly contemporary with the recutting of the enclosure and the construction of sub-enclosure 27. The ditch was up to 0.90m wide and 0.19-0.37m deep with a concave profile and terminated at its western extent, where it had narrowed considerably.
- 3.3.6 Shallow, east-west ditch 25 was aligned perpendicular to the trackway, south of the main enclosure. The terminal at its west end lay c 2.8m from trackway ditch 24, suggesting that it was laid out respecting the trackway and that the two formed part of a contemporary arrangement. A second more substantial ditch (1703), 0.85m wide and 0.35m deep, was recorded further east within Evaluation Trench 17, but lay on a more irregular NW-SE alignment and did not extend into the main excavation area. Both ditches contained middle Iron Age pottery, the latter also contained a small quantity of fired clay, probably from an oven or hearth structure.

3.4 Phase 3 (Roman or later)

- 3.4.1 Oval pit 113 cut the north-east corner of enclosure 312 and measured 1.98m wide and 0.48m deep. It contained frequent large fragments of stone and a single sherd of Samian ware pottery dated to AD 120-150. The sherd was highly abraded, which could suggest that it is residual and a pit of much later date.

4 DISCUSSION

- 4.1.1 The remains excavated at St Bartholomew's Way pertain almost exclusively to an episode of settlement and agricultural activity during the middle Iron Age, the only evidence for earlier activity comprising a small quantity of worked flint that occurred as residual material in later features and in the subsoil. This material included an awl and blade-like chips characteristic of Mesolithic and early Neolithic flint-working and a backed knife that is probably early Bronze Age or late Neolithic. The rest of the flint assemblage comprised undiagnostic knapping debris, but included four flakes with very squat forms that were hard-hammer struck, consistent with later prehistoric techniques. These pieces, comprising individual instances from the main enclosure ditch and enclosure 87 and two from sub-enclosure 27, may represent flintworking as late as the early Iron Age, although the precise date of such late assemblages is a contentious issue. The very small size of this group provides no indication that they represent continued manufacture of flint tools into the middle Iron Age and it is likely that their association with the settlement features is incidental.
- 4.1.2 The middle Iron Age activity comprised two distinct phases of activity that appear to have been of distinctly different character, although they were evidently not far separated in time, since the pottery was to all intents and purposes identical.

The Phase 1 boundaries

- 4.1.3 In contrast to the enclosed settlement of Phase 2, the Phase 1 features are likely to be agricultural boundaries. Ditch 137, which was exposed for a total distance of c 130m and continued to east and west beyond the limits of the excavation, was evidently a significant feature of the landscape; it is significant that subsidiary boundaries were present only on the north side, suggesting that it may have functioned as a boundary between areas in different use or in different tenure. It was adjoined to the north by ditches that defined what appeared to be the eastern parts of two concentric rectilinear enclosures that extended beyond the western edge of the excavation area. There was no definite evidence regarding the function of these enclosures, and despite the presence of a deposit of sherds from two vessels in ditch 137, assemblages of pottery and animal bone were generally small and characteristic of incidental inclusion rather than proximity to domestic activity or deliberate disposal of refuse. Nevertheless, the enclosures clearly did not lie in isolation and a settlement of some form associated with them is likely to be situated somewhere close by. The absence of features to the south of ditch 137 may indicate this was an area of open ground, perhaps used as pasture.

The Phase 2 settlement

- 4.1.4 The enclosed settlement by which the earlier boundaries were succeeded in Phase 2 is characteristic of the small farmsteads that formed the most common element of the landscape of lowland Britain during middle Iron Age, although unenclosed examples also occur. Due to their size and the range and quantity of facilities with which they are equipped they are typically, and not unreasonably, interpreted as the farms of discrete family groups. The recovery of refuse in the form of pottery and animal bone (some of it butchered), and the presence of a penannular gully that most likely

represents the location of a roundhouse, leave little doubt regarding the domestic character of the occupation within the enclosure at St Bartholomew's Way. Evidence for the farming regime that was practiced here was limited due to the small size of the animal bone and charred plant remains assemblages, the latter represented by only a small number of charred grains, often in a poor state of preservation, but the community evidently cultivated both wheat and barley and reared sheep/goat and cattle with smaller numbers of horse and pigs. Much attention has been paid to the relative proportions of the different domestic species on Iron Age settlements and to the relative importance of arable and livestock farming, which may have varied according to geography, elevation and local tradition (Monckton 1995; Willis 2006), but the limitations of the evidence preclude any detailed conclusions regarding the farming regime at St Bartholomew's Way. It can, however, be said that the bones of sheep/goat were more numerous than cattle, although the greater size of a cattle carcass means that beef may nevertheless have provided a larger share of the diet than mutton and there is no indication that the community necessarily specialised in either species. The animals may, of course, have been kept to provide a range of products, including milk, wool, and, in the case of cattle, as draught animals, only being slaughtered when they had outlived their productivity in these roles, insufficient evidence regarding the age and sex of the animals to address this issue. The paucity of charred crop remains may simply indicate that crops were processed in a way that resulted in only very limited accidental burning, or that such debris was disposed of elsewhere, rather than representing a genuine absence of crop processing activity (Monckton 1995, 35). Indeed, the quernstones from enclosure 87 provide compelling evidence that crops were processed at the settlement, and may indicate that processing was specifically associated with this enclosure.

- 4.1.5 The middle Iron Age date of the occupation is indicated by the ceramic assemblage, which is dominated by Scored Ware sherds, and by radiocarbon dates of 365-200 cal BC from a burnt residue on a pot sherd and 360-120 cal BC from a fragment of human skull (both 95% confidence). Only a single sherd with clear late Iron Age characteristics was found, and this came from an appropriately late context in the fill of the recut of the main enclosure ditch. This combination of evidence suggests that occupation was most likely concentrated within the 3rd or 2nd centuries BC, possibly continuing as late as the 1st century BC but certainly no later. It may therefore have been broadly contemporary with activity recorded c 400m to the east, where evaluation trenching uncovered a pit and a ditch that contained middle Iron Age pottery, although the absence of scoring from these sherds may indicate a slightly earlier date (ULAS 2014) – the trenching, although extensive and undertaken as part of the same investigation, did not include the complex of enclosures identified by geophysical survey north of Sysonby Farm, which has the appearance of a late Iron Age/Roman settlement but has not been dated by artefactual evidence. Further east again, Scored Ware pottery was recovered from two postholes at Melton Country Park, as well as from Roman features (Beamish 1990, 5). A pit at the latter site was also recorded as containing pottery of possible Iron Age date, albeit of unspecified type, and a penannular gully that was recorded in plan during a watching brief may also be Iron Age. A further settlement of possible contemporary date has been identified from cropmark evidence at Framlands

Farm, a little over 1km north-east of the site, comprising conjoined rectangular and D-shaped enclosures (Pickering and Hartley 1985, 44-5).

- 4.1.6 Exposure of the entire area of the settlement enclosure at St Bartholomew's Way has allowed a complete plan to be established, although disappointingly few internal features were present, indicating that shallower features had probably been removed by historic ploughing. The enclosure is quite regular, albeit with a slightly circuitous western side, and almost square. This shape is not atypical and enclosures of this date vary widely in plan from curvilinear to rectangular, although Speed's survey of Iron Age enclosures in Leicestershire and Northamptonshire indicated that the Leicestershire examples were more inclined to be curvilinear or D-shaped (Speed 2010, 37). Other elements of the settlement, including the roundhouse, sub-enclosure and possible evidence from postholes for post-built structures, are also characteristic of this type of settlement and can be readily paralleled elsewhere. Indeed, the essence of such enclosures appears to be that while individual settlements often had many aspects in common, detailed analysis tends to emphasise the uniqueness of each site, albeit composed from a finite range of individual elements, which perhaps reflects the distinct identity or varying agricultural strategies of the resident community.
- 4.1.7 No internal features within gully 100 survived to provide an indication of the character of the structure, and it is not possible to be certain whether it was the only such building within the enclosure or whether others have been lost to truncation; while settlements with a lone roundhouse are the most common arrangement, perhaps representing a single family unit, additional roundhouses are also widespread. The roundhouse was evidently no longer used when the enclosure ditch was recut and sub-enclosure 27 was constructed, since the ditch of the sub-enclosure cut gully 100. It is possible that the role of the roundhouse as the domestic focus was transferred to a structure within the sub-enclosure, although only a few sporadic postholes survived. The insertion of the sub-enclosure represents a significant alteration to the arrangement of the settlement and was clearly intended to provide a means of segregating the domestic occupation or other activities within it from those in the rest of the settlement. Such sub-enclosures are a not uncommon feature and may have served a range of roles, interpretations of instances elsewhere including animal pens, food storage areas, ritual space or, in individual instances, a metalworking area and the location of a tower or gatehouse (Speed 2010, 49). The rest of the enclosure was undoubtedly fully utilised, but no evidence has survived for further internal divisions or for the function of specific areas, and truncation is surely a factor in this. However, the complete absence of evidence for pits, even in the form of truncated bases, suggests that there were no substantial pits within the enclosure. This is unusual, since pits are almost ubiquitous on Iron Age settlements, and some at least were used for storage of grain. It is possible that for some reason ground conditions rendered this impractical at St Bartholomew's Way and that above-ground storage was preferred instead.
- 4.1.8 The association of the settlement enclosure with a ditched trackway is unusual for this period, as is the location of the entrance at a corner rather than in one of the sides. The enclosure and trackway certainly appear to have been conceived as a single integrated plan and may be key to understanding the site. Both attributes may perhaps

best be explained in relation to the movement of livestock, the entrance being designed to funnel animals through the gate and the trackway providing a means of driving them along a defined and enclosed routeway without impeding on the adjacent landscape. Ditches 25, 1907 and the eastward continuation of the ditch defining the southern corner of the main enclosure beyond the edge of the excavation presumably represent boundaries that defined paddocks or fields surrounding the settlement, suggesting that the immediate landscape was enclosed for agricultural purposes and that loose or uncontrolled livestock would be unwelcome. The ditched passageway by which the enclosure was entered is somewhat reminiscent of the banjo enclosures of the chalklands of southern Britain. Although typically a southern phenomenon, a few sites of ostensibly similar form have been identified elsewhere, including a group of about twenty that have been recognised in West and South Yorkshire from cropmark evidence (Roberts 2010, 30, 33). Moore (2012) has argued that banjo enclosures in the Cotswolds were high-status sites but there is nothing at St Bartholomew's Way to indicate that it differed in status from other contemporary settlements in the region, and the similarity in form with the southern sites may represent no more than a common adaptation to facilitate the management of livestock.

Ritual and funerary activity

- 4.1.9 In addition to their role in crop processing, the quernstones recovered from the ditch of enclosure 87 provide evidence for the spiritual life of the community. It has long been accepted that deliberate deposition of objects was a regular, though infrequent event, representing some form of religious propitiation (Cunliffe 1992; Hill 1995; Speed 2010, 35-6), and there is good reason to interpret the placing of the quernstones in this context. The location of the stones within an enclosure ditch represents a location that was clearly considered to be suitable for such votive offerings, perhaps due to their liminal character, and comprised 58% of the instances identified within the central belt by the Roman Rural Settlement Project (Smith *et al.* 2018, 130). Such deposits are commonly found in significant locations such as ditch terminals (Rees 2008, 70), and the placement of these objects within the opposite corners of enclosure 87 would certainly be consistent with this practice, although this need not imply that the enclosure had a specifically religious function. Deposits of quernstones interpreted as deliberate offerings have been recorded as Wanlip (Beamish 1998) and a 'placed' quernstone was found at the centre of a supposed ritual structure at Crick (Woodward and Hughes 2007), while quernstones found in pits at Ancaster Quarry, Lincolnshire (May 1976, 136) and Hunsbury hillfort, Northamptonshire, may have a similar origin. The significance of quernstones in such practices may derive from their importance in transforming corn into flour, which has given them an association with death, regeneration and new life in many past and contemporary cultures (Peacock 2013, 166). The location of a jar, apparently smashed *in situ*, directly beneath quernstone SF 2, is unlikely to be coincidence, and presumably represents a similar deliberate deposition. Pottery is a more common element of structured deposits than are quernstones, as for example at Elms Farm, Humberstone, where pottery groups almost invariably occur at or by the terminals of roundhouse gullies (Charles *et al.* 2000, illus. 42). The relationship between the jar in the original ditch cut and the quernstone in

the recut indicates that the objects were involved in depositional rites that occurred periodically over some length of time.

- 4.1.10 It is less certain whether the skull fragments in the upper fill of the ditch of the main enclosure and the fibula fragments from the south-eastern corner of the same enclosure represent deliberate deposition as part of funerary rites or are merely incidental inclusions. Evidence for formal inhumation or cremation burials of this period is rare, and the recovery of disarticulated human bone at settlement sites has led to the suggestion that in place of burials as we would understand them, the predominant rite may have involved defleshing the corpse through excarnation or interim burial, after which the disarticulated bones may have been deposited or retained for further commemoration (Carr and Knüsel 1997; Harding 2016). Skull fragments were certainly singled out for special treatment, as exemplified by pieces from a late Bronze Age/early Iron Age settlement at Billingborough, Lincolnshire, that were cut and pierced, perhaps for use as bowls or to be suspended as amulets (Bayley 2001), and a skull with a perforated vault from Hunsbury, Northamptonshire, that may have been used in a similar way (Parry 1982, 96). There was no evidence that the fragment at St Bartholomew's Way had been deliberately modified, although it is nevertheless possible that it was circulated in commemorative rites or placed deliberately within the ditch. The radiocarbon date obtained for the bone was essentially identical to the date from the burnt residue on a sherd from enclosure ditch 87 and so provides no definite evidence that the bone had been conserved for any period of time before it was deposited in the ditch, although the wide date range, which spans the mid 4th century to the late 2nd century at the 95% confidence range, leaves this possibility open. Skull fragments were recovered from ditches at Elms Farm, Humberstone in a similar circumstance to those at Bartholomew's Way, although whether they had been deliberately placed was similarly uncertain (Charles *et al.* 2000, 159).

After the settlement

- 4.1.11 The single sherd of Samian ware recovered from a pit that cut the infilled enclosure ditch provides evidence for activity in the vicinity during the 2nd century AD, although the character of the activity is unknown. Indeed, it is uncertain whether the pit itself was of Roman date or whether it is more recent, since the sherd was highly abraded and could be a residual inclusion –the pot may have been originally introduced to the site during manuring, perhaps associated with the settlement north of Sysonby Farm, and only subsequently incorporated into the pit fill. The condition of the enclosure during the Roman period can only be speculated upon; the pottery within the enclosure ditches was entirely Iron Age in character and it is evident that the ditches silted up completely during this period, but it is possible that the associated banks still remained as visible earthworks and this may have attracted opportunistic exploitation by Roman farmers.

APPENDIX A FINDS REPORTS

A.1 Pottery

By Alex Davies

Introduction

A.1.1 The excavation produced 439 sherds of predominantly middle Iron Age pottery weighing 3110g. The majority of the material had shell inclusions of varying grade, with quartz sand, quartzite, grog and chalk present in smaller quantities. The assemblage belongs to the Scored Ware tradition and dates somewhere in the 3rd-1st centuries BC. A single sherd of Samian Ware and a single 19th-century sherd were the only other pottery recovered.

Methodology

A.1.2 The pottery was recorded following the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). Individual vessels were separated out from each context and weighed, with body, rim and base sherds counted. The major inclusion and up to two different minor inclusions in the fabric were noted, recording the grade (1-5, from very fine to very coarse), frequency (1-5, from rare to abundant), how well-sorted the inclusions are (1-4, from very well-sorted to poorly sorted), and the level of abrasion (1-3, from fresh to highly abraded). Each vessel was assigned a working fabric number, and this was rationalised into a final site fabric code. The code starts with two letters indicating the major inclusion type, with subsequent pairs of letters indicating the minor inclusions. This is followed by a number indicating different fabrics that share the same inclusions types. Each fabric is then described in further detail in Table 1.

A.1.3 Forms were assigned to vessels where possible, and this follows a coded typological scheme developed by the author. Rim types, decoration and any other additional features were noted following a basic coded system. Details of this are available in the archive. Rim, shoulder and base diameters were measured and rim Estimated Vessel Equivalent (EVEs) were taken. The data was recorded onto an Excel spreadsheet.

Table 1: Iron Age pottery

	Sherds	Wt (g)	Contexts	Description	Forms, features and decoration
Sh1	85 20%	795 27%	13 23%	Sparse quantity of fine- to medium-grade shell.	One context produced Scored Ware. This was on a round-bodied jar with diagonal slashes across rim (Fig. 4.2). Five or six round-bodied bowls (Fig. 4.5) and another jar.
Sh2	51 12%	147 5%	12 15%	Very common medium-grade shell.	Two contexts produced Scored Ware. Includes a slightly flaring rim and small bowl.
Sh3	71 15%	474 16%	20 42%	Common moderately sorted coarse-grade shell.	Six contexts produced Scored Ware, including light single-directional scoring and light random scoring. Includes flaring rim with fingertip decoration on the top, a vessel with slack shoulder and short upright neck, a round-bodied vessel and a probable globular bowl.
Sh4	103 23%	974 31%	3 7%	Very common poorly sorted very coarse-grade shell.	All contexts produced Scored Ware, including jar with slack shoulder and short upright neck with light random all-over scoring (Fig. 4.1).
Qs1	21 5%	141 13%	3 7%	Sparse quantity of fine quartz sand.	Three fine undecorated globular bowls, two burnished. (Fig. 4.3)
Qs2	62 14%	376 11%	17 30%	Sparse to common quantity of medium-grade quartz sand. Can include some medium-grade shell.	Five contexts produced Scored Ware, including light and deep single-directional scoring, and light random scoring. One probable small undecorated globular bowl
Qt	17 4%	89 3%	5 9%	Moderate quantity of medium- to coarse-grade quartzite. Can include some medium-grade shell.	One context produced Scored Ware, with light random scoring.
Gr	28 6%	105 3%	8 14%	Moderate quantity of grog. Can include a little shell.	Undecorated body sherds.
Ch	1 0.2%	9 0.3%	1 2%	Moderate quantity of moderately sorted coarse-grade chalk.	Undecorated body sherd.
	310 71%	2390 79%		Total of shell predominant	
	83 19%	517 75%		Total of quartz sand predominant	
Total	490	3110	57		

Condition of the assemblage

A.1.4 The Iron Age pottery was in a moderate to poor condition. The average sherd weight was quite low at 6.9g, with 80% of the material moderately abraded. Slightly more sherds were in a fresh condition compared to those that were heavily abraded.

Number of vessels

A.1.5 A total of 51 contexts produced Iron Age pottery, representing a maximum of 79 vessels. However, it is likely that sherds from the same vessels were present in more than one context. No systematic attempt at cross-context refitting was attempted, although all of the 12 rims were compared against one another, and none belonged to the same vessel. Two fabrics were represented solely by body sherds. Together, this suggests that a minimum of 14 vessels were present.

A.1.6 Only three rims were large enough to accurately measure diameter and EVE. This produced a total figure of 0.44, under-representing the assemblage. These were all globular bowls. The vessels had a diameter of 15cm.

Decoration

A.1.7 Assessing the assemblage by its maximum number of vessels, some 18 (21%) were decorated in the Scored Ware tradition. This included light single-directional scoring (max. 3 vessels), deep single-directional scoring (max. 2 vessel), light random scoring (max. 7 vessels) including one sherd that might have been scored with a lattice pattern, and deep random scoring (max. 1 vessel).

A.1.8 Scored decoration was present in six fabrics (Sh1-4, Qs2 and Qt), indicating the minimum number of Scored Ware vessels. Some 59 (13%) sherds and 1073 (34%) of the pottery was scored, although the majority of this derived from two vessels (22 sherds, 460g, from fill 132 of ditch 137; 17 sherds, 322g from fill 206 of enclosure ditch 87). The jar in context 206 also had slashes on the top of the rim. A single sherd had fingertip decoration, which was on the top of the rim. The prevalence of scoring compares well to a number of nearby sites (Vale of Catmose College: Chapman 2010, 26; Elms Farm: Marsden 2000, 173; Manor Farm: Marsden 2008, 39; Hallam Fields: Marsden 2009, 67; Burrough Hill: Percival 2012, 84; Enderby: Elsdon 1992a, 38).

Key contexts

A.1.9 Three contexts (fill 132 of ditch 137, fill 206 of enclosure ditch 87 and fill 250 of enclosure ditch 312) accounted for 48% of the entirety of the assemblage by weight, and 36% by sherd count.

A.1.10 Context 132 produced a total of 98 sherds (861g) from two vessels, the vast majority from a vessel with slack shoulders, a short upright neck and decorated with light random all-over scoring (Fig. 4.1).

A.1.11 Context 206 produced 20 sherds (328g) in a fresh state from a round-bodied jar with diagonal slashes across the rim and deep, random scoring (Fig. 4.2). This was discovered in the corner of small square enclosure 87, and was broken *in situ*. It appeared to have been deliberately placed, and may be considered as a 'special

deposit'. Charred residue from beneath the rim on the outer side on the vessel was radiocarbon dated to 365-200 cal BC (95% confidence, Table 7).

A.1.12 Context 250 produced a total of 35 sherds (230g) from five vessels. One of the vessels had a slack shoulder and a short upright neck.

Fabric

A.1.13 Shell was the predominant inclusion in the majority of the material, accounting for 71% of the sherds and 77% of the pottery by weight (Table 1). This was present in varying grades (Sh1-4), with approximately equal amounts of fine- to medium-grade shell (Sh1) and very coarse-grade shell (Sh4). Quartz sand was the predominate inclusion in 19% of the sherds (17% by weight). Two grades were apparent, with the coarser Qs2 more popular. A small number of sherds included larger quartzite grains in the fabric or were tempered with grog. Chalk was present in a single sherd.

A.1.14 The major fabric in which Scored Ware is found changes significantly across Leicestershire, with the western and central parts of the county dominated by granite with sand, and the eastern part of the county, extending into Rutland and northern Northamptonshire, dominated by shell (Percival 2012, 85). The dominance of shell at St Bartholomew's Way concords with this pattern. At sites with Scored Ware in the locality of Melton Mowbray that have both granite and shell as the dominate inclusion, quartz sand and grog are present in comparable percentages to those at St Bartholomew's Way, although those dominated by granite sometimes have slightly fewer sherds dominated by quartz sand (Burrough Hill: Percival 2012, table 5; Vale of Catmose Collage: Chapman 2010, table 3; Empingham West: Cooper 2000, 67; Manor Farm: Marsden 2008, 38; Hallam Fields: Marsden 2009, 66; Enderby: Esdon 2991, 40-1). This includes both sites that have a clear late Iron Age element (eg Burrough Hill), and sites that do not extend this late (eg Hallam Fields). It is of note that the material of the earliest or early Iron Age assemblage at Hamilton is in more mixed fabrics without a clear predominance of inclusion type and has a much lower percentage of shell, with higher quantities of grog (Cooper 2008, table 3). Comparison of the fabrics at St Bartholomew's Way with other sites in the locality is therefore consistent with a middle/late Iron Age date, although fabrics cannot be easily used to refine the date within this period.

A.1.15 There are few differences between fabric and form correlations. This may in part be due to the small number of vessels that had discernible forms, and a general lack of typological variation within the assemblage. For example, round-bodied bowls were found in almost all of the fabrics that produced vessels of recognisable forms. The typologically latest sherd, a high-shouldered burnished bowl with a bead rim (Fig. 4.3) was one of only two vessels in fine sandy fabric Qs1. However, it may be incautious to interpret this observation further.

Form and chronology

A.1.16 The assemblage belongs to the Scored Ware (Breedon-Ancaster) tradition of the East Midlands. This style predominantly dates to the middle Iron Age, beginning probably in the 4th or possibly even the 5th century BC (Elsdon 1996, 2; Knight 2002, 134). In

some areas, such as the lower Nene, Welland and Trent Valleys, it is known to continue through to the 1st century AD (Elsdon 1992b; Knight 2002, 134), raising the possibility that the settlement at St Bartholomew's Way may have been occupied into this late period. However, the only Roman sherd dates to the 2nd century AD and must belong to a separate, later phase of activity, and it is not likely that activity continued this late.

- A.1.17 Only a single vessel has clear late Iron Age characteristics: a well-burnished, high-shouldered globular bowl in a fine sand fabric with a bead rim (Fig. 4.3). This is from the recut of the main enclosure ditch. The remaining forms all find parallels at Manor Farm and Elms Farm, Humberstone, and at Hallam Fields, all c 18km south-west of the site (Charles *et al.* 2000; Speed 2009; Thomas 2008). Manor Farm and Hallam Fields have suites of modelled radiocarbon dates, with activity at Hallam Fields beginning 450-220 cal BC and ending 360-130 BC (95% confidence; Hamilton 2009); probably starting 410-270 cal BC and ending 290-180 cal BC (68% confidence). Manor Farm has a longer, slightly later focus, beginning 520-260 cal BC and ending 40 cal BC-cal AD 110 (95% confidence; Hamilton 2008); probably starting 440-320 cal BC and ending 40 cal BC-cal AD 20 (68% confidence). However, only two of the 13 radiocarbon dates could date after 50 BC, suggesting that the majority of the activity pre-dates the mid-1st century BC.
- A.1.18 A rimsherd from enclosure ditch 27 is unusual as it has a swelling on the lower part of the rim (Fig. 4.4). This is closely paralleled at Manor Farm (Marsden 2008, fig. 16.1), where it had an associated radiocarbon date of 360-60 cal BC (95% confidence), probably 260-90 cal BC (64% confidence). A flaring rim with fingertip decoration on the top also has a close parallel at Manor Farm (Marsden 2008, fig. 18.19), where it was found in a pit within a multi-phased roundhouse, the first phase with a radiocarbon date of 330-200 cal BC (74% confidence) and the second with a date of 360-280 cal BC (26% confidence) or 240-90 cal BC (67% confidence).
- A.1.19 Unlike Manor Farm and Hallam Fields, the assemblage at St Bartholomew's Way entirely lacks vessels with pronounced shoulders that are influenced by the preceding early Iron Age traditions. Instead, all of the recognisable forms are either round-bodied (eg Fig. 4.5) or slack-shouldered. This finds close parallel with the phase 2-3 assemblage from Enderby (Elsdon 1992a), and the 'coarse' pottery from ceramic phase 1 from Weekley (Jackson and Dix 1986-7, 73-7). This phase at Weekley preceded the advent of 'Belgic' pottery at the site and was associated with five radiocarbon dates overlapping in the 1st century BC to early 1st century AD (Jackson 1986-7, 49), although these dates are should be treated with caution (Knight 2002, 132).
- A.1.20 Overall, the assemblage from St Bartholomew's Way appears to predominantly date in the mid-late part of the middle Iron Age and possibly into the late Iron Age. This equates to somewhere in the 3rd or 2nd centuries BC, possibly continuing as late as the 1st century BC. This accords with the later part of the ranges of the two radiocarbon dates. There is little in the assemblage that suggests that occupation was particularly long-lived.

Roman and post-Roman pottery, with Edward Biddulph and John Cotter

- A.1.21 The sole Roman sherd is half a very abraded base of Central Gaulish Samian Drag. 18/31 weighing 47g in fabric S30 (Fig. 4.6; Booth 2016), equivalent to LEZ SA 2 (Tomber and Dore 1998, 32). It was found in pit 113, which cut enclosure ditch 312. Two linear incised lines of possible graffiti were present on the underside. The sherd dates to AD 120-150.
- A.1.22 The sole post-Roman sherd weighs just 1g and was found in a tree-throw hole. It is Transfer Printed Ware and dates to c 1830-1900.

Catalogue of illustrated sherds (Fig. 4)

1. Slack shouldered jar with a short upright neck and decorated with light random all-over scoring. Fabric Sh4. Ctx 132, ditch 137, Phase 1.
2. Round-bodied jar with diagonal slashes across the rim and deep, random scoring. Fabric Sh1. Smashed *in situ*. Ctx 206, enclosure ditch 87. Phase 2.
3. High-shouldered burnished bowl with a bead rim. Fabric Qs1. Ctx 242, enclosure ditch 312, Phase 2.
4. Rim with swelling. Fabric Qs2. Ctx 188, enclosure ditch 27, Phase 2.
5. Round-bodied bowl with short upright neck. Fabric Sh1. Ctx 240, enclosure ditch 312, Phase 2.
6. Central Gaulish Samian Drag. 18/31. Fabric S30. Ctx 114, pit 113.

A.2 Rotary querns

By Ruth Shaffrey

- A.2.1 A complete lower rotary quern and half an upper rotary were recovered from the enclosure ditch at opposing corners of enclosure 87. They are beehive querns of typical Hunsbury form: the lower stone has steep, conical sides with a flat grinding surface (SF 1, Fig. 5) while the upper stone has steep sides with a cup-shaped hopper and a rectangular handle socket that pierces the hopper (SF 2, Fig. 5). The lower stone is made from coarse-grained Millstone Grit whilst the upper stone is made from a coarse sandstone, probably also from the Millstone Grit. Beehive querns in Leicestershire are usually made of Carboniferous sandstones like Millstone Grit (Ingle 1989, 47) and Hunsbury querns are made in the range 255-370mm diameter therefore the St Bartholomew's Way querns are of typical lithology and at the very upper end of the size range (Ingle 1989, 48).

Catalogue of querns

Half an upper beehive rotary quern. Sandstone, coarse-grained poorly-sorted sandstone, cream but orange on what looks like the fresh surface. Possibly from the quartz arenite variety of the Millstone Grit. The quern has a flat, pecked grinding surface. The edges are roughly dressed and rounded but the quern has sustained some damage, so the original profile is a little difficult to determine. There is a small, deep,

cup-shaped hopper (80mm diameter x 80mm deep) and a perforating side handle, which enters the hopper. The handle is sub-rectangular at the edge, 28 x 71mm and slopes slightly downwards whilst narrowing before raising up towards the hopper. The grinding surface is worn and slightly dished and there are numerous sharpening grooves across it where it has been reused as a hone. There is a trace of the vertical cylindrical feed pipe, c 25mm in diameter. Measures 360mm diameter x 180mm thick. Weighs 7kg. SF 2. Context 208, fill of enclosure ditch 87 (Phase 2). Middle-late Iron Age.

Lower rotary quern. Millstone Grit. Coarse-grained gritstone with white and pink feldspar and occasional small quartz pebble <5mm. Complete beehive quern with flat, pecked grinding surface, slightly rounded but steep vertical sides, pecked and roughly worked mostly flat base. The grinding surface is worn smooth on the outermost 1cm. The spindle socket measures 28mm diameter x 61mm deep, is sub-triangular in plan and cylindrical with smooth internal walls. There are traces of iron around the top of the socket, suggesting there was an iron collar or spindle. Measures 360-270mm diameter x 190mm thick. Weighs 23kg. SF 1. Context 152, fill of enclosure ditch 87 (Phase 2). Middle-late Iron Age.

Discussion

- A.2.2 The deposition of the two querns in opposing corners of the ditch of a small enclosure is noteworthy. Querns were one of the most important pieces of household equipment and, because of their longevity, they must have been highly valued. To discard a fully functional quern with many years of use left in it can only be viewed as a very deliberate act. The other quern has presumably been broken on purpose (it would be very difficult to break one accidentally), but subsequently extensively reused as a hone. In the light of the positions of the two querns, it seems likely that both were placed as part of the same tradition, and the broken fragment may have been selected for placement because of its function as a hone, or as a quern, or conceivably both.
- A.2.3 The recovery of complete querns from mid to late Iron Age contexts is more common in areas where beehive querns were in use than in the south of England, where smaller bun-shaped querns were typical. This may be because beehive querns were far more difficult to break up, but it also seems likely that there was a cultural tradition of the placement of querns in regions where beehive querns were used. Either way, the deposition of the querns at St Bartholomew's Way seems to have been part of a repeated practice in the region. Complete querns are more often found in pit fills than in ditches, and this is as true in Leicestershire as elsewhere, as at, for example, Burrough Hill, Breedon-on-the-Hill and Hallam Fields (Cooper *et al.* 2012; Cottrill and Dunning 1950, 46-47; Kenyon 1950, 41; Thomas 2009, 104). The querns from Burrough Hill are of particular note as two pairs of rotary querns were recovered from pit 7 (Taylor *et al.* 2012). These had not been particularly carefully positioned (they were found lying in various orientations in the pit), but there can be no doubt that they were part of a placed deposit. One of these (Q60) is of comparable form to the upper stone from St Bartholomew's Way (Cooper *et al.* 2012). Although placed deposits are less common in ditches, examples have been found at Enderby (Clay 1993, 54) and Bardon

Hill Quarry (Francis and Richmond 2017), and so the instance at St Bartholomew's Way is not unprecedented.

- A.2.4 Further north, in county Durham and southern Yorkshire, there was a move away from depositing complete querns in pits (associated with roundhouses) to depositing them in ditches (associated with boundaries) sometime during the later Iron Age (Heslop 2008, 74-75). Only a detailed survey of the dating and contexts of complete querns in the Leicestershire region would help determine whether a similar transition appeared here, but the St Bartholomew's Way querns add two more useful examples to the dataset.

A.3 Fired clay

By Cynthia Poole

Introduction and methodology

- A.3.1 A small assemblage of fired clay amounting to 37 fragments (170g) was recovered from ditch fills by hand excavation and from sieved samples. The material is poorly preserved, with a mean fragment weight of 4.6g. The fired clay is not intrinsically dateable in the absence of any diagnostic forms, but all the features have been dated to the middle Iron Age. The assemblage has been fully recorded on an Excel spreadsheet, which forms part of the archive.

Fabrics

- A.3.2 Fabrics were characterised on macroscopic features and supplemented with a x20 hand lens. All the fired clay was made in the same sandy clay fabric, fired light brown and red when oxidised and black or dark grey when reduced. The clay was micaceous and contained moderate to frequent densities of fine-medium rounded quartz sand, diffuse red ferruginous inclusions and rounded chalk grits, burnt and unburnt, up to 9mm. The fabric is typical of the till (boulder clay), which occurs extensively across the region around Melton Mowbray. One fragment had deliberately added chaff temper.

Description and provenance

- A.3.3 Almost all the fired clay was undiagnostic, comprising small fragments that were either amorphous or retained a single moulded surface, usually flat or slightly undulating and with a fairly rough finish. A high proportion of pieces had a light brown or red exterior surface and margins, and black or grey core, which is usually typical of portable objects, suggesting most of the material derived from oven/hearth furniture. The largest group, from ditch 1703, clearly all came from a single object, though only two fragments refitted. Some of the pieces appeared to have two surfaces forming the edge of the object, but no other diagnostic features were present. It is very likely that much of the fired clay derived from triangular perforated bricks, which are the commonest portable fired clay items at this period, but none could be positively identified as such.
- A.3.4 The only structural fired clay was recovered from ditch 1007. This comprised three fragments (53g) which had a regular flat, smoothed surface on one side and

interwoven wattle impressions on the back face. The wattles included two rods measuring 15 and 24mm in diameter woven around a sail of 16mm diameter. The fragments had a maximum thickness of 32mm. These pieces have probably come from a wattle-supported suspended floor within an oven or a drying floor of a crop processing oven. The associated ditch fill contained frequent charcoal suggesting the fired clay had originated from the raking out of such a structure and was dumped with the ash and cinders in the ditch.

A.3.5 The fired clay was all recovered from ditch fills of the enclosures. There were no concentrations of material and the fired clay occurred as a sparse scatter of fragments distributed across the whole of the exposed area.

A.4 Flint

By Michael Donnelly

Introduction

A.4.1 The excavation yielded a small assemblage of 39 struck flints and 16 pieces of burnt unworked flint weighing just 29g (Table 2). The assemblage was odd in that it was a largely flake-based assemblage of later prehistoric character but both tools recovered looked to be earlier in date. Moreover, numerous small chips included several that looked to be a product of blade production despite the site having no non-tool blade forms. Overall, the site looks to be a very low-level background assemblage dated to the middle Bronze Age or later alongside very limited activity sometime between the Mesolithic and early Bronze Age.

Methodology

A.4.2 The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type (Anderson-Whymark 2013; Bradley 1999), general condition noted and dating was attempted where possible. During the assessment additional information on the condition (rolled, abraded, fresh and degree of cortication), and state of each artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (eg Bamford 1985, 72-77; Healy 1988, 48-9; Bradley 1999). Technological attribute analysis was initially undertaken and included the recording of butt and termination type (Inizan *et al.* 1999), flake type (Harding 1990), hammer mode (Onhuma and Bergman 1982) and the presence of platform edge abrasion.

Table 2: The flint assemblage

Category type	Number
Flake	13
Blade	0
Bladelet	0
Blade index	0% (0/13)
Irregular waste	2
Sieved chip 10-2mm	22
Piercer	1
Backed knife	1

Total	39
Burnt unworked	16/29g
No. burnt (%)	1/17 (5.88%)
No. broken (%)	5/17 (29.41%)
No. retouched (%)	2/17 (11.76%)

Provenance

- A.4.3 The assemblage was dominated by flints recovered from ditch fills (76.92%) and most of the remaining pieces were found in pits (20.51%) as well as one piece from the subsoil. The majority of the flintwork was recovered from Phase 2 (11 features, 71.79%) with just three pieces from one Phase 1 feature (7.69%) and seven pieces from the single Phase 3 feature (17.95%). The majority of the contexts with flintwork relied heavily on material from samples (84.61%), probably indicating that a much larger assemblage was present than was recovered. However, both the diagnostic tools were recovered as stray finds, comprising a piercer on a blade from the subsoil and a fine backed knife that was the sole flint in Phase 2 enclosure ditch 27.

Discussion

- A.4.4 The small assemblage included a very minor early prehistoric component, one fine tool of late Neolithic-early Bronze Age date and flake debitage typical of later prehistoric knapping. It was also very low intensity, suggesting tool use rather than a primary knapping site, and this was further highlighted by the lack of cores and related debitage. A probable piercer or awl on an inner blade was recovered from the subsoil with retouch at the proximal end. This may in fact simply have been spontaneous retouch along an oblique snap, but intentional retouch would appear to be more likely. In addition to this, several fine blade-like chips were present in environmental samples that are very typical of the platform trimming chips one sees in Mesolithic and earlier Neolithic assemblages. A fine backed knife was also recovered from middle Iron Age ditch 27. This piece had very regular, parallel invasive retouch along its distal dorsal end as well as far more irregular scaler retouch along the distal ventral surface, probably in an effort to thin a thick step or hinge terminus. The piece also had backing along its right edge and also utilised the thick platform as natural backing. This tool is most likely early Bronze Age or late Neolithic in date and must be regarded as a stray find.
- A.4.5 The bulk of the remaining pieces were undiagnostic but the flake assemblage included several very squat forms that were hard-hammer struck with simple plain or cortical platforms that are very typical of mid-late Bronze Age or later industries. Two flakes from sub-enclosure ditch 27 looked to have been struck from the same core or nodule while other very similar flakes with rolled gravel cortex were present in the assemblage. These flakes could be Iron Age in date but identifying such industries is contentious and generally Iron Age knapping is usually assigned to the early Iron Age (Humphreys and Young 1999, McLaren 2008, Saville 1981). Here, the flakes would be middle Iron Age in date if contemporary with the features from which they were recovered. However, there could be an argument made for a limited early Iron Age

phase generating enough flintwork to supply such a background assemblage. The flints are of little informative value for this phase of activity as they comprise unmodified flakes and associated knapping waste but lack cores or tools. They may simply have been very expedient cutting tools that were used when needed and rapidly discarded.

APPENDIX B ENVIRONMENTAL REPORTS, HUMAN SKELETAL REMAINS AND RADIOCARBON DATING

B.1 Animal bone

By Ian Smith

Introduction

B.1.1 The animal bone assemblage was recovered from middle Iron Age ditch fills of Phases 1 and 2 and pit fills of Phases 2 and 3. It comprises 2632 hand-collected fragments and 663 fragments from sieved samples and is dominated (according to zoned parts) by the remains of domesticated stock, principally sheep (*Ovis aries*), cattle (*Bos taurus*) horse (*Equus* sp) and pigs (*Sus* sp). Red deer (*Cervus elaphus*) antler is present amongst the hand-collected remains, and the remains of voles (*Arvicola terrestris*, *Microtus agrestis*), mice (*Apodemus* sp), shrews (*Sorex cf araneus*) and frogs (*Rana* sp) are present amongst the sieved remains. The assemblage, in common with several other Iron Age assemblages from the region, is notable in that there are marked differences in the frequencies of cattle versus sheep according to either the hand-collected or sieved data.

Methodology

B.1.2 All fragments were identified, wherever possible, to species or genus, anatomical element and side. Identifications were carried out with reference to modern comparative specimens and with reference to Halstead and Collins (1995), Schmid (1972), Sisson and Grossman (1938) and Lawrence and Brown (1967). With regard to attempted sheep/goat species determinations, reference was made to Halstead and Collins (2002), Boessneck (1969), Payne (1985) and Prummel and Frisch (1986). Diagnostic zones were recorded for all anatomical elements illustrated by Serjeantson (1996, 196-7) with divergences only amongst horncores (and antler), vertebrae and ribs. Zones were recorded for horncores and antlers where more than half the basal part or burr (or other clearly non-duplicated section) was present. The atlas, axis and sacrum were identified to species and zoned but amongst the other vertebrae and ribs, zones were not recorded and these bones were grouped into medium mammal (sheep size) and large mammal (cattle size). Mandible zones were recorded according to Strid (2012, 13). Doubt as to the mammal size represented, particularly amongst the smallest fragments, is reflected in the term medium/large mammal. The fragment count accurately reflects the numbers of fragments present at the time of recording, regardless of whether there is probable or suspected recent fragmentation. The (minimum number of anatomical elements (MNE) is based solely on those elements from which >50% of a diagnostic zone (Serjeantson 1996) is present. References are also made to number of identified specimens (NISP) and minimum number of individuals (MNI). Tooth wear amongst the cattle (comprising only a few loose teeth), was recorded after Grant (1982) and amongst the sheep/goat according to Payne (1973; 1987). There were no complete mandibular pig teeth. References to the girdle are used to encompass the scapula and pelvis. Butchery was recorded following the

codes of Lauwerier (1988) and Binford (1981). A small number of measurements were taken following von den Driesch (1976), Payne and Bull (1988) and Davis (1996) and can be found in the archive.

Recovery

B.1.3 The majority of the assemblage (80% of fragments) was recovered by hand collection. All sampled material had been sorted into >10mm, 10 to 4mm and 4 to 2mm fractions. Twelve samples produced animal bones, and all of the small vertebrate fauna (voles, mice, shrew and frog) was recovered from these samples. It is of note that, amongst the hand collected-bone, there is some highly fragmented bone and antler with either clear or probable excavation or recent damage.

Table 3: Animal bones from hand-collection

	<i>Taxa</i>	Sum of total frags	Sum of zoned
Phase 1		233	10
Cattle	<i>Bos taurus</i>	17	4
Sheep/goat	<i>Ovis/Capra</i>	9	2
Pig	<i>Sus sp</i>	2	2
Horse	<i>Equus sp</i>	14	2
Deer	<i>Cervidae sp</i>	1	0
Large mammal	<i>Mammalia</i>	122	0
Medium mammal	<i>Mammalia</i>	5	0
Medium/large mammal	<i>Mammalia</i>	63	0
Phase 2		2399	95
Cattle	<i>Bos taurus</i>	207	61
Sheep	<i>Ovis aries</i>	2	1
Sheep/goat	<i>Ovis/Capra</i>	65	14
Sheep/goat/roe	<i>Ovis/Capra/Capreolus</i>	1	0
Pig	<i>Sus sp</i>	17	5
Horse	<i>Equus sp</i>	42	7
Dog/fox	<i>Canis/Vulpes</i>	1	0
Red deer	<i>Cervus elaphus</i>	93	1
Deer	<i>Cervidae sp</i>	35	0
Large mammal	<i>Mammalia</i>	812	1
Medium mammal	<i>Mammalia</i>	111	4
Medium/large mammal	<i>Mammalia</i>	1012	1
Indet.	Indet.	1	0
Total		2632	105

B.1.4 With regards to the recovery of smaller fauna, it is of note that, in sample 2, a productive Phase 1 ditch fill, only 1% of such remains (NISP 104) were recovered from the >10mm sieved fraction, whilst all other mouse, vole or other small vertebrate remains were recovered from the 10 to 4mm fraction (28%) or the 4 to 2mm fraction (71%).

Table 4: Animal bones from soil samples

Feature		27	27	27	70	87	87	100	113	137	312	312	312	313	1018	Total
Cut		122	293	99	70	149	207	22	113	131	223	241	249	1003	1016	
Context		123	295	98	72	152	208	23	114	132	225	242	250	1004	1017	
Phase 1 totals								123		1				12	34	170
Medium/large mammal	<i>Mammalia</i>							15						9	30	54
Small mammal	<i>Mammalia</i>							53							1	54
Water vole	<i>Arvicola terrestris</i>							14								14
Small mammal	<i>cf Rodentia</i>							13								13
Rodent	<i>cf Arvicola terrestris</i>							12								12
Rodent	<i>Rodentia</i>							8								8
Large mammal	<i>Mammalia</i>							3		1				2	1	7
Mouse	<i>Apodemus sp</i>							3								3
Medium mammal	<i>Mammalia</i>													1	1	2
Cattle	<i>Bos taurus</i>							1								1
Bird	<i>Aves cf Passerine</i>							1								1
Pig	<i>Sus sp.</i>														1	1
Phase 2 totals		78	3	52	91	2	73				21	106	48			474
Medium/large mammal	<i>Mammalia</i>	47		7	23		48				5	84	23			237
Large mammal	<i>Mammalia</i>	12		8	24		6					5	8			63
Medium mammal	<i>Mammalia</i>	11		10	7		3				1	7	4			43
Mammal	<i>Mammalia</i>				31											31
Sheep/goat	<i>Ovis/Capra</i>	1		4	1						11	1	1			19
Small vertebrate	<i>Vertebrata</i>	1	3	10		2						1	2			19

Feature		27	27	27	70	87	87	100	113	137	312	312	312	313	1018	Total
Cut		122	293	99	70	149	207	22	113	131	223	241	249	1003	1016	
Context		123	295	98	72	152	208	23	114	132	225	242	250	1004	1017	
Indet	<i>indet</i>	1			3		6					3	3			16
Cattle	<i>Bos taurus</i>	4		2	2								2			10
Rodent	<i>Rodentia</i>			5			1				2	1	1			10
Pig	<i>Sus sp.</i>			2			2									4
Rodent, mouse size	<i>Rodentia</i>						4									4
Frog	<i>Rana sp.</i>			1			2									3
Frog/toad	<i>Rana/Bufo</i>						1						1			2
Sheep	<i>Ovis aries</i>											2				2
Small mammal	<i>Mammalia</i>	1											1			2
Water vole	<i>Arvicola terrestris</i>										1		1			2
Dog	<i>Canis familiaris</i>										1					1
Hare sized	<i>Mammalia</i>											1				1
Mouse	<i>Apodemus/Mus</i>			1												1
Mouse	<i>Apodemus sp.</i>												1			1
Shrew	<i>Sorex sp. cf araneus</i>												1			1
Vole	<i>Microtus agrestis</i>			1												1
Vole	<i>cf Clethrionomys/microtus</i>				1											1
Phase 3 totals									19							19
Large mammal	<i>Mammalia</i>								5							5
Bird	<i>Aves sp. Indet.</i>								4							4
Cattle	<i>Bos taurus</i>								3							3
Medium mammal	<i>Mammalia</i>								3							3

Feature		27	27	27	70	87	87	100	113	137	312	312	312	313	1018	Total
Cut		122	293	99	70	149	207	22	113	131	223	241	249	1003	1016	
Context		123	295	98	72	152	208	23	114	132	225	242	250	1004	1017	
Medium/large mammal	<i>Mammalia</i>								3							3
Small vertebrate	<i>Vertebrata</i>								1							1
Total		78	3	52	91	2	73	123	19	1	21	106	48	12	34	663

Phasing

B.1.5 Amongst the hand recovered bones (Table 3) 9% are from Phase 1 and 91% (2399 fragments) from Phase 2. The proportions by phase amongst the zoned, hand collected, specimens (ten from Phase 1 and 95 from Phase 2) are almost exactly the same. Amongst the sieved fragments (Table 4), 75% came from Phase 2 (474 fragments), 22% from Phase 1 and 3% from Phase 3. Fourteen fragments that could not be assigned a phase have been excluded from consideration. Phase 3 produced only three (cattle) elements identified to species, and is not considered further.

Preservation

B.1.6 A majority of the hand-collected bones are in fair or good condition with regard to texture (Harland *et al.* 2003) and some retain areas of gloss. However, the fact that there are no complete tooth rows from amongst the domestic stock and that loose teeth predominate is indicative of some severe taphonomic processes. In the sieved material there is much fragmented cattle- and sheep-sized mammal bone that corresponds approximately to Behrensmeyer's (1978) weathering stage 5 (for large mammals). The latter have generally been classed as large mammal or medium mammal, or where fragmentation is advanced (or there are few surface features) medium/large mammal. There is widespread evidence for recent fracture in the assemblage from each of the phases and root etching (*sensu* Baker and Brothwell 1981, 194; Binford 1981, 50) is also seen throughout. Carnivore gnawing was noted to affect 1% of the hand-collected material and <1% of the sieved material but it is highly probable that the latter underestimates of the true extent of carnivore damage. Throughout, there is little longitudinal splitting (*sensu* Behrensmeyer 1978) and obvious signs of sub-aerial weathering are not common. Among the sieved material, burnt bone comprises 9% of the total, consisting of one burnt cattle element and 12 burnt sheep/goat parts. By contrast, amongst the hand collected material there are 13 burnt cattle parts and only one from sheep/goat.

Phase 1

Penannular gully 100

B.1.7 The penannular gully produced the hand-collected remains of cattle (NISP 12) and sheep/goat (NISP 8) as well as a single horse incisor. The cattle bones include forelimb and hindlimb meat-bearing elements and the sheep/goat includes a few each of maxillary, forelimb, hindlimb and foot bones. The sieved samples constitute about half the material by fragment count and yet it is of note that burnt bones comprise only 1% of the sheep- and cattle-sized mammal from gully 100, which is perhaps surprising since the penannular gully relates to a roundhouse.

B.1.8 Samples 2 and 5 produced animal bones and the former of these appear to reflect some of the smaller fauna that were inhabiting the area. Fill 23 (sample 2) produced a considerable number of small mammal remains (NISP 103). Water vole (*Arvicola terrestris*) mandibles, maxillae and loose teeth (NISP 14) are represented amongst the bones. Some other anatomical elements (NISP 12) were identified to the level of 'rodent cf *Arvicola*'. Smaller rodent (mouse) remains include a mandible and two left

hand side maxillae, identified to genus (*Apodemus* sp). There appear to be no clear signs of predation amongst these vole and mouse remains, which are taken to represent animals living in the ditches or their vicinity.

- B.1.9 Water voles formerly had a very wide distribution over most of Britain (Lawrence and Brown 1967, 80; Yalden 1999, 116-7; Stuart 1982, 35-8), and although often more terrestrial further to the south in Europe, in the British part of its range at present the species is closely associated with ditches and other waterside habitats (McDonald and Barrett 1993, 246-8). Water vole was recorded from the Elms Farm Iron Age enclosure (Charles 2000; Albarella and Pirnie 2008) and one water vole element was recorded from Burrough Hill hillfort (Gordon 2012, 96).

Ditch 313

- B.1.10 This group includes a horse distal humerus which was affected by carnivore gnawing and root etching. One might speculate that a horse skeleton was left exposed on the surface before becoming incorporated into the ditch fills. Twelve other fragments were not identified to species and comprise comminuted material (including five burnt or charred fragments).

Ditch 137

- B.1.11 This ditch may be an agricultural boundary and produced bones from fills 132, 155 and 160. One large mammal long bone fragment came from sieving (fill 132; sample 5) and sixty-four other bone fragments are from hand collection. Cattle, horse, sheep/goat and pig remains are present from fill (155) and cattle and horse from (160). No bias towards a particular species can be claimed and there were only thirteen robust identifications to species. Sheep/goat are represented solely by a maxillary tooth in (155) and horse by an incisor in (160). The long bone elements of cattle and horse in (155) are reduced to relatively small fragments (one, two or no complete diagnostic zones in each case) and amongst these a cattle humerus is affected by probable gnawing at the proximal end. The range of elements and their fragmentation states appears plausibly to be reflective of taphonomic processes. One might reasonably speculate that the remains of these domesticated animals perhaps accumulated gradually, presumably from a nearby settlement and were at least partially exposed for a time as opposed to being dumped en masse and then covered by backfill.

Ditch 1018

- B.1.12 This group largely comprises small fragments that could not be identified to species. However, there is a very probable red deer antler fragment from fill 1010 and two pig specimens, one a partial mandibular tooth (a probable deciduous fourth premolar) and the other a single pig distal tibia affected by butchery comprising multiple fine transverse cut marks on the dorsal distal shaft (approximating to Lauwerier 1988 code 20).

Phase 2

Main enclosure ditch 312

- B.1.13 The main enclosure ditch produced 150 fragments of bone. Amongst these specimens there are 15 sheep/goat elements of which one, a butchered radius, is confidently identified as sheep and 10 as cattle. Two of the cattle parts and one from sheep/goat were from samples.
- B.1.14 An upper fill (250) of this main enclosure ditch produced bones of sheep, cattle, pig, and horse. Approximately half the remains (by fragment count) came from hand collection and half from sieved samples, the latter including eleven small burnt bone fragments. The sheep/goat are represented by cranial, mandibular, girdle and foot bone parts, the cattle by cranial, mandibular, girdle and hind limb parts, and horse is represented by a fragment of a humerus and a cranial part (supra-orbital process with foramen). The large mammal parts (including probable cattle) include several fragments of rib and vertebra. The sheep parts include some adjoining parts of a (probable female) pelvis with evidence for dismembering (PS-10 of Binford 1981, 113). The form of some furrowing in the area of the fragmented ischial tuberosity appears to indicate the probability that, after discard, this sheep pelvis was gnawed by a dog. The few pig elements comprise fragmented mandibular parts and a third phalanx. Thus, although a small group, there is a diversity of skeletal parts amongst the domesticates. The taphonomic evidence includes widespread root etching (*sensu* Baker and Brothwell 1981, 194; Binford 1981, 50), which varies in the degree to which it has affected bone surfaces. Amongst the larger specimens there is little longitudinal splitting (*sensu* Behrensmeyer 1978) and although root damage is widespread, most fragments are judged to be in a fair or good state with regard to texture (Harland *et al.* 2003). There are few obvious signs of sub-aerial weathering and some specimens even retain 'gloss' between areas of root etch. Recent damage is in evidence amongst the larger elements, including a cattle tibia and astragalus, although there are also probable ancient and post-depositional fractures. The horse cranial part is affected by probable rodent gnawing, which in turn is partly obscured by erosion of the surface. The most fragmented bone, much of it from the samples, corresponds approximately to Behrensmeyer (1978) weathering stage 5 (for large mammals) in that it is highly fragmented. Approximately 30% of the medium to large mammal bone from the sieved samples is either charred, burnt or calcined.
- B.1.15 The western side of the enclosure is of interest with regards to recovery, and species ratios, in that from hand collection and sieving there are 24 cattle identifications and 22 of sheep/goat. However, amongst these fragments 11 of the sheep/goat are from sieving, whereas all of the cattle remains were hand collected (cf Payne 1975). Remains identified to large mammal or medium mammal (hand collected apart from one medium mammal fragment which came from a sample) are present at 93% to 7% respectively.
- B.1.16 Among the small vertebrate remains from this ditch (all of which came from samples), there is water vole (an *Arvicola terrestris* tooth fragment), mouse (an *Apodemus* sp. part maxilla with an *in situ* M1), and frog or toad (a *Rana/Bufo* sp. urostyle).

B.1.17 The group from ditch fill 250 is relatively small but amongst the main domesticates, a range of skeletal parts are present, some of them certainly butchered, some burnt, and one might hypothesise that a proportion of them originate from domestic butchery and consumption.

Ditch 25

B.1.18 Ditch 25, one of the ditches at the southern corner of the main enclosure, produced a large amount of cattle, large mammal and other bone. Cattle outnumber sheep/goat by 10:1 amongst the hand-collected fragments recorded to species, and by 9:1 amongst the zoned parts. Of the hand-collected bones that were recorded as large mammal or medium mammal (excludes those identified to species), 94% are from cattle-sized mammals. Fragments of horncores and of crania, maxillary, mandibular, scapula, pelvic and sacral parts are represented amongst the cattle remains.

B.1.19 Amongst the other remains from ditch 25 there is a fragmented horse metatarsal from fill 235, which when refitted has a total length of 250mm, suggesting a withers height of 1.3m using the factors of May (1985).

Sub-enclosure 27 and red deer antler

B.1.20 Antler from red deer (*Cervus elaphus*) was recovered from three phased contexts (134, 187 and 188), almost all (128 fragments) originating from sub-enclosure 27. It should be noted that only a single burr was recorded (part from context 188 and adjoining parts from 187) and that a large proportion of the antler from these contexts is suspected to relate to very few, perhaps even a single, shed antler. There is major pearlying on the burr which suggests that this antler is from red deer (Lister 1996) as should be expected in this period. Given the number of small fragments and the extent of the damage, refitting of all parts is impracticable. The refitting brow tine is worked, apparently rather crudely, with multiple encircling incisions some 30-50mm from the burr. The brow tine appears to have been snapped at the deepest of these incisions. The associated and partial beam has both an ancient and more widespread recent fractures. Thus, there is evidence for some antler working, but given that only a single burr is represented and that there is much clearly recent fragmentation, this may potentially have been small-scale domestic activity.

Butchery and scorching

B.1.21 There are 42 butchered or possibly butchered parts, 37 of them from Phase 2 (excluding worked antler). The butchered parts of cattle and sheep/goat from Phase 2 are present in a ratio of 19:5. Further large mammal and medium mammal parts in Phase 2 are butchered at a ratio of 7:3. The affected cattle parts include metapodials split longitudinally (Lauwerier 1988, 210, code 19) in a manner that has also been noted in Iron Age contexts at Manor Farm, Humberstone (Browning 2008, 67-8). Several such cattle metapodial fragments, either clearly or probably split in antiquity, are from pits 70 and 113, whilst one is from the ditch of sub-enclosure 27. They include metapodial parts that are clearly scorched or burnt as well as split longitudinally. It is suggested that these elements may have been heated prior to splitting for the extraction of marrow. Other parts where scorching was recorded include a cattle

fourth carpal and a second and third carpal, from both from pit 70. It is plausible that such scorched carpals may have become scorched as 'riders' when other, larger associated bones were heated. Scorching was also recorded in a butchered scapula from ditch 25. A total of 24 anatomical parts bear some form of chopping evidence, including 20 specimens from Phase 2. Amongst these Phase 2 specimens, 12 are from cattle and two (split metapodials) are from sheep/goat. This admittedly small sample suggests butchery through chopping at 6% amongst the cattle and 2% amongst the sheep/goat. There are 12 specimens affected by fine cut marks most clearly associated with dismemberment, half of them from cattle and half from sheep/goat. It is suggested that some of the longitudinally split and scorched bones may well relate to the extraction of marrow and to domestic food preparation.

Evidence for animal husbandry and stock ratios

- B.1.22 There is very little evidence that can be used to construct age profiles for the domestic stock and this limits what can be projected regarding animal husbandry and the agricultural economy. There are no complete tooth rows amongst the cattle, sheep and pig bones. There is one partial cattle mandible from Phase 2, which is estimated to be 28 to 30 months plus in age based on the erupted and worn P4 and M2 (Halstead 1985; Silver 1969). Amongst the sheep/goat there is one fused pelvic acetabulum, one fused proximal radius and one fused distal tibia. There is insufficient evidence from which to draw any conclusion regarding age profiles for either the sheep or pigs.
- B.1.23 There is some fusion evidence (Table 5) for the cattle which might tentatively suggest that a proportion of cattle were only killed once they had reached prime meat bearing age. However, the sample size is very small and one must note the probability that early fusing anatomical elements may have faced an adverse taphonomic bias which would dictate that the younger cattle are less likely to be represented.

Table 5: Cattle epiphyseal fusion states

Phase 2	Fused	Unfused	% Fused	Months
Early fusing				
Pelvis	1	0	100	6-10
Scapula	2	0	100	7-10
Humerus d	2	0	100	12-18
Radius p	6	0	100	12-18
1st phal	1	0	100	18-24
2nd phal	3	0	100	18-24
Middle fusing				
Tibia d	5	1	83	24-30
Metacarpal	3	0	100	24-36
Calcaneus	1	0	100	36-42
Late fusing				
Femur p	0	1	0	42
Radius d	1	0	100	42-48
Tibia p	1	0	100	42-48

- B.1.24 The MNI ratio for cattle:sheep:pig, according to the sieved remains in Phase 2 is 1:1:0. If one amalgamates hand-collected and sieved remains, the same ratio is 4:3:1. This is based on cattle calcanei, sheep/goat tibia and pig astragali. If one combines the middle Iron Age Phases 1 and 2 the cattle:sheep:pig ratio is 4:3:2. Arguably the real ratio probably falls somewhere between the NISP and the MNI (Reitz and Wing 1999, 202) and clearly the amalgamation of material from different methods of recovery to arrive at a MNI is problematic.
- B.1.25 More specifically, hand-collected totals cannot be relied upon to accurately reflect the proportions of cattle to sheep (and pigs) as demonstrated conclusively by Payne (1972; 1975). So, wherever possible, conclusions regarding the cattle to sheep ratio should be based on sieved samples. Here, in Phase 2 (based on the combined results of nine samples), the cattle:sheep:pig ratio is 10:21:4. Parts of sheep/goat (by NISP) are therefore approximately twice as common as those of cattle in the sieved samples. Whilst there are differences across the site with regard to species ratios, sheep/goat are, as expected, generally more common, as compared to cattle, in the sieved samples when compared to the hand-collected material.
- B.1.26 With regard to meat, it is clear given the size of a cattle carcass that beef must have been an important meat. If the species ratios are considered to accurately reflect that of the culled stock, then beef would certainly be the principal meat (cf Charles 2000, 206). Moreover, to be of equal economic importance to cattle there would need to be some five times as many sheep (Trow-Smith 1957, 35). However, for secondary products the relative economic importance of cattle hides versus wool in the middle Iron Age is not clear and inevitably in addition to the recovery biases, there are other taphonomic biases that may discriminate against sheep- and pig-sized bones as compared to those of cattle (cf Charles 2000, 197; Greenfield 1988; Payne and Munson 1985). So, while the evidence points to the importance of cattle (beef), sheep (and pigs) may well be under-represented even in the sieved samples. The age-related evidence here is not substantial enough to reflect population age structures, but meat production may not have been the main focus of cattle and sheep husbandry.

Conclusions

- B.1.27 The numbers of bones from Phases 1 and 3 are insignificant and so all conclusions are based on the Phase 2 assemblage.
- B.1.28 Stock ratios are of some importance with regard to an understanding of the agricultural economy, one of the main stated aims of the research framework for this project. Hides, milk, the use of cattle in traction, wool and dung from the stock may well have been of equal or greater economic importance than meat (cf Charles 2000, 206), so stock ratios can reflect much more than relative amounts of beef, mutton or pork. These meats may reflect a final use for cattle and sheep, rather than being the economic focus. So sheep, apparently stocked here at higher levels than cattle, may have been of some considerable economic importance in the Leicestershire area during the Iron Age. Doubtless, in addition to cultural concerns, elevation and local environmental conditions had some bearing on local stock ratios and of course some farmers may have specialised (Pryor 2006, 149), although there is no evidence for specialisation in this assemblage.

- B.1.29 With regard, again, to the frequency of cattle versus sheep, the data from some local contemporary sites (Deighton 2010, 41; Browning 2008, 55) is similar to that presented here; sheep are clearly more common than cattle numerically when only sieved bone is considered. Meanwhile at Burrough Hill, a hillfort dug in the 60s and 70s (Gordon 2012), there was a lack of sieving (which is of course typical of the time), and at Rutland Water (Armitage 2008) the relationship between sieved and hand-collected bone is unclear since they have been combined. It is notable that at Manor Farm (Browning 2008, 56), even where the NISP indicates a greater frequency of cattle over sheep, the MNIs indicate equal frequencies of these animals. In one of the two areas examined by Browning (2008, 56) sheep are more abundant than cattle both according to NISP and MNI and amongst the adjacent and significant Elms Farm assemblages the MNIs calculated from combined hand-recovered and sieved bones indicate approximate parity of cattle and sheep. However, as at St Bartholomew's Way, identifications of sheep were clearly more frequent than those of cattle in the sieved assemblage (Charles 2000, 199).
- B.1.30 Any investigation of stock ratios and of distributions inside and outside of domestic areas and inside and outside features such as banjo or similar enclosures (Wilson 1996, Albarella 2007, 394) should arguably start with comparable, preferably large, sieved samples. This is because the hand-collected evidence is known to be misleading (Payne 1972, 1975). Consequently, although there are clearly intra-site spatial differences in the distribution of faunal remains at St Bartholomew's Way, the significant differences between hand-collected and sieved samples in what is a fairly small assemblage would make detailed spatial analysis problematic.

B.2 Wood charcoal

By Julia Meen

- B.2.1 Fourteen bulk sediment samples were taken for the recovery of charred plant remains, charcoal and small artefacts. Each sample was processed using a modified Siraf-style flotation machine. Flots were collected onto 250µm meshes and the heavy residues were sieved to 500µm, after which both flots and residues were dried in a heated room. The residues were sorted by eye for artefacts and ecofactual remains.
- B.2.2 Each flot was scanned using a stereo microscope and the abundance of charred plant remains and charcoal was scored. This assessment demonstrated that apart from charcoal no significant charred plant remains were recovered from any of the twelve samples, being limited mostly to small numbers of cereal grains which were often in a poor state of preservation. However, charcoal was present in all samples and on the basis of the assessment it was decided to proceed with fuller analysis of four samples in which charcoal was particularly well preserved. These four are all of middle Iron Age date. Samples 6 and 8 both come from the south-western corner of the main enclosure: sample 6 from a slot in the southern enclosure ditch and sample 8 from one of the termini that form the entrance to the enclosure (Fig. 2). Sample 1 is from pit 70, located in this corner of the enclosure. Sample 4 was taken from the north-eastern corner of the ditch defining subsidiary enclosure 87, adjacent to the ditched trackway leading from the main enclosure.

B.2.3 Charcoal fragments of potentially identifiable size were randomly selected from each sample. While normally it is preferable to identify around 100 pieces in order to fully characterise the diversity of wood taxa in an assemblage, with all samples it soon became apparent that each assemblage was dominated by only one or two taxa. Because of this, and because the number of potentially identifiable pieces was generally small, identification was halted after 50 items as it became clear further work would not add further clarity to the results. Each fragment was fractured and examined on the transverse, radial and tangential sections as necessary at up to x400 magnification using a Brunel SP-400BD metallurgical microscope. Species identifications were made on the basis of diagnostic anatomical characteristics, using criteria in Hather (2000) and Schweingruber (1990). Nomenclature follows Stace (2010).

B.2.4 Wood species identifications for each sample are shown in Table 6, and Figure 6 illustrates the relative proportions of taxa in each assemblage. As noted above, none of the samples have very mixed assemblages, being mostly dominated by just one or two species; however, there is considerable difference in species composition between individual samples. Ditch 240 and pit 70 show the strongest similarities to each other, each containing a fairly equal split between wood of the *Prunus* genus (most likely to be either blackthorn, *Prunus spinosa*, or wild cherry, *Prunus avium*) and those of the Maloideae group (a group containing several closely related taxa which are difficult to distinguish using anatomical characteristics, and which includes apple, hawthorn and whitebeam). Pit 70 also contains some oak. In contrast, the charcoal from ditch 223 is split between oak (*Quercus* sp) and willow or poplar (*Salix/Populus*; these two genera are also difficult to distinguish) while ditch 149 contains field maple (*Acer campestre*) exclusively. The sample from ditch 240 also contains fragments of tubers from onion couch grass (*Arrhenatherum elatius* subsp. *bulbosum*) which may reflect the use of uprooted grasses as kindling; further tubers were also identified during the assessment of samples 7 and 11, from the ditches of the main enclosure and sub-enclosure 27 respectively.

Table 6: Wood charcoal species identifications from pit 70 and ditch cuts 149, 240 and 223

	Sample no.	1	4	6	8
	Context no.	72	152	242	225
	Feature no.	70	87	312	312
	Feature type	Pit	Ditch	Ditch	Ditch
	Phase	2	2	2	2
	Processed volume (L)	35	40	36	40
	Flot volume (ml)	100	50	75	50
	Charcoal >4mm	200	116	99	17
Maloideae	hawthorn/apple/whitebeam/rowan type	22		20 (r)	1
cf Maloideae	cf hawthorn/apple/whitebeam/rowan type			2	
<i>Prunus</i> cf <i>spinosa</i>	cf blackthorn	2 (r)			
<i>Prunus</i> sp.	blackthorn/cherry	5 (r)		22 (r)	
cf <i>Prunus</i>	cf blackthorn/cherry	1		2	

Maloideae/ <i>Prunus</i> type	hawthorn/blackthorn/cherry type	11		4	
<i>Quercus</i> sp.	oak	7 (h)			23 (r)
<i>Corylus avellana</i> L.	hazel	2			
cf <i>Corylus avellana</i> L.	cf hazel				1
<i>Acer campestre</i> L.	field maple		47		
cf <i>Acer campestre</i>	cf field maple		2		
<i>Salix/Populus</i>	willow/poplar				16
cf <i>Salix/Populus</i>	cf willow/poplar				5
Indet.			1		4
Total		50	50	50	50

h = heartwood; r = roundwood

B.2.5 The results from the charcoal analysis indicate spatial patterning, with discrete deposits containing groups of wood taxa that may point to deliberate selection of fuelwood or otherwise derive from burning of structural wood. The concentration of field maple charcoal is from subsidiary enclosure 87 while the mix of oak and willow charcoal is from the main enclosure ditch entrance. The two hawthorn/blackthorn/cherry assemblages are from the southern side of the main enclosure and, located less than 10m to the north of this, pit 70. Where individual charcoal assemblages are composed predominately of one or two taxa, and also where there is variation across the site amongst assemblages of similar date, it can be tentatively suggested that there was deliberate selection, with certain taxa favoured for different purposes. All the identified taxa from the site can be found in hedgerows, and it is possible that wood was being collected from hedgerows growing on the site for fuel. It would have been common to plant hedges alongside ditches in order to reinforce the boundaries of enclosures.

B.2.6 The presence of fragments from quern stones points to grain processing being carried out at the site, although this is not strongly represented in the charred assemblages. Although cereal grain is present in several samples, in particular samples 1, 7 and 8, grain density is never greater than one grain per litre of processed sediment – and is often far less – suggesting these remains derive from background activity. While the grain from the samples is generally poorly preserved, both wheat (*Triticum* sp.) and barley (*Hordeum vulgare*) have been identified.

B.3 Human bone

By Lauren McIntyre

Introduction

B.3.1 Two fragments of human skull were recovered from fill 250, on the northern side of the main enclosure ditch, and 16 pieces from the same un-sided fibula were recovered from a soil sample from fill 238 at the south-eastern corner of the same ditch.

B.3.2 The skull fragments comprised two pieces from the same un-sided parietal bone, separated by a clear post-mortem break. They were of a size and thickness consistent with those of an older juvenile or adult individual. No evidence of sex or non-metric

traits was present. The ectocranial surface of both fragments exhibited extensive fine porous lesions (apparently in the process of remodelling at the time of death), and slight thickening of the outer table of the skull. These 'orange peel' lesions are a common finding in archaeological skeletons and probably represent active inflammation (or inflammation in the process of healing). Such lesions may result from something such as minor scalp irritation due to head lice. The larger parietal fragment exhibited a shallow, oval-shaped depressed lesion measuring c 11.2mm long, 3.9mm wide, and less than 1mm deep. This lesion was overlain by the fine porous lesions described above. This may represent an old, well-healed depressed cranial fracture, overprinted by the aforementioned bony changes indicative of minor inflammation. Such fractures are often the result of high velocity impact by a small object, which may or may not fully penetrate the skull (Galloway and Wedel 1999, 136-9).

- B.3.3 The fibula fragments were robust, with the size and thickness consistent with those of an adult individual. There was no evidence of sex or pathology.
- B.3.4 In both cases the fragments exhibited just slight, patchy surface erosion, consistent with McKinley's (2004, 16) grade 1.

B.4 Radiocarbon dating

By Andrew Simmonds

- B.4.1 A sample from a charred residue on the outside of a rim sherd from a middle Iron Age jar from enclosure 87 and a sample from the human skull fragment from the main enclosure ditch were submitted for radiocarbon dating at the Scottish Universities Environmental Research Centre (SUERC) AMS Facility, Glasgow. Both returned date ranges that place them within the middle Iron Age (Table 7). The radiocarbon age ranges were calibrated to the calendar timescale using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4 and have been rounded out following Mook (1986).

Table 7: Radiocarbon results

Lab no.	Context	Feature	Material	$\Delta^{13}\text{C}$ (‰)	Radiocarbon age BP	Calibrated date range, 95% confidence
SUERC-85193	206	Enclosure ditch 87	Carbonised residue on pot sherd	-26.3	2213 ± 20	365-200 cal BC
SUERC-85194	250	Enclosure ditch 312	Bone: human	-18.6	2170 ± 26	360-120 cal BC

APPENDIX C BIBLIOGRAPHY

Albarella, U, 2007 The end of the Sheep Age: people and animals in the late Iron Age, in *The later Iron Age in Britain and beyond* (eds C Haselgrove and T Moore), Oxbow Books, Oxford, 389–402

Albarella, U, and Pirnie, T, 2008 *A review of animal bone evidence from central England*, http://ads.ahds.ac.uk/catalogue/archive/animalbone_eh_2007, accessed 19th May 2019

Anderson-Whymark, H, 2013 The worked flint, in *Opening the wood, making the land. The archaeology of a Middle Thames landscape: the Eton College Rowing Land Project and the Maidenhead, Windsor and Eton Flood Alleviation Scheme, volume 1: Mesolithic to early Bronze Age* (T G Allen, A Barclay, A-M Cromarty, H Anderson-Whymark, A Parker, M Robinson and G Jones), Oxford Archaeology Thames Valley Landscapes Monograph No. **38**, Oxford, 513–526

Allen Archaeology, 2014 Archaeological evaluation report: geophysical survey by magnetometry on land off Sysonby Road, Melton Mowbray, Leicestershire, report no. AAL2014037, https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-805-1/dissemination/pdf/allenarc1-176804_1.pdf

Armitage, P, 2011 Animal bone, in Rutland Water Habitat Creation, Lagoon B. An Iron Age enclosure and Romano-British shrine near Egleton, Rutland, May to July 2008 (S Carlyle), Northamptonshire Archaeology unpublished report, 18–20

Baker, J, and Brothwell, D, 1980 *Animal diseases in archaeology*, Academic Press, London

Baker, P, and Worley, F, 2014 *Animal bones and archaeology: guidelines for best practice*, English Heritage, Portsmouth

Bamford, H, 1985 *Briar Hill: excavation 1974–1978*, Northampton Development Corporation Archaeological Monograph **3**, Northampton

Bayley, J, 2001 Human skeletal material, in *Excavations at Billingborough, Lincolnshire, 1975–8: a Bronze–Iron Age settlement and salt-working site* (P Chowne, R M J Cleal and A P Fitzpatrick, with P Andrews), East Anglian Archaeology **94**, 73–8

Beamish, M, 1991 Excavations at Scalford Brook, Melton Mowbray, Leicestershire, <https://doi.org/10.5284/1023674>

Beamish, M, 1998 A middle Iron Age site at Wanlip, Leicestershire, *Trans Leicestershire Archaeol Hist Soc* **72**, 1–91

Behrensmeyer, A, 1978 Taphonomic and ecologic information from bone weathering, *Paleobiology* **4(2)**, 150–162

- Binford, L, 1981 *Bones: ancient men and modern myths*, Academic Press, New York
- Boessneck, J, 1969 Osteological differences between sheep (*Ovis aries* Linné) and goat (*Capra hircus*. Linné), in Brothwell and Higgs 1969, 331–58
- Booth, P, 2016 Oxford Archaeology Roman Pottery Recording System: an introduction, Oxford Archaeology unpublished
- Bradley, P, 1999 The worked flint, in *Excavations at Barrow Hills, Radley, Oxfordshire. Volume 1: the Neolithic and Bronze Age monument complex* (A Barclay and C Halpin), Oxford Archaeology Thames Valley Landscapes Monograph No. **11**, 211–227
- Brothwell, D, and Higgs, E, 1969 *Science in archaeology: a comprehensive survey of progress and research*, Thames and Hudson, London
- Browning, J, 2008 The animal bone, in Thomas 2008, 54–79
- Carr, G, and Knüsel, C, 1997 The ritual framework of excarnation by exposure as the mortuary practice of the early and middle Iron Ages of central southern Britain, in *Reconstructing Iron Age societies: new approaches to the British Iron Age* (A Gwilt and C Haselgrove), Oxbow Monograph **71**, Oxford, 167–74
- CgMs, 2018 A written scheme of investigation for archaeological mitigation: St Bartholomew's Way, Melton Mowbray, Leicestershire, CgMs Heritage unpublished report
- Chapman, A, 2010 Iron Age pottery, in Iron Age and Roman settlement at The Vale of Catmose College, Oakham, Rutland, Northamptonshire Archaeology unpublished excavation report 09/152, 25–8
- Charles, B M, 2000 Animal bone report in Charles *et al.* 2000, 197–207
- Charles, B M, Parkinson, A, and Foreman, S, 2000 A Bronze Age ditch and Iron Age settlement at Elms Farm, Humberstone, Leicester, *Trans Leicestershire Archaeol Hist Soc* **74**, 113–220
- Clay, P, 1993 An Iron Age farmstead at Grove Farm, Enderby, Leicestershire, *Transactions of the Leicestershire Archaeological Soc* **66**, 1–82
- Cooper, N J, 2000 The Iron Age pottery, in *The archaeology of Rutland Water* (N J Cooper), Leicester Archaeological Monograph **6**, 67–71
- Cooper, N (ed.), 2006 *The archaeology of the East Midlands: an archaeological resource assessment and research agenda*, University of Leicester Archaeological Services Monograph **13**, Leicester

- Cooper, N J, 2008 Prehistoric and Roman pottery, in Taking stock in the late Bronze Age to early Iron Age transition: a crowding-alley and settlement site at Hamilton, Leicester (M Beamish and M Shore), *Trans Leicestershire Archaeol Hist Soc* **82**, 54–7
- Cooper, N J, Adams, S and Thomas, J, 2012 Small finds, in Taylor *et al.* 2012, 90–96
- Cottrill, F, and Dunning, G C, 1950 Report on archaeological material from sites in Leicestershire and Northamptonshire, in Kenyon 1950, 75–82
- Courtney, P, 1980/1 The monastic granges of Leicestershire, *Trans Leicestershire Archaeol Hist Soc* **56**, 33–45
- Cunliffe, B 1992 Pits, preconceptions and propitiation in the British Iron Age, *Oxford J Archaeol* **11**, 69–83
- Davis, S J M, 1996 Measurements of a group of adult female Shetland sheep skeletons from a single flock: a baseline for zooarchaeologists, *J Archaeol Sci* **23**, 593–612
- Deighton, K, 2010 Animal bone, in Iron Age and Roman settlement at The Vale of Catmose College, Oakham, Rutland (J Brown), Northamptonshire County Council unpublished report, 40–42
- Elsdon, S M, 1992a The Iron Age pottery, in An Iron Age farmstead at Grove Farm, Enderby, Leicestershire (P Clay), *Trans Leicestershire Archaeol Hist Soc* **66**, 38–52
- Elsdon, S M, 1992b East Midlands Scored Ware, *Trans Leicestershire Archaeol Hist Soc* **66**, 83–91
- Elsdon, S M, 1996 *Iron Age pottery in the East Midlands: a handbook*, Department of Archaeology, University of Nottingham
- Francis, K, and Richmond, A, 2017 Bardon Hill Quarry. Archaeological mitigation works: the hilltop settlement, Phoenix Consulting, unpublished report PC 244Q
- Galloway, A, and Wedel, V L, 1999 Bones of the skull, the dentition, and osseous structures of the throat, in *Broken bones: anthropological analysis of blunt force trauma* (eds V L Wedel and A Galloway), Charles C Thomas, Springfield, Illinois, 133–60
- Gordon, R, 2012 Animal bone, in Taylor *et al.* 2012, 96–7
- Grant, A, 1982 The use of tooth wear as a guide to the age of domestic ungulates, in *Ageing and sexing animal bones from archaeological sites* (eds B Wilson, C Grigson and S Payne), BAR Brit Ser **109**, 91–108

Greenfield, H J, 1988 Bone consumption by pigs in a contemporary Serbian village: implications for the interpretation of prehistoric faunal assemblages, *J Field Archaeol* **15**, 473–79

Halstead, P, 1985 A study of the mandibular teeth from Romano-British contexts at Maxey, in *Archaeology and environment of the Lower Welland Valley, vol 1* (F Pryor, C French, D Crowther, D Gurney, G Simpson and M Taylor), East Anglian Archaeology Report **27**, 219–224

Halstead, P, and Collins, P, 1995 Sheffield animal bone tutorial: taxonomic identification of the principle limb bones of common European farmyard animals and deer: a multimedia tutorial, Archaeology Consortium, TL TP, University of Glasgow

Halstead, P, and Collins, P, 2002 Sorting the sheep from the goats: morphological distinctions between the mandibles and mandibular teeth of adult *Ovis* and *Capra*, *J Archaeol Sci* **29**, 545–553

Hamilton, D, 2008 Bayesian Modelling, in Thomas 2008, 7–8

Hamilton, D, 2009 Radiocarbon dating results, in Speed 2009, 147–51

Harding, D W, 2016 *Death and burial in Iron Age Britain*, Oxford University Press, Oxford

Harding, P, 1990 The worked flint, in *The Stonehenge environs project* (J C Richards), English Heritage, London, 213–25

Healy, F, 1988 *The Anglo-Saxon cemetery at Spong Hill, North Elmham. Part VI: Occupation in the seventh to second millennia BC*, East Anglian Archaeology **39**, Gressenhall

Harland, J F, Barrett, J H, Carrott, J, Dobney, K, and Jaques, D, 2003 The York System: an integrated zooarchaeological database for research and teaching, *Internet Archaeology* **13**

Hather, J G, 2016 *The identification of Northern European woods: a guide for archaeologists and conservators*, Routledge, Abingdon

Heslop, D H, 2008 *Patterns of quern production, acquisition and deposition. A corpus of beehive querns from northern Yorkshire and southern Durham*, Yorkshire Archaeological Society Occasional Paper **5**

Hill, J D, 1995 *Ritual and rubbish in the Iron Age of Wessex: a study on the formation of a specific archaeological record*, BAR Brit Ser **242**, Oxford

Humphrey, J, and Young, R, 1999 Flint use in later Bronze Age and Iron Age England - still a fiction? *Lithics* **20**, 57–61

Ingle, C. 1989 Characterisation and distribution of beehive querns in Eastern England, Unpublished PhD thesis, Southampton University

Inizan, M-L, Roche, H, and Tixier, J, 1992 *Technology of knapped stone*, Cercle de Recherches et d'Etudes Préhistoriques, CNRS, Meudon

Jackson, D, and Dix, B, 1986-7 Late Iron Age and Roman settlement at Weekley, Northants, *Northamptonshire Archaeol* **21**, 41–94

Kenyon, K, 1950 Excavations at Breedon-on-the-Hill, 1946, *Trans Leicestershire Archaeol Hist Soc* **26**, 75–82

Knight, D, 2002 A regional ceramic sequence: pottery of the first millennium BC between the Humber and the Nene, in *Prehistoric Britain: the ceramic basis* (eds A Woodward and J D Hill), Oxbow Books, 119–42

Knight, D B, Vyner, B, and Allen, C, 2012 *East Midlands heritage: a research agenda and strategy for the historic environment*, University of Nottingham and York Archaeological Trust

Lauwerier, R C G M, 1988 *Animals in Roman times in the Dutch Eastern River area*, Nederlandse Oudheden 12/Project Oostelijk Rivierengebied 1, Rijksdienst voor het Oudheidkundig Bodemonderzoek, Amersfoort

Lawrence, M J, and Brown, R W, 1967 *Mammals of Britain: their tracks, trails and signs*, Blandford Press, London

Lister, A M, 1996 The morphological distinction between bones and teeth of fallow deer (*Dama dama*) and red deer (*Cervus elaphus*), *Int J Osteoarchaeol* **6**, 119–43

McDonald, D, and Barrett, P, 1993 *Mammals of Britain and Europe*, Harper Collins, London

McKinley, J I, 2004 Compiling a skeletal inventory: disarticulated and co-mingled remains, in *Guidelines to the standards for recording human remains* (eds M Brickley and J I McKinley), Institute for Archaeologists Paper No. **7**, 14–7

McLaren, A, 2008 Flintworking in the British later Bronze and Iron Ages: a crucial review and statement of research potential, *Lithic Technology* **33(2)**, 141–159

Marsden, P, 2000 The prehistoric pottery, in Charles *et al.* 2000, 170–86

Marsden, P 2008 The prehistoric pottery, in Thomas 2008, 36–51

Marsden, P 2009 The Iron Age pottery, in Speed 2009, 65–80

May, E, 1985 Widerristhöhe und Langknochenmasse bei Pferd- ein immer noch aktuelles Problem, *Zeitschrift für Säugertierkunde* **50**, 368–382

May, J, 1976 *Prehistoric Lincolnshire*, History of Lincolnshire Committee, Lincoln

Monckton, A, 1995 Environmental archaeology in Leicestershire, *Trans Leicestershire Archaeol Hist Soc* **69**, 32–41

Mook, W G, 1986 Business meeting: recommendations/resolutions adopted by the twelfth International Radiocarbon Conference, *Radiocarbon* **28**, 799

Moore, T, 2012 Beyond the oppida: polyfocal complexes and late Iron Age societies in southern Britain, *Oxford J Archaeol* **31(4)**, 391–417

Onhuma, K, and Bergman, C A, 1982 Experimental studies in the determination of flake mode, *Bull Inst Archaeol Univ London* **19**, 161–171

Parry, T W, 1982 Holes in the skulls of prehistoric man and their significance, *Archaeol J* **85**, 91–102

Payne, S, 1972 Partial recovery and sample bias: the results of sieving, in *Papers in economic prehistory* (E S Higgs), Cambridge University Press, Cambridge

Payne, S, 1973 Kill off patterns in sheep and goats: the mandibles from Asvan Kale, *Anatolian Studies* **23**, 281–303

Payne, S, 1975 Partial recovery and sample bias, in *Archaeozoological studies* (ed. A T Clason), Oxford, North Holland Publishing, 7–17

Payne, S, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and Goats, *Capra*, *J Archaeol Sci* **12**, 139–147

Payne, S, 1987 Reference codes for wear states in the mandibular cheek teeth of sheep and goats, *J Archaeol Sci* **14(6)**, 609–14

Payne, S, and Bull, G, 1988 Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains, *Archaeozoologia* **2**, 27–66

Payne, S, and Munson, P J, 1985 Ruby and how many squirrels? The destruction of bones by dogs, in *Palaeobiological investigations: research design, methods and data analysis* (eds N R J Fieller, D D Gilbertson and N G A Ralph, BAR Int Ser **266**, 31–42

PCRG, 2010 *The study of prehistoric pottery: general policies and guidelines for analysis and publication*, 3rd edn, Prehistoric Ceramics Research Group Occasional Papers **1** and **2**

- Peacock, D, 2013 *The stone of life: the archaeology of querns, mills and flour production in Europe up to c. 500 AD*, Southampton Monographs in Archaeology **1**, Southampton
- Percival, S, 2012 Iron Age pottery, in Burrough Hill, Leicestershire: excavations at the hillfort in 1960, 1967 and 1970–71 (J Taylor, J Thomas and C Haselgrove), *Trans Leicestershire Archaeol Hist Soc* **86**, 82–5
- Pickering, J, and Hartley, R F, 1985 *Past worlds in a landscape: archaeological cropmarks in Leicestershire*, Leicestershire Museums, Art Galleries and Records Service Archaeological Report No. **11**, Leicester
- Pryor, F, 2006 *Farmers in prehistoric Britain*, The History Press, Stroud
- Prummel, W, and Frisch, H A, 1986 Guide for the distinction of species, sex and body side in bones of sheep and goat, *J Archaeol Sci* **13**, 567–577
- Reitz, E J, and Wing, S W, 1999 *Zooarchaeology*, Cambridge Manuals in Archaeology, Cambridge
- Rees, G, 2008 Enclosure boundaries and settlement individuality in the Iron Age, in *Changing perspectives on the first millennium BC: proceedings of the Iron Age Research Student Seminar 2006* (eds O Davis, N Sharples and K Waddington), Oxbow Books, Oxford, 61–82
- Roberts, I, 2010 *Understanding the cropmark landscape of the Magnesian Limestone*, English Heritage/Archaeological Service WYAS, Leeds
- Saville, A, 1980 On the measurement of struck flakes and flake tools, *Lithics* **1**, 16–20
- Saville, A, 1981 Iron Age flintwork - fact or fiction? *Lithics* **2**, 6–9
- Schmid, E, 1972 *Atlas of animal bones for prehistorians, archaeologists and Quaternary geologists*, Elsevier, London
- Schweingruber, F, 1990 *Microscopic wood anatomy*, 3rd edn, Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf
- Serjeantson, D, 1996 The animal bones, in *Refuse and disposal at Area 16 East Runnymede. Runnymede Bridge research excavations, volume 2* (S Needham and A Spence), British Museum Press, London, 196–200
- Silver, I, 1969 The ageing of domestic animals, in Brothwell and Higgs 1969, 283–302
- Sisson, S, and Grossman, J D, 1938 *The anatomy of the domestic animals*, Saunders, London

Smith, A, with Allen, M, Brindle, T, and Lodwick, L, 2018 Religion and the rural population, in *Life and death in the countryside of Roman Britain* (A Smith, M Allen, T Brindle, M Fulford, L Lodwick and A Rohnbogner), *Britannia Monograph* no. **31**, London

Speed, G, 2009 An excavation of an Iron Age settlement at Hallam Fields, Birstall, Leicestershire, University of Leicester Archaeological Services report 2009-080

Speed, G, 2010 Everything in its right place? An unwritten architectural language of late Iron Age enclosed settlements in the East Midlands, in *In search of the Iron Age: proceedings of the Iron Age Research Student Seminar 2008*, University of Leicester (eds M Sterry, A Tullet and N Ray), *Leicester Archaeology Monograph* **18**, Leicester, 27–60

Stace, C, 2010 *New flora of the British Isles*, 3rd edn, Cambridge University Press, Cambridge

Stratascan, 2015 Nottingham Road, Melton Mowbray, Leicestershire, unpublished report no. J8943

Strid, L, 2012 Animal bone, in *London Gateway: Iron Age and Roman salt making in the Thames Estuary. Excavation at Stanford Wharf Nature Reserve, Essex* (E Biddulph, S Foreman, E Stafford, D Stansbie and R Nicholson) *Oxford Archaeology Monograph* **18**, Oxford

Stuart, A J, 1982 *Pleistocene vertebrates in the British Isles*, Longman, London

Taylor, J, Thomas, J, and Haselgrove, C, 2012 Burrough Hill, Leicestershire: excavations at the hillfort in 1960, 1967 and 1970–71, *Trans Leicestershire Archaeol Hist Soc* **86**, 49–102

Thomas, J, 2008 Excavation of an Iron Age 'aggregated' settlement at Manor Farm, Humberstone, Leicester, University of Leicester Archaeological Services Report 2008–133 2008

Tomber, R, and Dore, J, 1998 *The National Roman Fabric Reference Collection: a handbook*, Museum of London Archaeological Service Monograph **2**

Tracey, J, 2012 New evidence for Iron Age burial and propitiation practices in southern Britain, *Oxford J Archaeol* **31(4)**, 367–79

Trow Smith, R, 1957 *A history of British livestock husbandry, volume 1*, Routledge and Kegan Paul, London

ULAS, 2014 An archaeological evaluation by trial trenching at Sysonby Farm and land off Scalford Road, Melton Mowbray, Leicestershire, University of Leicester Archaeological Services report no. 2014-152

ULAS, 2016a An archaeological evaluation at Hilltop Farm, Nottingham Road, Melton Mowbray, Leicestershire, University of Leicester Archaeological Services report no. 2016-038

ULAS, 2016b An archaeological evaluation at New Guadeloupe, Leicester Road, Melton Mowbray, Leicestershire, University of Leicester Archaeological Services report no. 2016-082

ULAS, 2017 Archaeological evaluation at Hilltop Farm, Nottingham Road, Melton Mowbray, Leicestershire, University of Leicester Archaeological Services report no. 2017-182

von den Driesch, A, 1976 *A guide to the measurement of animal bones from archaeological sites*, Peabody Museum Bulletin 1, Harvard Peabody Museum of Archaeology and Ethnology, Cambridge, MA

Willis, S, 2006 The later Bronze Age and Iron Age, in Cooper 2006, 89–136

Wilson, B, 1996 *Spatial patterning among animal bones in settlement archaeology*, BAR Brit Ser **251**, Oxford

Woodward, A, and Hughes, G, 2007 Deposits and doorways: patterns within the Iron Age settlement at Crick Covert Farm, Northamptonshire, in *The earlier Iron Age in Britain and the near continent* (eds C Haselgrove and R Pope), Oxbow Books, Oxford, 185–203

Yalden, D, 1999 *The history of British mammals*, Poyser, London

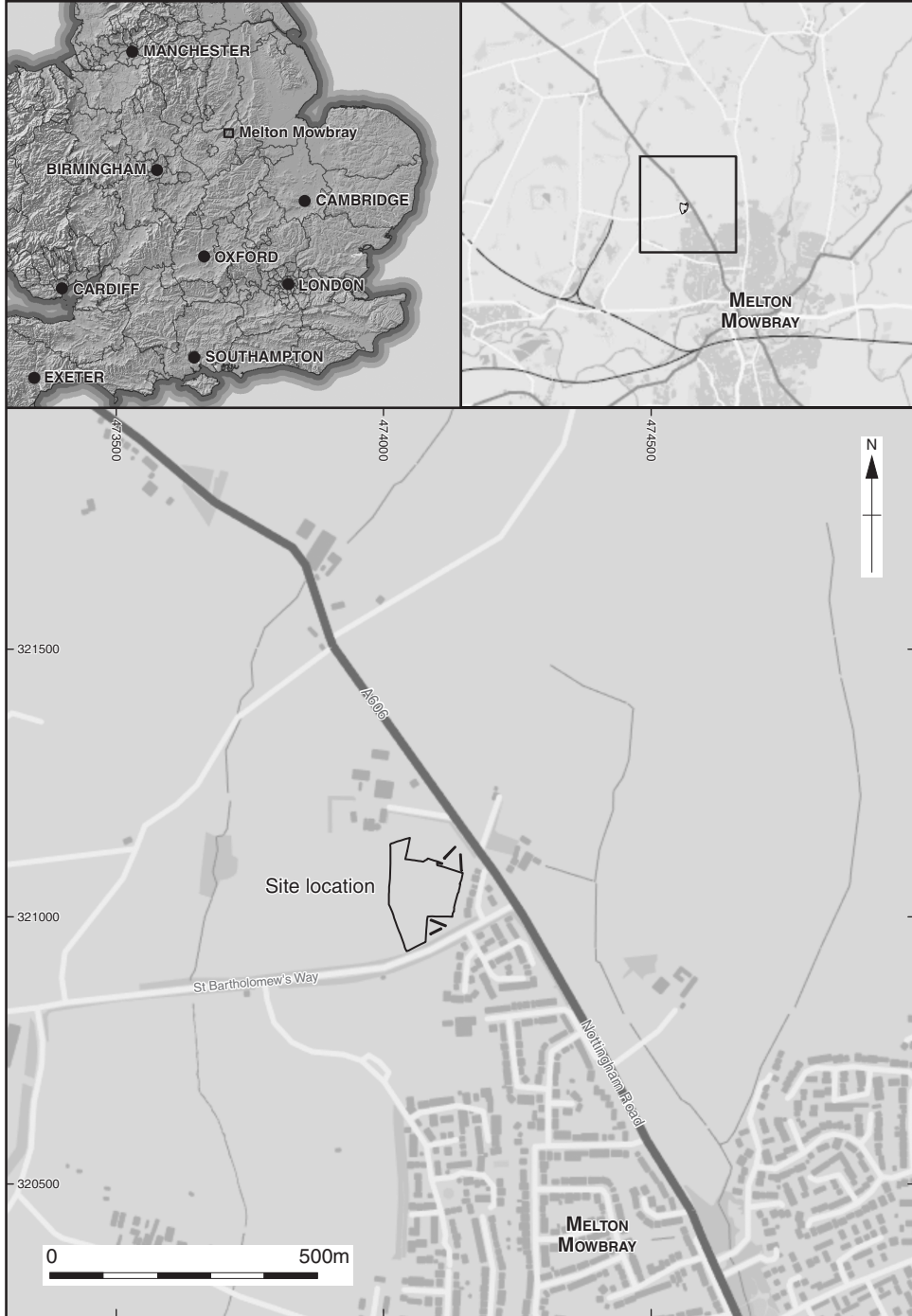


Figure 1: Site location

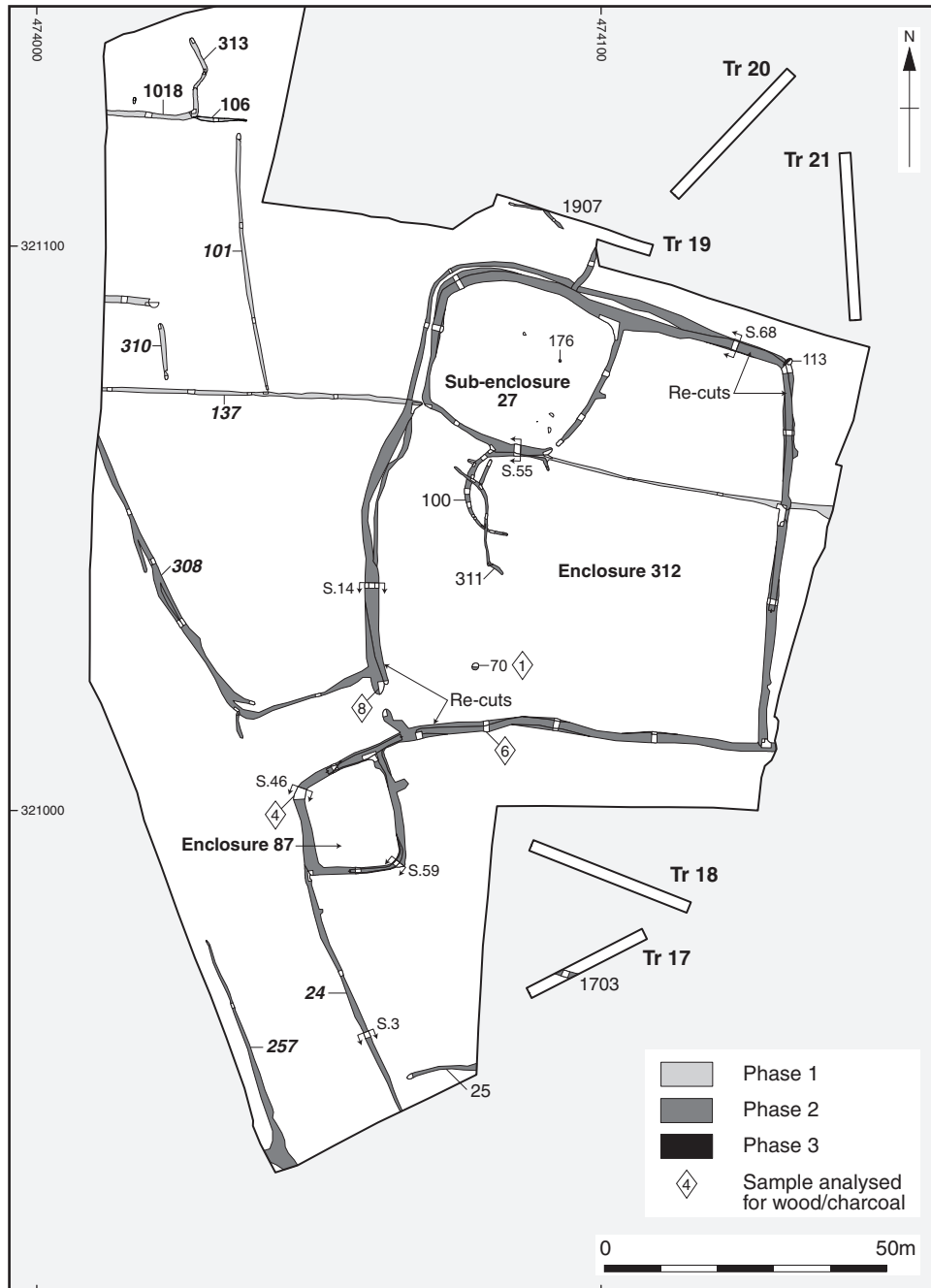


Figure 2: Plan of all features

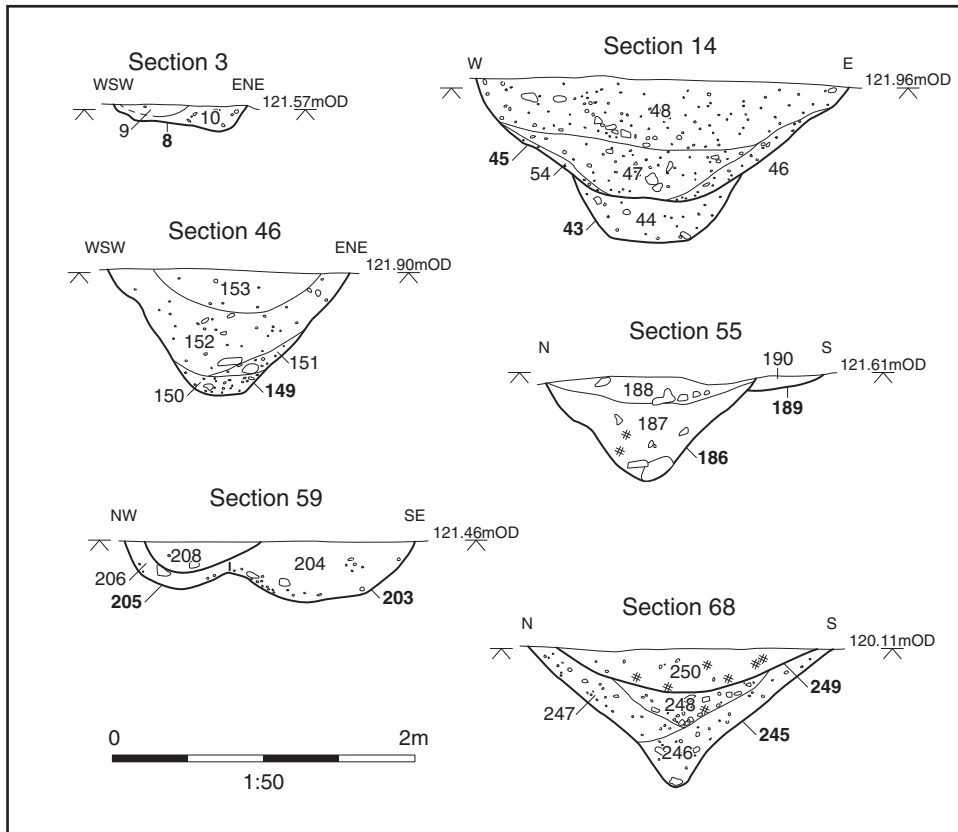


Figure 3: Selected sections

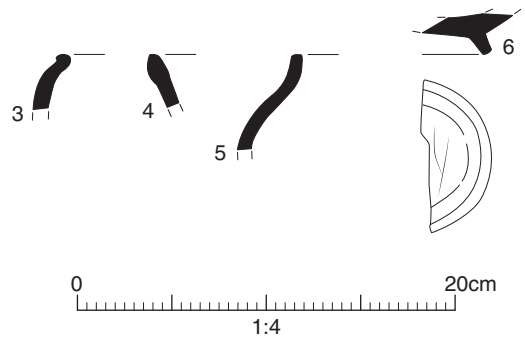
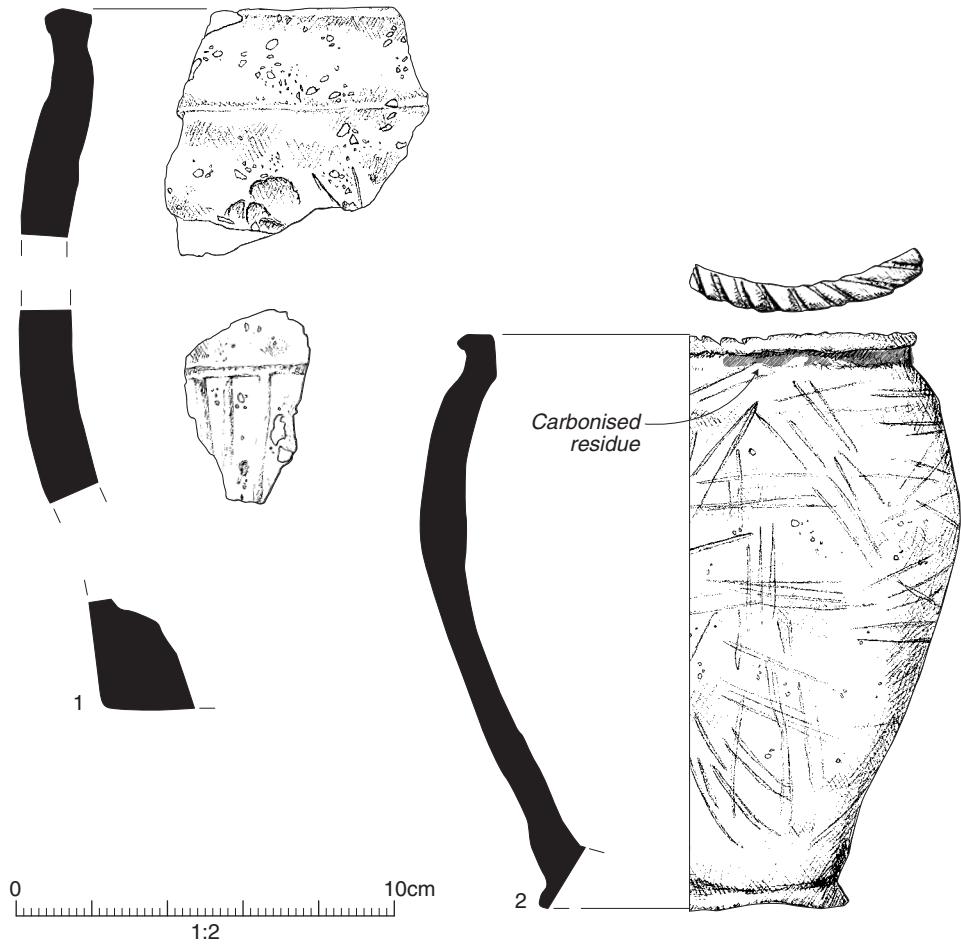


Figure 4: Pottery



Figure 5: Rotary querns

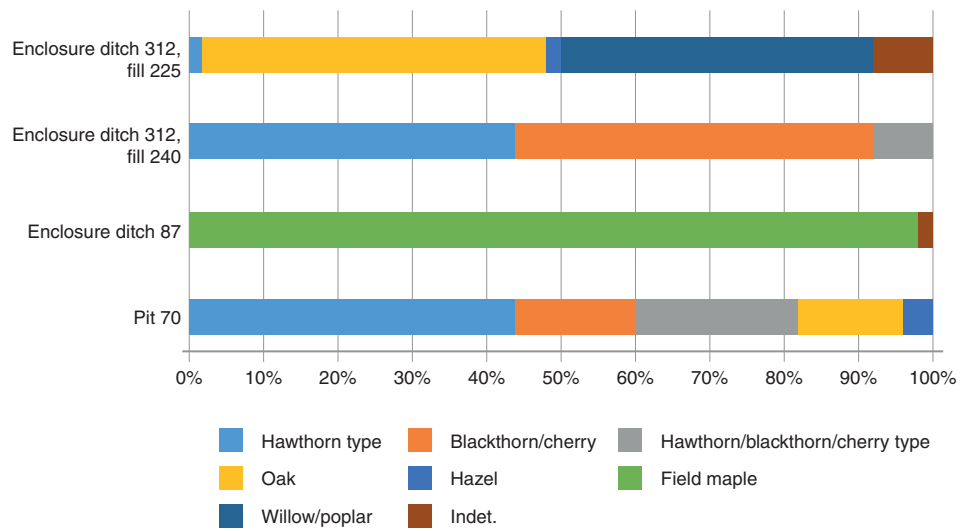


Figure 6: Proportion of wood taxa in the four analysed samples



Plate 1: General shot of site, view toward east



Plate 2: Section through the west side of enclosure ditch 312,
view toward north



Plate 3: Section through the north side of enclosure ditch 312,
view toward east



Plate 4: View toward south along the east side of enclosure ditch 27



Plate 5: Section through the north-west corner of enclosure ditch 87



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