Sutton Courtenay Lane, Sutton Courtenay, Oxfordshire

Archaeological Excavation Report

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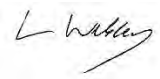
Signature:	

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Sutton Courtenay Lane, Sutton Courtenay, Oxfordshire

Archaeological Excavation Report

By Charlotte Howsam

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Summary

Oxford Archaeology carried out an archaeological excavation in 2019 on land east of Sutton Courtenay Lane to the south of the village of Sutton Courtenay in Oxfordshire. Preceding trial-trench evaluation in 2016 and monitoring work in 2018 of the *c* 10ha development site established the presence of prehistoric and Roman remains, including ditches, gullies, pits, and postholes indicative of a multi-phase settlement site. The excavated area, totalling *c* 1.4ha, was subsequently targeted upon these remains in the north-west of the development site.

The recovery of a small quantity of residual worked flint from across the excavated area provides evidence of limited earlier prehistoric activity. The first evidence of settlement belongs to the earliest Iron Age in the form of a possible roundhouse ditch and small quantity of pottery. Evidence of more substantial settlement dates to the early Iron Age, comprising a series of curvilinear ditches defining several roundhouses. The pottery assemblage dates to the latter part of the early Iron Age (*c* 400–350 BC), suggesting that there was a hiatus in activity on site during the 6th and 5th centuries BC. The inter-cutting nature of many of the roundhouse ditches demonstrates a sequential pattern of occupation. Numerous Iron Age pits and postholes, some of which formed four-post structures, are also indicative of associated activity.

Occupation continued throughout much of the middle Iron Age when the layout of the site, and perhaps the nature of activity, developed with the establishment of several large enclosures, possibly for livestock management. Multiple recuts seen within the ditches demonstrate the maintenance of existing enclosures.

The extent to which the occupation of the middle Iron Age settlement continued into the late Iron Age/early Roman period is unclear. An inhumation burial radiocarbon dated to 120 cal BC–cal AD 63 and a small assemblage of pottery and metal finds, however, demonstrate that some level of activity occurred on site at this time, and may indicate the earliest phase of a Romano-British rural settlement.

Evidence of activity spanning the Roman period was revealed across the excavated area, predominately composed of land boundaries and a trackway that underwent several phases of maintenance and modification. Other subsidiary ditches were inserted to reorganise the landscape during the middle and late Roman periods. Evidence of associated activity was limited to a small number of pits and postholes. Nonetheless, the quantity and variety of finds indicate the deposition of domestic waste from nearby settlement. Signs of more deliberate, placed deposits are evident, including a probable coin hoard. The addition of a corndryer and a rectangular post-built building in the late Roman period are suggestive of a developed arable-farming regime,

while the animal-bone assemblage highlights the importance of a mixed agricultural economy. A small number of Roman cremation and inhumation burials were revealed on site, with some remains showing signs of trauma, including those that were placed within the latest phases of the Roman ditches and potentially associated with the abandonment of the site.

A small number of inter-cutting pits and an inhumation burial provide evidence of limited activity on site during the early–middle Anglo-Saxon period, with the focus of settlement perhaps located elsewhere. It is possible that further remains of Anglo-Saxon date have been removed by later agricultural activity and development, as demonstrated by a small quantity of intrusive medieval/early post-medieval finds and later historic mapping.

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1 INTRODUCTION

1.1 Background

1.1.1 Oxford Archaeology (OA) was commissioned by Paul Clark at RPS Group Ltd to undertake an archaeological excavation on land east of Sutton Courtenay Lane, Sutton Courtenay, Oxfordshire. Planning permission (ref. P14/V1906/O) was granted for the redevelopment of the *c* 10ha site, and several phases of archaeological work have been undertaken in accordance with the planning condition.

1.1.2 A desk-based assessment (DBA) highlighted the high potential for archaeological remains to be present within the development site (JMHS 2013). In 2016, a trial-trench evaluation was undertaken, revealing Iron Age, Roman and possible Anglo-Saxon remains (OA 2016). A watching brief was subsequently maintained during groundworks for a new warehouse development in 2018, when further Iron Age and Roman remains were revealed (OA 2018). Given the archaeological potential of the site, it was recommended that a subsequent phase of open-area excavation be undertaken.

1.1.3 The *c* 1.40ha excavation area targeted the results of the preceding evaluation. This work was undertaken in June–August 2019 in accordance with a written scheme of investigation (WSI) produced by RPS Consulting Services Ltd (CgMs 2017). The results of the fieldwork were summarised in a post-excavation assessment (PXA) and updated project design (UPD), which included provisional interpretation and an initial assessment of the potential and significance of the site data (OA 2020). This document concluded that the results of the fieldwork revealed new and substantial evidence relating to the Iron Age, Romano-British and early Anglo-Saxon periods, and had the potential, through further analysis, to address several period-based research questions relating to the Solent-Thames Research Framework (Hey and Hind 2014).

1.2 Location, geology and topography

1.2.1 The site lies to the south of the village of Sutton Courtenay in southern Oxfordshire (NGR SU 50100 92400). It is bounded to the west by Sutton Courtenay Lane, to the east and south-east by Didcot Power Station, to the south by a distribution centre and to the north by open fields (Fig. 1). The site is roughly flat, between 56–58m aOD, and is situated *c* 1.7km south of the River Thames.

1.2.2 The British Geological Survey records the solid geology of the site as mudstone belonging to the Gault Formation (BGS 2020). This is overlain by superficial deposits of sand and gravel belonging to the Summertown-Radley Sand and Gravel Member. A ground investigation, comprising the examination of 54 test holes, was undertaken on the site in 2015 (Hydrock 2015). It revealed that a made-ground deposit of brown and grey-brown, sandy, gravelly clay and clayey sandy gravel with modern inclusions covered the majority of the site, 0.30–3.50m below ground level (BGL). River terrace deposits of Summertown-Radley Sand and Gravel Member were found underlying the modern made ground (0.70–4.20m BGL), and Gault clay was encountered underlying the river-terrace deposits (more than 10m BGL). The recorded groundwater levels

were generally shallow (1–2m BGL) within the river-terrace deposits and were recorded as having a fast rate of inflow.

1.3 Archaeological and historical background

1.3.1 The following archaeological and historical background is drawn from previous WSIs and the DBA (CgMs 2016; 2017; JMHS 2013) and is based on data held by the Oxfordshire Historic Environment Record (HER), the Oxfordshire Records Office and other sources.

1.3.2 Evidence of Neolithic activity within the vicinity of the site is limited to a small number of recorded findspots.

1.3.3 The site of a scheduled Iron Age settlement (list entry no. 1004853) is located immediately to the west of Sutton Courtenay Lane within Milton Park. Cropmark evidence comprises a dense complex of circular features and linear ditches. Late Iron Age/Roman pottery has been collected from the site by fieldwalking, and a trial-trench evaluation demonstrated that Iron Age/Roman settlement evidence continued southwards outside the scheduled area (CAT 2000).

1.3.4 Cropmarks indicative of a large rectangular enclosure with internal divisions recorded immediately to the north of the site suggest that Roman activity, evidenced by the 2016 evaluation (OA 2016) and 2018 watching brief (OA 2018), continued beyond the site boundary. Another evaluation in 2016 farther to the north revealed additional evidence of Iron Age and Roman activity, including enclosure ditches, pits and a trackway (CA 2016).

1.3.5 A Roman cemetery comprising five inhumations was found in *c* 1928 during the construction of a railway siding *c* 315m to the south. The area immediately to the south of the site was investigated prior to development by evaluation and a subsequent strip, map and sample investigation, which identified a number of linear features forming parts of Roman and later field systems (FA 2008a; 2008b). A late Iron Age/early Roman field system and associated trackway were also identified by excavation 550m north-west of the site (MOLA 2014).

1.3.6 Excavations ahead of the expansion of Didcot Power Station in 1991, 215m south-west of the site, uncovered 17 Anglo-Saxon inhumation burials dating to the 7th century and two sunken-featured buildings (Boyle *et al*. 1995). Anglo-Saxon features were identified within the central part of the scheduled area within Milton Park (JMHS 2008) to the west of Sutton Courtenay Lane. Further Anglo-Saxon features were identified by evaluation in the southern (unscheduled) part of Milton Park (CAT 2000).

1.3.7 John Rocque's 1761 map of Berkshire and the Sutton Courtenay Inclosure map of 1804 indicate the agricultural nature of the site. Subsequent 19th- and 20th-century Ordnance Survey (OS) maps demonstrate the developing use of the landscape, from agricultural fields to gravel extraction and water management, the construction of the Central Ordnance Depot and railway sidings.

1.4 Previous archaeological investigations

Evaluation 2016

1.4.1 Following acceptance of the planning application for the proposed redevelopment of the site, OA was commissioned to undertake a trial-trench evaluation based on the archaeological potential of the site as highlighted in the DBA (JMHS 2013). The evaluation initially comprised the investigation of 23 trenches, although only 19 were excavated, of which 15 were partially abandoned owing to the presence of waste ground surrounding derelict warehouses. The results of the evaluation revealed archaeological remains demonstrating a high level of activity in the north-west of the proposed development site, which later became the focus of the current excavation (Fig. 2).

1.4.2 Concentrations of prehistoric and Roman remains were identified in Trenches 6–15. The features appeared to represent a complex of linear and curvilinear enclosure ditches, smaller ditches and discrete features, including pits and postholes. The frequency of inter-cutting features, particularly in the enclosure ditches, was indicative of a multi-phased site, where the maintenance and modification of boundaries was clearly evident. These remains spanned the Iron Age to late Roman periods, with possible hints of Anglo-Saxon activity within the wider area.

1.4.3 The pottery assemblage predominately dated to the middle Iron Age and late Roman periods, with most of the earlier material concentrated in Trenches 7, 8, 9 and 11 in the north-west corner of the site. The late Roman pottery groups were recovered from Trenches 6, 10, 11, 13 and 14, also in the north-west corner of the site, but were also found further eastwards suggestive of a shift in focus. Two decorated weaving combs of Iron-Age type provided evidence for textile manufacture, while a fragment of worked antler indicate that bone working was being carried out in the vicinity. Fired clay fragments deriving from an oven structure were also recovered. A single coin of Constantine II (AD 337–40) was found within one of the enclosure ditches. Environmental sampling in this area of site produced charred remains and animal bones indicative of farming and settlement activity. Evidence of fields and other low-level activity were identified during the evaluation to the east and south of the settlement area.

1.4.4 Areas of contaminated and disturbed ground were also located across the site and relate to previous phases of modern landscaping and warehouse development. The nature of archaeological preservation within these areas was either reduced or uncertain.

1.4.5 Two military pillboxes and two large concrete water tanks were also recorded at the north-west and south-west corners of the derelict distribution centre. These relate to the former WWII military warehouses that were located on the site.

Watching brief 2018

1.4.6 A programme of archaeological monitoring was undertaken in 2018 as part of the first phase of mitigation works relating to the construction of a new warehouse development (OA 2018). The watching brief involved the monitoring of the excavation of a 250m-long service trench in the north-western corner of the site (Fig. 2). While large sections of the service trench were heavily truncated, either by modern landscaping or extensive rooting, several concentrations of archaeological features were identified. This activity appeared to have been associated with the Iron Age and

Roman settlement activity identified in the adjacent evaluation trenches (OA 2016). At least four main areas of archaeological features were identified in the service trench, consisting of inter-cutting ditches, pits and a posthole.

1.4.7 The pottery assemblage recovered during the watching brief ranged in date from the middle Iron Age to the early Roman period, although it was predominantly of the earlier of these phases suggesting that the main focus of late Roman activity was located farther east towards the previous evaluation area. A well-preserved faunal assemblage of horse, cattle and sheep/goat with evidence of butchery and defleshing was recovered from these features. A sherd of Anglo-Saxon pottery also suggested some later activity. Evidence of wartime activity and rubbish deposits was also identified within or close to the service trench.

1.5 Aims and objectives

1.5.1 The primary aim of the open-area excavation, as stated in the WSI (CgMs 2017), was to identify and record the archaeological deposits within the site. To achieve this aim, the excavation sought to meet the following objectives:

- to ascertain the nature and extent of the archaeological remains identified 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 Oxfordshire Museums Service and to provide information for Oxfordshire Historic Environment Record to ensure the long-term survival of the excavated data

1.5.2 With reference to the Solent-Thames Research Framework for the Historic Environment Resource Assessments and Research Agendas (Hey and Hind 2014), the excavation aimed address the following research objectives:

- to understand and compare the nature of activity/occupation during the Iron Age and Roman periods (research agenda themes 10.5.5, 10.5.11, 10.7.4, 10.13, 12.2.1–2)
- to understand the apparent shift between the Late Iron Age and Roman period activity, and to investigate when this occurred (themes 10.3.3, 10.13, 12.2.1–2)
- to elucidate the nature and function of the extensive recut boundary ditches on site, and to understand the length of time they were utilised for (themes 10.4.5–6, 12.3.1)
- to investigate whether any evidence relating to Iron Age weaving is present on the site (theme 10.8.1)
- to assess the role that palaeoenvironmental evidence can play in enhancing our understanding of the activity undertaken on site during both the Iron Age and Roman periods (themes 10.7.4, 12.3.1)

1.5.3 Following the initial assessment of the stratigraphic, finds and environment datasets collated from the excavation, the PXA report concluded that the excavation results

have the potential to contribute to identified areas of local and regional research (OA 2020). An updated project design, with reference to the period-based Solent-Thames Research Agenda (Lambrick 2014a; Fulford 2014a; Dodd and Crawford 2014), allowed for the proposal of the following research aims:

Iron Age

- Can the chronology and sub-phasing of the Iron Age settlement be more firmly established?
- How was agriculture practised at the Iron Age settlement, how intensive were farming practices, and how did the pattern of farming relate to other settlements in the region?
- How does the Iron Age architectural pattern develop over time, and how does it relate to other settlements in the region?
- How does the use and deposition of artefacts relate to everyday practices, and can we better identify ritualised activities?

Roman

- The Roman phase of activity indicates that a major reorganisation of the occupational and agricultural landscape occurred, perhaps relating to settlement elsewhere; when did this occur, and how does it relate to contemporary changes in the landscape found elsewhere?
- The changing pattern of land use that occurred in the Roman period is suggestive of a more-integrated agricultural landscape; is there evidence to identify what the agricultural basis was for this change?

Late Roman/early Anglo-Saxon

- A total of 14 inhumation burials may all date to the period when the Roman landscape was in decline or following its abandonment; can a more accurate chronology be established for these burials, do they all relate to the same period of activity, and what does their character tell us about burial activity in this period more widely?

1.6 Fieldwork methodology

1.6.1 The *c* 1.40ha excavation area targeted features identified during the preceding evaluation (OA 2016). The work was undertaken in June–August 2019 and was carried out in accordance with the WSI (CgMs 2017). The excavation area was machine stripped using a mechanical 360° excavator fitted with a toothless ditching bucket, under constant archaeological supervision. Topsoil and subsoil layers were removed down to the first archaeological horizon or the surface of the natural geology, whichever was found first. On completion of overburden removal, the resultant surfaces were hand cleaned as necessary, and a digital pre-excavation plan showing revealed features was produced using a GPS.

1.6.2 A sufficient sample of the revealed features was investigated by hand to establish their character and date, where possible. Approximately 10% of the exposed length of linear and curvilinear features and 50% of roundhouse ditches were excavated. Where

required, a 50% sample of all discrete features was excavated. All archaeological deposits and features were hand excavated and recorded on *pro forma* sheets in accordance with OA's recording system. All excavated features were planned by GPS, with certain areas being hand planned. All sections were hand drawn at a scale of 1:10 or 1:20, as appropriate. A full photographic record, illustrating both archaeological features and the works in general, was produced and comprised digital images.

1.6.3 All artefacts from excavated contexts were collected and retained for specialist identification and study, in line with the OA artefact collection policy. Bulk environmental samples were collected from a range of features that exhibited the potential to contain ecofacts. Environmental soil sampling methodology, processing and recording was undertaken in line with current Historic England guidelines (HE 2011). Rebecca Nicholson, Environmental Manager at OA South, was consulted throughout the fieldwork to ensure that an appropriate sampling strategy was implemented.

1.6.4 All work was carried out in accordance with the WSI (CgMs 2017) and in compliance with the Chartered Institute for Archaeologists, *Standard and Guidance for Archaeological Excavation* (CIfA 2014a), and local and national planning policies (DCLG 2012).

2 STRATIGRAPHY

2.1 Introduction

2.1.1 Archaeological remains were exposed across the excavated area, with denser concentrations of features located in the central and western parts (Fig. 3). Four broad phases of activity have been identified, primarily based on the assessment of dateable evidence, predominately the pottery and radiocarbon results (Table 1), alongside analysis of the stratigraphic relationships or where similarities in orientation and/or morphology of features suggest a relationship. Where stratigraphic and artefactual dating evidence indicate different episodes of use and/or development, the phases have been further sub-divided.

2.1.2 Most features encountered on site are dated to the Iron Age and Roman periods, with small quantities of pre-Iron Age and post-Roman material suggestive of some degree of land use during the earlier prehistoric, Anglo-Saxon and medieval/post-medieval periods. While some features were undated/unphased, many were probably associated with the predominant Iron Age or Roman activity. The phase definitions are as follows:

- Phase 0: Earlier prehistoric
- Phase 1: Iron Age
  - Phase 1.1: Earliest Iron Age (*c* 800–600 BC)
  - Phase 1.2: Early Iron Age (*c* 600–350 BC)
  - Phase 1.3: Middle Iron Age (*c* 350–100 BC)
- Phase 2: Roman
  - Phase 2.1: Late Iron Age/early Roman (*c* 100 BC–AD 50)
  - Phase 2.2: Early Roman (*c* AD 50–150)
  - Phase 2.3: Middle Roman (*c* AD 150–250)
  - Phase 2.4: Late Roman (*c* AD 250–400)
- Phase 3: Early–middle Anglo-Saxon
- Phase 4: Medieval/post-medieval

2.2 Phase 0: Earlier prehistoric

2.2.1 No archaeological features or deposits of demonstrably pre-Iron Age date were identified within the excavated area. A total of 60 worked flints, mostly residual in later contexts, point to early prehistoric activity at the site or close by. While only a broad date range could be given to the flintwork, it is likely that much of it focused on the early Neolithic. It possible, however, that some of the material relates to flint use during the Iron Age and may be contemporary with recorded features. Single pottery sherds of probable early Neolithic and early Bronze Age date were also recovered and were probably residual in later features.

2.2.2 The general paucity of earlier prehistoric remains encountered during the excavation corresponds with the limited evidence identified during the evaluation (OA 2016) and watching brief (OA 2018), which comprised a small quantity of largely undiagnostic worked flint. Nevertheless, this material provides evidence of limited local activity during early prehistory.

2.3 Phase 1: Iron Age

Phase 1.1: Earliest Iron Age (c 800–600 BC)

2.3.1 A probable roundhouse ditch (837) near the eastern edge of the excavated area potentially represents the earliest phase of settlement on site (Fig. 4). Although the full extent of the feature was not exposed, owing to subsequent Iron Age and Roman truncation, it appeared to have a rounded terminal at its southern end. The ditch was 0.66m wide and 0.11m deep with steep sides and a concave base. It contained a single fill with six sherds of earliest Iron Age pottery and six animal bones. Other pottery of this date was found residual in later features.

Phase 1.2: Early Iron Age (c 600–350 BC)

Roundhouses

2.3.2 At least four inter-cutting roundhouse ditches were found in the south-western part of the excavated area (Fig. 4). Penannular roundhouse ditch 1676 had a west-facing entrance that was nearly 2m wide and an internal diameter of *c* 11m (N–S). It was cut on its eastern side by middle Iron Age enclosure ditch 1705 (Fig. 5), although a surviving cut may have remained on the opposite side in the form of cut 1337 (Fig. 6, Section 285). Ditch 1676 was 0.38–0.46m wide and up to 0.26m deep with steep sides and a slightly concave base. Its two fills contained a moderate amount of earlier and early Iron Age pottery, a moderate quantity of animal bones and a small quantity of flints. The ditch appeared to have been recut or redefined by a shallower length of ditch, where posthole 327 cut both features.

2.3.3 Roundhouse ditch 1676 cut two ditches (1505 and 1511), possibly earlier roundhouse features, and was cut by early Iron Age roundhouse ditch 405 on its north-western side. Roundhouse ditch 405 had a projected internal diameter of *c* 12m and a possible south-west-facing entrance. The ditch measured 0.24–0.89m wide and 0.20–0.45m deep, being wider and deeper to the north, with moderately steep sides and a concave to slightly flat base (Fig. 6, Section 43). A moderate amount of animal bone was retrieved alongside small quantities of early Iron Age pottery, fired-clay triangular perforated brick, flint and a small quantity of slag. A single sherd of possible middle Iron Age pottery found in an upper fill of the ditch was either intrusive or suggested that the ditch continued into the subsequent phase. Pit 598 and posthole 626 were located within roundhouse ditch 405 and may have been related to it. Both contained a few pieces of early Iron Age pottery and small quantities of animal bone.

2.3.4 Another possible early Iron Age roundhouse (628) was located east of and cut by middle Iron Age ditch 1705. Two nearby postholes (226 and 666) contained a few pieces of early Iron Age pottery and animal bone and, together with a few other undated pits/postholes, they were probably related to the occupation of possible roundhouse 628.

2.3.5 Ditches 1678 and 1679 defined sequential elements of roundhouse development within the central part of the western excavated area. Roundhouse ditch 1678 was *c* 9.50m in diameter and may have had an entrance facing south-west, owing to the presence of a terminal in this area. This ditch was replaced by 1679, which defined

either a slightly smaller structure or one that had shifted marginally to the east (Fig. 7). Only about a quarter of this later ditch survived, though its projected diameter measured *c* 8m and it had a rounded terminal to the north-east, suggestive of an entrance on the opposite side to ditch 1678. The two ditches measured 0.18–0.72m wide and 0.07–0.26m deep and generally had moderately sloping to steep sides and concave bases (Fig. 8). Both contained two fills from which small amounts of earlier and early Iron Age pottery and animal bone were recovered. A very small pottery sherd of possible middle Iron Age date was recovered from roundhouse ditch 1679 where it was truncated by pits 167 and 170, the second having been phased to the middle Iron Age, suggesting that the sherd was probably intrusive.

2.3.6 Several pits and postholes were positioned within the area defined by roundhouse 1678/1679 and may have been contemporary. While a number of these features could only be broadly dated to the Iron Age (eg pits 31 and 249—see below), postholes 37, 40, 54 and 56 contained small quantities of early Iron Age pottery. Positioned within the northern part of the roundhouse area, these sub-circular postholes measured 0.47–0.51m wide and up to 0.46m deep and had near-vertical sides with slightly concave bases. The postholes also contained small quantities of animal bone, and posthole 56 contained a whetstone fragment. A small number of undated postholes within the southern part of the area may also have been contemporary. Together, these postholes seem likely to have been for structural support.

2.3.7 Ditch 1678 was cut by the more-substantial, curvilinear ditch 1677 to its south-west. It is uncertain whether this feature represented the remains of another roundhouse or had bounded a small enclosure. The western part of the feature survived, suggesting an internal diameter of *c* 12m (NNE–SSW). The ditch was 0.38–1m wide and 0.17–0.56m deep, with moderately steep sides and a concave base (Figure 9). It appeared to terminate where it was cut by middle Iron Age pit 170. The ditch contained three fills from which moderate assemblages of earlier and early Iron Age pottery, worked flint and animal bones were recovered. One body sherd of possible middle Iron Age pottery was recovered from the upper fill. This may have been intrusive or suggests that the ditch remained partially open into this later phase.

2.3.8 Another roundhouse, represented by ditch 1680, was situated towards the centre of the excavated area (Fig. 4). This had undergone at least one alteration by being replaced by a later middle Iron Age roundhouse ditch (1681) (see below). Its earlier, inner roundhouse ditch (1680) defined a structure *c* 10.3m in diameter (NE–SW), with a southern, rounded terminal suggestive of a south- or south-east-facing entrance. Its exposed extent was up to 0.50m wide and 0.40m deep, with moderately sloping sides and a slightly concave base (Fig. 6, Section 310). Finds recovered from this roundhouse ditch consist of small quantities of early Iron Age pottery and animal bones. A large pit (197) was located approximately within the centre of the roundhouse structure. Measuring 0.98m wide and 0.44m deep, it had near-vertical to slightly convex sides and a flat base and contained a few fragments of early Iron Age pottery and animal bone. A similar but slightly larger, undated pit (195) was adjacent to pit 197 within the roundhouse structure. Although devoid of finds, it is possible that it was broadly contemporary with 197.

2.3.9 The eastern side of roundhouse ditch 1689 was revealed in the north-west of the site, measuring up to 0.38m wide and 0.16m deep but appears to have been very truncated. It had moderately sloping sides and a concave base, and contained one to two fills from which only two sherds of probable early Iron Age pottery were recovered. Ditch 1689 cut ditch 744 and was in turn cut by ditch 790, which may also have represented a roundhouse. Neither contained any finds, though their stratigraphic relationships suggest an early Iron Age date.

2.3.10 In addition to those already mentioned, several other less well-dated roundhouse ditches also encircled internal features, mostly postholes that may have formed internal structural elements. Unfortunately, very few were datable, and it was difficult to establish spatial patterning to indicate more specific functions, such as entrances or central supports. A cluster of eight postholes (1686) were situated within an area defined by an unexcavated roundhouse ditch in the north-east of the site and was cut by Roman trackway/boundary ditch 1692. The postholes were roughly positioned in two parallel rows on a NE–SW alignment, perhaps to divide the roundhouse into separate areas. Sub-circular in plan, they measured 0.17–0.45m wide and 0.06–0.12m deep, with moderately steep sides and flat to slightly concave bases. All contained single fills with small quantities of early Iron Age pottery and animal bones recovered from the two slightly larger postholes. Alternatively, it is possible that this roundhouse was in use during the middle Iron Age and was contemporary with pit 448 located to the east of postholes 1686 (see below).

Post-built structures

2.3.11 Several post-built structures of early Iron Age date were recorded. Three square structures (451, 1464, 1687), each comprising four regularly spaced postholes *c* 1.50–2.30m apart, were located in the central and central-northern parts of the excavated area (Figs 4 and 10). Given the locations of other nearby postholes, it is possible that structures 451 and 1687 were rectangular six-post structures. The postholes were typically sub-circular in plan, measuring 0.24–0.60m wide and 0.06–0.40m deep, with steep sides and flat to slightly concave bases (Fig. 6, Section 94). They generally contained single fills, though some had lower fills suggestive of post-packing. Finds recorded from these postholes comprise small quantities of early Iron Age pottery, animal bones and fired clay.

2.3.12 A fourth post-built structure (1688) located near the centre of the excavated area contained a small quantity of broadly Iron Age pottery that could not be more closely dated. Given the early Iron Age date for the other similar structures, however, it is possible that four-post structure 1688 was contemporary.

Pits

2.3.13 In addition to the pits found within roundhouse structures, several more early Iron Age examples were located across the site. Of particular note is sub-circular pit 82, which was found close to roundhouse ditches 744, 790 and 1689 (Fig. 5). Measuring 1.02m long by 1.27m wide and 0.90m deep, it had near-vertical sides and a slightly concave base. It contained six fills of generally dark brownish/grey sandy silt with occasional charcoal inclusions. Middle fills 85 and 86 stood out as containing burnt

deposits associated with an oven or a hearth (Fig. 11). Nearly all the fills contained small quantities of early Iron Age pottery and animal bones (including some burnt bones), while 40 fragments of fired clay structural oven/hearth material were recovered from environmental sample 1 (fill 85) and a spindle whorl was retrieved from upper fill 90. The size and form of pit 82 suggest it may have originally been a well or a waterhole. The finds recovered from its fills, however, indicate that the pit was used for the deposition of domestic waste following disuse.

2.3.14 Pit 1068 was excavated in the eastern part of the excavated area, where it was cut by late Roman ditch 1694 (Fig. 4; Fig. 8, Section 254). The pit was 2.20m wide and more than 1m deep with a steep and undercut western side. Its base was not reached as the depth exceeded safety regulations, but it is unlikely to have been much deeper. Pit 1068 contained a sequence of five fills suggestive of natural infilling. Upper middle fill 1072 contained 15 sherds of Iron Age pottery, eight of which dated to the early Iron Age, and 38 fragments of animal bone, indicating deliberate deposition of domestic waste. Its form and depth suggest that it may have originally functioned as a well or waterhole.

2.3.15 Pit 1226 was located approximately 33m to the south-west of pit 1068. Truncated by Roman ditch 1710, the pit was at least 1.56m wide and up to 0.86m deep, with steep sides, a sloping base and two fills. Small quantities of early Iron Age pottery and animal bone, including red deer antler, were concentrated in its lower fill.

2.3.16 Pits 1513 and 79/121 located in the south-west corner of the site were notably large. Spaced *c* 21m apart, they were oval in plan and measured 3.5–3.7m wide and up to 0.76m deep (eg Fig. 12). They contained both early Iron Age pottery and animal bones, with a piece of fired clay oven/hearth furniture also retrieved from pit 79/120. Two postholes adjacent to pit 79/121 were undated but may have been associated.

2.3.17 Two large pits (4 and 130) were located *c* 2m to the west of roundhouse/enclosure ditch 1677 (Fig. 5). Spaced *c* 1.1m apart, the sub-circular pits were similar in size measuring 1.40–1.44m wide and 0.14m deep. Pit 4 had gently sloping sides and a slightly concave base, while pit 130 had steeper sides and a flat base. Both contained single fills containing early Iron Age pottery and animal bones, with a notably larger collection of butchered bones being recovered from pit 130.

2.3.18 Pit 390 was located in the centre of the site, close to roundhouse ditch 1680. It measured 1.60m long by 1.40m wide and 0.15m deep (Fig. 6, Section 83), and contained early Iron Age pottery, animal bones and fired clay (possibly a piece of triangular perforated brick). Several pits were located in this area, although some dated to the middle Iron Age (see below) and together possibly indicate a long and continued period of activity in this area (also suggested by the recutting of the roundhouse in the later period).

Phase 1.3: Middle Iron Age (c 350–100 BC)

Enclosures

2.3.19 The middle Iron Age saw the establishment of several large enclosures (Fig. 13). Some cut a number of earlier roundhouse ditches indicating changing patterns of land use and several may have been related to agricultural activities such as livestock

management. D-shaped enclosure 1683, located in the centre of the excavated area, was perhaps the most complete example. The enclosure was recut at least once, and measured at least *c* 17m long and 9m wide internally. The size and profiles of the ditch cuts varied along their lengths, measuring 0.55–2.22m wide and 0.24–1.18m deep, with uneven moderately sloping to steep sides and concave to slightly flat bases. Relatively large quantities of broadly Iron Age and middle Iron Age pottery were recovered from both ditches, as well as residual early Iron Age pottery, flint, animal bones (including a near-complete horse skull), shell, fired clay (including pyramidal and triangular perforated brick fragments) and a piece of worked stone interpreted as a possible floor slab.

2.3.20 Ditch 1691 was located *c* 40m to the east of 1683. It formed a roughly U-shaped enclosure, measuring *c* 14m wide, but was truncated through its centre by late Roman ditch 1694 (Fig. 6, Section 319). Ditch 1691 typically measured 1.65–2.31m wide and 0.60–1.06m deep, and generally had moderately steep sides and a concave base. The eastern part of the enclosure ditch was notably wider at *c* 5.20m owing to being recut on several occasions. Moderate quantities of broadly Iron Age and middle Iron Age pottery and animal bones were retrieved, while a single sherd of Roman pottery was found intrusive in the upper fill. A fragment of hammerscale was recovered from environmental sample 66 (fill 1542), together with small quantities of charcoal and charred plant remains, including wheat, barley, oat, and weed and grass seeds.

2.3.21 Two groups of multiple ditches (1690 and 1705) were exposed in the south-western part of the excavated area (Figs 5 and 13). These formed enclosures that superseded several of the early Iron Age roundhouse ditches in this area. Continuing beyond the limit of the excavated area, enclosure 1690 comprised a sequence of six cuts, indicating that had been in use for a relatively long time (Fig. 9). The north-west side of enclosure 1690 also cut earlier roundhouse/enclosure ditch 1677. The cuts that bounded enclosure 1690 varied in size, measuring 0.36–1.26m wide and 0.42–0.96m deep, though they generally had moderately sloping sides and concave bases. Two to three fills were typically found within the ditches, with a moderate quantity of Iron Age pottery and animal bones being recovered. A number of pottery sherds date to the middle Iron Age, though the majority of the pottery could only be broadly dated to the Iron Age. Two sherds of early Iron Age date were probably residual within the ditches, while a late recut (1087) contained a single sherd of Roman pottery in its basal fill. It is possible that the enclosure was still in use in the early Roman period or that cut 1087 (which was shallower and had a flat base) constituted a separate boundary feature associated with late Roman corndryer 1712 rather than enclosure 1690 (see below).

2.3.22 Enclosure 1705 was dug to the south-west of enclosure 1690. The stratigraphic relationship between the two enclosures was not investigated, though it is probable that they represent separate phases of middle Iron Age activity. Cut by possible late Iron Age/early Roman ditch 269/896 to the south-east (Fig. 6, Section 227), enclosure 1705 consisted of approximately six inter-cutting ditches measuring 0.42–1.84m wide and up to 0.86m deep, most with broadly V-shaped profiles (Fig. 6, Section 285). A relatively large assemblage of middle Iron Age pottery, as well as some residual sherds of early Iron Age date, was retrieved from across the enclosure ditches, which typically contained two to three fills. Flint, burnt stone, animal bones, fired-clay triangular

perforated brick fragments, slag and a piece of lead waste were also recovered. An incomplete iron bow brooch (SF 55) dating to *c* AD 25–100 and an iron hobnail (SF 18) recovered from the uppermost fills of the latest recuts of the enclosure suggest that it may have still be in use or had not become fully infilled by the late Iron Age/early Roman period.

Roundhouses

2.3.23 Towards the centre of the excavated area, early Iron Age roundhouse 1680 was replaced in the middle Iron Age by a roundhouse ditch 1681, which created a larger internal diameter of *c* 11.3m (Fig. 13). The ditch measured 0.40–0.65m wide and up to 0.33m deep, and had moderately sloping sides and a concave base. It contained a single fill from which small quantities of middle Iron Age pottery, residual early Iron Age pottery and animal bones were recovered. In its deepest part, two fills were identified within cut 1496 (eg Fig. 6, Section 310). The remains of an incomplete baby skeleton were recovered from upper secondary fill 1498 of cut 1496, alongside middle Iron Age pottery and animal bones. A radiocarbon date was sought from a sample of the neonatal human bones, but the results were unsuccessful owing to a lack of surviving collagen in the bone. It is assumed that the human remains are contemporary with the disuse/backfilling of the roundhouse ditch in the middle Iron Age, although the possibility that this was a later placement cannot be ruled out.

2.3.24 A length of a further possible roundhouse or enclosure ditch (1713) was recorded on the north-east side of roundhouse ditch 1681. Although they shared no stratigraphic relationship (eg Fig. 6, Section 310), the ditches were both dated by pottery to the middle Iron Age. It is possible that 1713 was a later replacement for 681. Fired clay (including a triangular perforated brick fragment) and burnt stone were also recovered from ditch 1713. Both ditches 1713 and 1681 were cut by D-shaped enclosure 1683.

2.3.25 Located *c* 8.70m north of enclosure 1683 were the partial remains of roundhouse ditch 1288. Only the northern part of the structural ditch survived, suggesting an estimated internal diameter of *c* 9.90m (ENE–WSW), though a rounded terminal is suggestive of an east-facing entrance. The ditch was 0.29–0.64m wide and 0.20–0.26m deep, with moderately sloping sides, a concave base and between one and two fills present in different interventions. Finds recovered from the excavated ditch interventions were all from the upper fill, where present, and comprise a moderate assemblage of Iron Age pottery, a large proportion of which dates to the middle Iron Age, while two sherds are of early Iron Age date and considered to have been residual. A moderate quantity of animal bones (including fragments with signs of butchery, burning and gnawing) and a few pieces of flint and slag were also recovered. Posthole 1339 and stakehole 1343, both undated, appeared to cut roundhouse ditch 1228, though it is possible that they were related to the structure.

2.3.26 Three probably related ditches, 1684, 1685 and 1707, were located adjacent to enclosure 1691. These ditches appeared to have defined potential roundhouse structures or small enclosures ranging from 9.5m to 13.3m in diameter. Ditches 1684 and 1685 could not be firmly dated, but both were stratigraphically earlier than ditch 1707, which contained middle Iron Age pottery alongside animal bones and burnt stone. The ditches measured 0.44–1.03m wide and 0.13–0.50m deep, and had

moderately steep sides and concave bases. Ditches 1685 and 1707 were both cut by pit 1465, which was 2.40m wide and 0.76m deep and contained small amounts of middle Iron Age pottery and animal bone (Fig. 6, Section 309).

Pits

2.3.27 The unexcavated roundhouse ditch in the north-east of the site, which defined an area containing potentially early Iron Age posthole group 1686 (see above), may have been in use during the middle Iron Age as suggested by the presence of pit 448 internally. The pit was sub-circular in plan and with a bell-shaped profile, measuring 1.30m wide and 0.34m deep. Perhaps originally used as a storage pit relating to the occupation of the roundhouse, it contained a complete middle Iron Age jar (SF 11) that appeared to have been deliberately placed at its base, possibly to signify the disuse of the pit or potentially the roundhouse itself (Fig. 14). A piece of worked flint and a heat-cracked cobble stone were also found in the pit, and these may have been deposited alongside the vessel. Thirteen other sherds of Iron Age pottery were found within the pit, though these were fragments and abraded, suggesting that they were residual within the feature and had not been deliberately deposited.

2.3.28 In the west of the excavation area was large pit 399, which measured 3.33m long by 1.63m wide, though it was relatively shallow at 0.24m deep (Fig. 5). It had moderately sloping sides and a slightly uneven concave base, which may have been affected by root disturbance. It cut a possible roundhouse ditch (403) of broadly Iron Age date. The pit contained a sequence of three fills from which small quantities of Iron Age pottery (including a sherd of middle Iron Age date), animal bone and unidentified slag were retrieved. A single sherd of intrusive early–middle Roman pottery was recovered from its uppermost fill.

2.3.29 Located further to the north were pits 6, 61 and 170 (Fig. 5). Pit 6 was situated approximately within the centre of early Iron Age roundhouse/enclosure ditch 1677, though it may have continued in use into the middle Iron Age (see above). The pit was very truncated, with its slightly concave base measuring 1.08m wide and only 0.08m deep. Its fill contained two sherds of middle Iron Age pottery and one residual sherd of early Iron Age date, together with a fragment of animal bone. Approximately 6.50m to the north, pit 170 cut the northern terminal of ditch 1677, as well as roundhouse ditch 1679. Measuring 1.32m long by 0.76m wide and 0.58m deep, it had slightly stepped steep sides and an uneven base. It contained three fills, of which only the uppermost fill contained finds comprising small quantities of early and middle Iron Age pottery, animal bone and fired clay triangular perforated brick fragments. Pit 61 was located 2m west of pit 170. It measured just over 1m across and its single fill contained four sherds of Iron Age pottery, including a rim sherd and a body sherd from a vessel of middle Iron Age date.

2.3.30 Pits 386 and 392, located to the south of enclosure 1683, dated to the middle Iron Age. Measuring 1.63m wide and 0.30m deep, pit 386 had near-vertical sides and a flat base, while pit 392 was 1.85m wide and 0.43m deep, with moderately sloping sides and a concave base. Both contained residual early Iron Age and middle Iron Age pottery, together with animal bones. Fired clay was also recovered from pit 392.

2.3.31 In the north-east of the site were inter-cutting pits 690 and 692. Large shallow pit 690 was sub-oval in plan, measuring 3.20m long by 1.76m wide and 0.10m deep. Its two fills contained a small quantity of early and middle Iron Age pottery, as well as animal bones and flint. Sub-circular pit 692 cut the north-east of pit 690 and was 0.99m long by 1.14m wide and 0.30m deep, with moderately steep sides and a flat base. Earlier and early Iron Age pottery, animal bones and flint were recovered from its single fill. Although no middle Iron Age pottery was recovered from this feature, its stratigraphic relationship with pit 690 is suggestive of a probable middle Iron Age date.

Iron Age (c 800–50 BC)

2.3.32 A large number of features could not be dated to the sub-phases outlined above as they were not sampled during excavation. However, many of these could be defined as certainly Iron Age or possibly Iron Age, based on their morphology and/or spatial relationship with other better-dated features. Many of these appear to have represented roundhouse ditches, some of which appear to have been related to sequential construction. A large number of pits were also very probably of Iron Age date.

Roundhouses

2.3.33 Probable roundhouse ditch 1675 was partially exposed at the eastern end of the excavated area and continued beyond it. The shallow ditch was up to 0.40m wide and no more than 0.14m deep, exhibiting moderately sloping sides and a concave base. Just a few fragments of broadly Iron Age pottery, a fragment of animal bone and an intrusive piece of medieval roof tile were recovered from its single fill.

2.3.34 Shallow roundhouse ditch 635 was located in the north of the site, *c* 20m north of middle Iron Age enclosure 1683. Only the western half of the ditch survived, suggesting an estimated internal diameter of *c* 8.50m (NNW–SSE). The ditch was generally 0.30–0.46m wide and up to 0.10m deep, though its possible terminals were particularly shallow at 0.04–0.08m deep. Similar to other Iron Age roundhouse ditches, it had moderately steep sides, a concave base and a single fill. Small quantities of broadly Iron Age pottery, animal bone, flint and burnt stone were recovered from the roundhouse ditch.

2.3.35 Another curvilinear ditch (569) in the central part of the eastern excavated area also appears to have been an associated roundhouse feature. This ditch was cut by a Roman ditch 1682.

Pits

2.3.36 Pits 31, 249, 272, 275 and 288 were recorded within early Iron Age roundhouse 1678/1679 (Fig. 7). Although they did not contain identified early Iron Age pottery, it is probable that they were related to the structure. Pits 31, 249 and 272 were sub-circular/oval in plan, measuring 0.95–1.26m wide and 0.26m deep, with moderately steep sides and concave bases (Fig. 8). Both contained broadly Iron Age pottery and animal bones, and pit 249 also produced charcoal, ironworking slag and charred plant remains, from bulk soil sample 69 collected from its upper fill. Pits 275 and 288 were smaller cuts into the back fill of 272.

2.3.37 Pit 410/540 was located towards the south-east of the excavated area. This sub-circular feature measured 2.40m long by 2.30m wide and 1.30m deep, and had moderately steep sides and a slightly concave base. A modern service pipe cut the eastern side of the pit, while a Roman pit (417/549) cut the top fill of the pit (Fig. 6, Section 128). It contained a sequence of eight fills suggestive of successive natural silting and deposition of waste material following disuse. Finds recovered from the pit comprise a small quantity of broadly Iron Age pottery, and single pieces of animal bone and fired clay triangular perforated brick.

2.3.38 Located south of enclosure 1683, four pits (285, 353, 490, 492) contained Iron Age pottery that could not be more closely dated. As with the other pits of this cluster, they measured 1.07–1.84m wide and 0.08–0.34m deep, and generally had moderately sloping sides and slightly flat bases. In addition to pottery, they all contained animal bones, with large quantities recovered from pit 353, which also contained flint and slag. A single sherd of late Iron Age/early Roman pottery may have been intrusive within pit 356 (see below), suggesting that there may have been some degree of continuity in activity on site from the Iron Age into the Roman period.

2.4 Phase 2: Roman

Phase 2.1: Late Iron Age/early Roman (c 100 BC to AD 50)

2.4.1 Ditch 269/896 has been dated to the late Iron Age/early Roman phase based on the presence of an inhumation burial that produced a radiocarbon date of this period (Fig. 15). The ditch cut middle Iron Age enclosure ditch 1705 (Fig. 6, Section 227) and was on the same alignment as the adjacent Roman ditch 1708 (see below), which also indicates its later date. The stratigraphic relationship between 269/896 and 1708 could not be discerned, but it seems likely to have formed the earliest definition of boundary 1708.

2.4.2 Inhumation burial 1570 provides the only conclusive evidence for late Iron Age/early Roman activity at the site. The NE–SW aligned burial appeared to have been placed directly into the fill of ditch 269/896 and comprised the remains of an adult woman (*c* 26–35 years old). Radiocarbon analysis of a sample of bone from this skeleton returned a date of 151 cal BC–cal AD 63 (UBA-43690, 2038 ± 33, 95% probability; Table 1). While no finds were hand collected from around the burial, environmental samples 60, 62 and 64 produced a piece of animal bone and two iron fragments (possibly hobnails).

2.4.3 A second, double inhumation burial containing the remains of a juvenile (SK 271) and an adult (SK 364) was also recovered from the fill of ditch 269/896. Again, no dating evidence was recovered from the ditch fill, although it is clearly very likely that the burial of these individuals was broadly contemporary with SK 1570.

2.4.4 In addition to these two inhumation burials, a femur (SK 1535) was found in the lower fill of ditch 150, which was also a stratigraphically early definition of Roman boundary 1708 (Fig. 16, Section 35). It was overlain by a fill (151) from which broadly dated Roman pottery and residual Iron Age pottery were recovered. While the remains are not well dated, the pattern of burial in this area suggests that the bone may belong to an individual that died towards the end of the Iron Age or the beginning of the Roman

period. It is not clear if this was a deliberately placed disarticulated bone or derived from a burial perhaps disturbed by the digging of ditch 150.

2.4.5 A small quantity of late Iron Age/early Roman pottery was also recovered during the excavation. A single sherd was retrieved from pit 356, which was located within the cluster of Iron Age pits in the centre of the site, suggesting that is likely to have been intrusive. Elsewhere, pottery of this date was exclusively residual in later Roman features, but nonetheless provides evidence of low-level activity during this period. A bow brooch (SF 55) dating to the 1st century AD was recovered from the upper fill of the latest recut of middle Iron Age ditch 1705.

Lab. code	Material	Context/ sample no.	RC Age BP	F14C value	Calibrated Age 95% probability	Calibrated Age 68% probability
UBA-43690	Human bone	SK 1570	2038 ± 33	0.7759	151–131 cal BC (3.3% confidence) 120 cal BC–cal AD 63 (96.7% confidence)	92–77 cal BC (11.7% confidence) 54 cal BC–cal AD 20 (88.3% confidence)
UBA-43694	Human bone	SK 712	1721 ± 31	0.8071	cal AD 250–295 (29.6% confidence) cal AD 309–411 (70.4% confidence)	cal AD 258–281 (29% confidence) cal AD 328–382 (66.8% confidence) cal AD 397–401 (4.2% confidence)
UBA-43697	Human bone	SK 707	1875 ± 41	0.7919	cal AD 61–247 (99.7% confidence) cal AD 300–304 (0.3% confidence)	cal AD 124–216 (100% confidence)
UBA-43700	Human bone	SK 531	1776 ± 27	0.8016	cal AD 217–265 29.7(% confidence) cal AD 272–350 (70.3% confidence)	cal AD 241–256 (24.6% confidence) cal AD 283–327 (75.4% confidence)
UBA-43702	Human bone	SK 247	1504 ± 28	0.8293	cal AD 483–489 (0.08% confidence) cal AD 537–612 (91.1% confidence) cal AD 614–641 (8.1% confidence)	cal AD 555–598 (100% confidence)
UBA-43703	Charcoal: *Corylus* sp.	1120 <49>	1346 ± 22	0.8457	cal AD 647–687 (81.1% confidence) cal AD 743–761 (14.6% confidence) cal AD 765–772 (4.3% confidence)	cal AD 653–674 (97.9% confidence) cal AD 754–755 (2.1% confidence)

Table 1: Radiocarbon dating results (the calibrated age ranges were determined in CALIB REV8.2 using the IntCal20 curve)

Phase 2.2: Early Roman (c AD 50–150)

2.4.6 As with the late Iron Age/early Roman phase, there appears to have been limited activity at the site during the later 1st and early 2nd centuries AD (Figs 17 and 18). Boundary 1708 is likely to have continued with new recuts of ditch 269/896 and possibly 150, both of which were possibly extant in the late Iron Age (see above).

Having been recut a number of times, the earlier cuts of this boundary exhibited moderately sloping sides and slightly flat bases, measuring 1.20–1.40m wide and up to 0.89m deep (Fig. 14, Section 35). Sherds of 2nd-century pottery were recovered from the upper fill (154) of ditch cut 153 and the basal fill (147) of cut 145, which likely indicates that earlier cuts (eg 161 and 157) are more securely of this early Roman phase.

2.4.7 To the west of ditch 1708, a middle and late Roman land boundary (1710 and 1699) extended across the southern part of the excavated area. The sequence of cutting in this land boundary is unclear, owing to the complex nature of the stratigraphy of these ditches. Cutting in the middle and late Roman periods account for much of the activity associated with these features. However, there are signs that some of the earliest cuts and other underlying features belong to the early Roman phase. A NE–SW aligned ditch (995), only 0.35m wide and 0.20m deep, was cut by early phases of ditch 1710. It contained 34 sherds of E-ware pottery dating to the 1st-century AD and the partial remains of a neonate skeleton (SK 997). The remains of a second neonate (SK 1105) were also found within a recut of ditch group 1710 (cut 1104). This burial is shown on the early Roman phase plan to highlight its location (Fig. 18), but it could feasibly belong to a later Roman phase. Another possibly early ditch cut of 1710 was 1113, the fill of which produced a dolphin-style brooch dating to the second half of the 1st century AD.

2.4.8 An early Roman phase of the east–west boundary in this area appeared towards the eastern end of ditch 1699, where the earliest cut (437) contained 22 sherds of pottery dating to *c* AD 40–150 and a small quantity of animal bones. Although heavily truncated, this ditch was at least 2.4m wide and 0.74m deep with moderately sloping sides and a concave base.

2.4.9 A small number of pits also belong to this phase. Elongated pit 370 was found in the western part of the excavated area. It measured 1.7m long and was fairly shallow, containing two sherds of 1st-century AD pottery in its fill. This pit was cut by pit 367, which measured 1.84m long by 1.34m wide and 0.30m deep, and had steep sides and a flat base. It contained two fills, with small amounts of early Roman pottery (AD 40–100) and animal bones recovered from the lower secondary fill (369).

2.4.10 Located approximately 19.5m to the north was elongated oval pit 261, measuring 2.13m long by 0.80m wide and 0.58m deep. It had near vertical sides and a slightly irregular concave base. It contained a shallow black-brown gravelly basal fill (262) suggestive of redeposited natural and an overlying backfill (263) of mid-brownish-grey sandy silt with gravel and charcoal inclusions. Small to moderate quantities of early Roman pottery, animal bones and fired-clay plate fragments, and a few pieces of flint and shell were recovered from this upper fill.

2.4.11 Pit 849 was situated towards the central part of the excavated area. It was 0.50m wide and only 0.15m deep, with moderately sloping sides and a slightly flat base. Its single fill contained the remains of a large early Roman (AD 43–150) storage vessel (SF 35). Although truncated, the vessel appears to have been deliberately placed. An environmental sample (45) taken from around the vessel produced a large of rodent bones (599 specimens), including those of mice and voles, as well as bones of shrews and frogs. Three cattle bones were also recovered by hand.

Phase 2.3: Middle Roman (c AD 150–250)

Trackway 1692/1693

2.4.12 A ditched trackway was established in the later 2nd century AD and continued un use to the end of the Roman period of occupation at the site (Fig. 19). The trackway extended roughly east–west across the northern end of the excavated area. It was defined by recut ditches 1692 and 1693, which extended parallel from the eastern excavation limit on a WNW trajectory over *c* 95m to where the southern ditch (1693) turned to the south-west and the northern ditch (1692) curved less markedly in a WSW direction, effectively opening up the area at this end of the trackway. Both ditches extended beyond the western limits of the eastern excavated area, but ditch 1692 may have been continued by ditch 1702 in the western excavated area. Ditch 1693 may have aligned with early Roman boundary 1708, which likely continued in use in the middle Roman phase, owing to the recovery of dated pottery from recut 145—the latest cut in this sequence (Fig. 16, Section 35).

2.4.13 As many as seven cuts were observed in some interventions of ditch 1692 (eg Fig. 16, Section 259; Fig. 20). The ditches measured 1.60–3.82m wide and 0.74–1.66m deep with moderately steep sides and concave bases (Fig. 16, Sections 232, 257 and 259). Sherds of late 2nd-century AD pottery were recovered from lower and middle fills of early cut 1148 on the southern side of ditch 1692, with similar pottery also being recovered from the upper fill of possible early cut 1191 (Fig. 16, Section 259). The boundary here incurred at least two further recuts following the backfilling of these cuts.

2.4.14 Ditch 1693 was situated no more than 10m to the south of ditch 1692 and was previously recorded in the trial-trench evaluation (OA 2016). As with 1692, ditch 1693 also comprised numerous recuts, demonstrating the maintenance and reuse of the boundary (Fig. 21). At the eastern end of ditch 1693, an intervention through the feature exposed an early cut (1138) on the southern side that produced later 2nd/early 3rd-century pottery from its basal fill and contemporary pottery was also recovered from the single fill of cut 1131 on the northern side (Fig. 16, Section 257). Residual pottery of this date was also recovered from the fills of the later cuts (1127 and 1133), which were more clearly of the late Roman phase (see below). An intervention towards the western end of ditch 1693, after it turned to the south-west, shows that the feature was likely established no earlier than the middle Roman phase. Here, ditch cut 919 cut undated waterhole 1627 and pit 926, which contained 2nd-century pottery (Fig. 16, Section 232). Another ditch (924) also cut pit 926 and was cut by 919. This ditch extended *c* 7m to the south-east, cutting Iron Age features along the way.

2.4.15 As mentioned above, ditch 1702 may have formed a continuation of ditch 1692 in the western excavated area. The ditch was 1.64–2.60m wide and 0.80–0.90m deep with moderately sloping sides and a concave base. No finds were recovered from ditch 1702, though its orientation and morphology suggest that it relates to an early definition of 1962. The lack of recuts in this ditch, however, perhaps suggests that it belonged to the middle Roman phase only and did not continue into the late Roman phase.

Other land boundaries

2.4.16 Approximately 13m to the south of ditch 1702 was NNE–SSE aligned ditch 1703, which may have been related, subdividing this area of the site. It was exposed for *c* 19.5m before it was cut by late Roman ditch 1704, though it may have originally continued further towards the north-east. Ditch 1703 was 0.87–1.40m wide and 0.29–0.35m deep, and had moderately sloping sides and a concave base. Small amounts of residual Iron Age pottery, broadly Roman pottery and animal bones were retrieved from the ditch.

2.4.17 Southern boundary ditch 1710 and its eastern continuation (1699) were probably established during the middle Roman phase, though as mentioned above, there are signs of earlier ditches in this area that date to the early Roman phase. As with ditches 1692 and 1693, ditch 1710 was recut several times. Closely dated middle Roman pottery was not recovered from interventions into the ditch. However, the stratigraphic relationships between some cuts with early Roman and late Roman ditches, respectively, demonstrates their probable middle Roman date. Ditch 1700 was aligned WNW–ESE and represented the probable western continuation of ditch 1710. Truncating a number of Iron Age features, the ditch was 1.00–1.15m wide and 0.50–0.99m deep, with steep sides and a concave base. It contained a sequence of up to four fills from which residual Iron Age pottery, early and middle Roman pottery, animal bones and flint were retrieved.

2.4.18 Approximately 9.25m to the south of ditch 1710 was WNW–ESE aligned ditch 1709, which was exposed for a length of *c* 5.75m, ending in a rounded terminal. It was 0.95m wide, 0.43m deep and had moderately steep sides and a flat base. It contained a sequence of three fills from which small assemblages of residual Iron Age pottery, middle Roman pottery, animal bones and fired clay were recovered.

2.4.19 Several ditches subdivided the area south of trackway ditch 1693 into rectilinear fields, possibly co-axially aligned to the trackway. Crossing the centre of the site was NNE–SSE aligned ditch 1695. It was nearly 24m long, ending to the south in a slightly pointed terminal that cut the eastern end of ditch 1696. At its northern end, ditch 1695 did not continue beyond 1693, thus clearly respecting the position of the trackway. Ditch 1695 cut middle Iron Age roundhouse ditch 1288 and was cut by late Roman pit 522. The ditch was up to *c* 1.2m wide and 0.38m deep, with moderately sloping sides and a slightly flat base. The ditch had been recut once along its full length (Fig. 16, Section 106). Residual Iron Age and early Roman pottery was recovered alongside pottery dating to the second half of the 2nd century AD, animal bones, flint and burnt unworked stone. Two middle–late Roman coins (SFs 44 and 45) were also recovered from the upper fill and were probably intrusive.

2.4.20 Ditch 1696 extended ESE from the southern terminal of ditch 1695, almost parallel to 1693, and was cut by late Roman ditch 1694. It appears to have been terminated by boundary ditch 1698 at its east end, although this ditch is likely to be a later addition (see below). Measuring generally 0.60–1.79m wide and 0.16–0.31m deep, ditch 1696 had moderately steep sides and a concave to slightly flat base. It typically contained a single fill, though two fills were recorded where the ditch was at its deepest at 0.48m. Small quantities of residual Iron Age pottery, early and middle Roman pottery, animal bone, flint, fired clay, shell, a copper-alloy bow brooch (SF 41) and a late 3rd-century

Roman coin (SF 59) were recovered from its fills. The coin is likely have been intrusive as it was found next to the cut of ditch 1694.

2.4.21 Ditch 1697 extended *c* 41m south from where ditches 1695 and 1696 met, before it turned 90° to the WNW at its southern end. No clear stratigraphic relationships were identified between this ditch and ditch 1710, so it is uncertain whether this represented a temporary southern boundary in this area before 1710 was recut again in the late Roman period (see below). A probable recut of 1710 was, however, observed to extend eastward from near the southern corner of 1697 to ditch 1050, which led southwards. Ditch 1697 measured 2.03m wide and 0.50m deep, with moderately sloping sides, a concave base and one to two fills. Pottery, comprising sherds of Iron Age, early Roman and broadly Roman date, animal bones, CBM, fired clay, stone and an iron tool (SF 34) were recovered from across the ditch. While no specifically middle Roman dated pottery was recovered from ditch 1697, its alignment and stratigraphic relationships with other dated features are suggestive of it belonging to this phase.

Burials

2.4.22 Close to the intersection of ditch 1050 and the probable recut of 1710, near the southern end of the excavated area, the remains of an adult skeleton (SK 707) was found laid on a roughly N–S alignment. It is unclear if the body had been placed directly into a ditch 1050 or was buried within a grave cut into the fill of this ditch (706) (Fig. 22). A sample of bone collected from SK 707 produced radiocarbon dates of cal AD 61–304 (UBA-43697, 1875 ± 41, 95% probability) and cal AD 124–216 (UBA-43697, 1875 ± 41, 68% probability), suggesting that it very likely belonged to the middle Roman phase (Table 1). Overlying SK 707 was a series of disarticulated human remains (SK 709–712), some or all of which are late Roman in date and are discussed below.

Pits

2.4.23 Pit 926 was located in the central part of the excavated area, where it was cut by a late Roman phase of boundary ditch 1693 and middle Roman ditch 924. Where it survived the pit was 2.2m wide and 0.75m deep, and it exhibited a moderately steep and slightly stepped southern side that appeared to lead into to a slightly flat base. Two fills were identified, with small amounts of middle Roman pottery, animal bone and a rolled sheet of lead waste (SF 57) recovered from its upper fill (928) and a fragment of animal bone from its lower fill (927).

2.4.24 Located approximately 23m to the south-east was possible pit 1313, which cut middle Iron Age enclosure ditch 1683 and middle Roman ditch 1696, and was cut by the southern terminal of middle Roman ditch 1695. The potential pit was at least 0.49m wide and 0.36m deep, with moderately sloping sides and a concave base. Its single fill contained just a few sherds of residual Iron Age pottery and broadly middle to late Roman pottery (AD 120–410).

Phase 2.4: Late Roman (c AD 250–400)

Trackway and main land boundaries

2.4.25 The general layout of the middle Roman site were largely maintained during the late Roman period (Fig. 23). Trackway ditch 1692 continued to define the northern extent of the known activity. The latest recuts of ditch 1692 were generally 1.16–3.30m wide and 0.40–1.26m deep, with moderately steep sides and concave bases, though the ditch was *c* 5.7m at its widest point in the north-east of the site (eg cut 1188; Fig. 14, Section 259). The later phases of this boundary ditch contained one to three fills from which residual Iron Age and earlier Roman pottery, late Roman pottery, animal bone, CBM, fired clay, a late Roman copper-alloy bracelet fragment (SF 24), two early 4th-century Roman coins (SFs 25 and 26), an iron bar/nail, flint and burnt stone were recovered. Late Roman pottery was recovered from the lower fills of ditch cuts 929 and 1188. An Anglo-Saxon loomweight is considered to be intrusive within the upper fill (947) of a late recut. A disarticulated human skull (SK 931) with evidence of trauma was also recovered from the uppermost fill (930) of the latest recut 1188. While no pottery was recovered from this fill, a copper-alloy armlet/bracelet (SF 47) and a copper-alloy seal box lid (SF 48), both of later Roman date, were recovered, suggesting that the skull was also deposited in this period.

2.4.26 A WNW–ESE aligned row of six postholes (1107) was cut into the upper fill of one of the middle Roman cuts of ditch 1692 and indicates the presence of a fence or palisade along this side of the boundary/trackway in the later phase. The postholes were generally sub-circular, measuring 0.18–0.25m wide and 0.08–0.25m deep, with steep sides and flat bases. The only finds recovered from these postholes comprise a sherd of pottery dated AD 40–150, which is probably residual.

2.4.27 Ditch 1171 was located in the north-western part of the excavated area and may have formed a replacement of middle Roman ditch 1702, continuing the westward alignment of dich 1692. The single intervention excavated revealed the ditch to be 1.32m wide and 0.42m deep with moderately steep sides and a concave base. Small quantities of late Roman pottery and animal bones, as well as single fragments of waste lead and iron bar/nail, were recovered from its two fills.

2.4.28 It is unclear to what extent trackway ditch 1693 continued in use in the late Roman phase. Late Roman pottery was recovered from fills of several late recuts, eg fills 921 and 923 of cut 919 and fill 918 of cut 915 (Fig. 16, Section 232). Other finds recovered from these later ditch fills include animal bones, fired clay, two late Roman coins (SFs 20 and 46) and a shard of blue glass. It appears likely, however, that this feature had ceased to function as a boundary sometime within the late Roman phase. Ditch 1698 cut 1693 on a north–south alignment at the eastern edge of the excavated area, suggesting that the trackway may have gone out of use, or was perhaps either fully or partially blocked at this end. Pit 1108 also cut the latest fill of the ditch about halfway along its length (see below).

2.4.29 The south-west continuation of boundary ditch 1693 may have shifted slightly further to the south-east during the late Roman period, where it was recorded as ditch 142. Alternatively, ditch 142 may have formed a continuation of boundary ditch 1710, perhaps curving southwards in this area. Parallel with earlier ditch group 1708, 142 may simply have been a later iteration of this boundary. The ditch was 0.70m wide and 0.40m deep with moderately steep sides and a concave base. It contained a sequence

of two fills that produced small quantities of residual Iron Age pottery and 3rd-century pottery, as well as a hoard of 25 coins, the latest of which date to AD 388–402.

2.4.30 Ditch 1710 continued to mark the southern part of the site during this phase. The latest recuts of this boundary were generally 1.04–1.60m wide and 0.50–0.69m deep, with late Roman pottery recovered from both lower and upper fills. Small assemblages of animal bones, CBM, iron and copper-alloy objects were also retrieved from these later phases of the boundary ditch. At the eastern end of 1710 ditch 1699 continued to be used, perhaps briefly, during the late Roman phase, as indicated by the recovery of late 3rd/4th-century pottery from upper fills 432 and 433. It is likely, however, to have been replaced by ditch 1698, which extended southwards from where it cut ditch 1693, along the eastern end of the excavated area before turning westward to where it joined to ditch 1710. An intervention was dug across the adjoining area of ditches 1710, 1698 and 1699, but no clear relationships were identified.

Enclosures

2.4.31 A number of less-substantial late Roman ditches appear to have subdivided areas to the south and west of ditch 1693. Ditch 1694 extended over 55m from its northern end, where it met with ditch 1693 southwards to where it was cut by ditch 1698. Ditch 1694 was recut once, although it measured 1.62–2.60m wide and 0.64–0.8m deep, with generally steep sides and a concave base. Pottery was recovered from across the ditch, the majority of which was late Roman in date, though residual early and middle Roman sherds were also present. Residual Iron Age pottery was concentrated within the ditch where it cut early Iron Age pit 1068 (Fig. 6, Section 254). Roman fired clay oval plates, butchered animal bones and shells were also retrieved from the ditch.

2.4.32 WNW–ESE aligned ditch 1701 was located in the western part of the excavated area. The ditch extended 30m from the edge of the excavated area to a rounded terminal at its western end. The ditch was interrupted by a gap measuring *c* 2.2m wide, also with terminals. Measuring 0.89–1.28m wide and 0.12–0.28m deep, the ditch had moderately sloping sides and a flat base. Residual Iron Age and earlier Roman pottery, late Roman pottery, animal bones and a Roman coin (SF 10) were recovered from its fill.

2.4.33 L-shaped ditch 1704 may have formed part of a field or enclosure alongside 1701 in this part of the site. It measured *c* 7.5m (E–W) and 28m (N–S) but extended beyond the excavated area in both directions, so it is unclear how the two were related. The northern part of ditch 1704 had been recut, almost completely removing the original cut. It was 0.61m–1.50m wide and 0.45–0.57m deep, and had moderately steep sides and a concave base. The ditch contained two fills from which small quantities of early and late Roman pottery, animal bones, CBM, shell and a fragment of a possible Roman bracelet (SF 36) were retrieved.

2.4.34 A set of narrower, shallower ditches (1434, 1706, 812 and 1682) was located at least 21m to the west of ditch 1694 and just north of ditch 1710. These ditches cut each other so may not have been contemporary, though their positioning suggests that they may have been related. The only feature that contained closely dated pottery was curved ditch 812, from which 11 sherds of late Roman pottery were recovered from the middle fill. Small assemblages of residual Iron Age pottery, animal bones and shells

were also retrieved. Ditch 812, which was on a roughly NW–SE alignment, was 0.53–0.80m wide and 0.26–0.44m deep with generally steep sides and a flat base. It was cut by 0.25m-deep pit 573, which contained only animal bones and residual Iron Age pottery. Ditches 1434, 1706 and 1682 contained pottery of broadly Roman date, together with residual Iron Age pottery, animal bones and fired clay. It is probable that this set of ditches disturbed an area of Iron Age activity, the remains of which are limited to residual finds and a truncated roundhouse ditch (569), located in the proximity of four-post structure 1464.

Corndryer 1712

2.4.35 A rectangular stone-built corndryer (1712), aligned roughly WNW–ESE, was constructed in the western part of the excavated area (Fig. 24). Cutting middle Iron Age enclosure ditch 1690, the construction cut for the main chamber and flue measured 3.66m long by 1.3m wide and 0.3m deep (Fig. 25). The two surviving walls of the flue each comprised a single course of roughly shaped limestone blocks bonded with white/grey mortar (Fig. 25). Overlying the base of the flue was a sequence of burnt and charcoal-rich deposits (1176, 1177, 1178) associated with the use of the structure (Fig. 25, Section 260). Burnt stones were hand collected from these fills, while animal bones, flint and an iron nail were recovered from environmental samples 51, 52, 57 and 58. A heat-affected deposit (1179) encountered in the western end of the corndryer indicated the location of the stokehole.

2.4.36 In the eastern end of the corndryer, a deposit (1175) was suggestive of natural slumping that had accumulated following abandonment of the structure but prior to deliberate backfilling. A final backfill layer (1174) covered the stone structure and its internal deposits. Both deposits contained late Roman pottery, while backfill 1174 also contained animal bones, together with two residual sherds of early and middle Iron Age pottery.

Post-built structure 1101

2.4.37 A rectangular posthole structure was revealed in the western part of the site about 12m west of corndryer 1712. Structure 1101 was orientated roughly NNE–SSW, measured *c* 10m long and 3m wide, and comprised up to 34 postholes forming two parallel lines (Fig. 24). The postholes forming the southern half of the structure were inter-cutting, suggesting that the structure had been modified. The postholes were generally sub-circular in plan and 0.32–0.73m in diameter, with moderately steep to near-vertical sides and flat to slightly concave bases; the majority were no more than 0.21m deep, although a small number of the larger postholes measured 0.37–0.61m deep. The postholes each contained one or two fills, with stony basal fills suggestive of padding or packing (Fig. 16, Section 245). Pottery, fired clay, animal bones, marine shell and residual worked flints were recovered from the postholes. Approximately half contained small quantities of pottery, with no more than 13 sherds recovered from a single posthole. While the majority of pottery was Iron Age in date, four postholes contained small quantities of broadly Roman and late Roman pottery. Given the form and location of this post-built structure in the west of the site, where many of the Iron Age features were concentrated, it is considered to be late Roman in date

and the Iron Age pottery residual in nature. It is also possible that this structure was related to late Roman corndryer 1712 located nearby.

Burials

2.4.38 The skeletal remains of two adults (SKs 428 and 531) were recovered from the terminal of undated ditch 1671 in the central-southern part of the excavated area. It is unclear how this curvilinear ditch may have related to southern boundary ditch 1710. Ditch terminal 1671 was slightly curved, on a roughly N–S alignment, and was 1.35m wide and 0.38m deep, with moderately sloping sides and a concave base. The terminal truncated an earlier ditch cut (1669) of similar orientation, size and form. No clear evidence of a grave cut was evident during excavation, so it possible that the remains had been placed within the ditch, which may have been of earlier origin. Ten sherds of broadly dated Roman pottery were recovered from the fill of ditch terminal 1671, together with a few pieces of animal bone and fired clay, which overlaid the skeletal remains; terminal 1669 was devoid of finds. However, a radiocarbon date of cal AD 217–350 (UBA-43700, 1776 ± 27, 95% probability; Table 1) was obtained from a sample of bone from SK 531, and it is likely that SK 428 was contemporary.

2.4.39 Located approximately 10.5m to the south, a series of disarticulated human remains (SKs 709–712) were found overlying middle Roman remains of SK 707 in ditch 706. The four elements of disarticulated remains, as well as the remains of SK 707, were all overlain by a mid-brownish-grey silty fill (708) (Fig. 22). Six sherds of broadly Roman pottery and an iron nail were recovered from this deposit. However, in contrast to the middle Roman radiocarbon date of SK 707, a sample of bone from SK 712 produced a radiocarbon date of cal AD 250–411 (UBA-43694, 1721 ± 31, 95% probability; Table 1). It is unknown whether the remaining disarticulated remains (SK 709–711) are of similar late Roman date, though the four bones present are of similar condition and together they represent a minimum of one person clearly not belonging to SK 707, owing to duplication of elements already found. If SKs 709–712 belonged to the same individual, it may be that selected remains were deliberately deposited in the grave of an earlier burial or were coincidentally deposited where the earlier inhumation burial had already been placed. It is perhaps noteworthy that the remains of both SK 707 and SKs 709–712 were deposited at the junction of ditches 1710 and 1050, which had been recut (1053) in the late Roman period.

Pits

2.4.40 Large sub-circular pit 1145 cut the southern side of an earlier phase of trackway ditch 1692 (Fig. 23). It had near-vertical sides and measured 0.84m wide and more than 0.78m deep. The top of the pit was truncated by tree-throw hole 1154 and the base of the pit was not reached owing to safety regulations. Its form and depth suggest that it may have functioned as a well/waterhole. Two fills were found, including a mid-grey silty gravel (1147) suggestive of natural slumping/erosion of the southern side of the pit and a dark grey, silty gravel secondary fill (1146) from which small quantities of late Roman pottery and animal bones were retrieved.

2.4.41 Pit 1108 truncated trackway ditch 1693 about halfway along its observed length. Machine excavation revealed that the pit was sub-rectangular in plan with moderately

sloping sides and measured *c* 5m wide. At a depth of *c* 1.50m, it was observed to have narrowed slightly as its sides became steeper. It contained a sequence of six fills, with its lowest, humic blue-grey sandy silt fills suggestive of its function as a well/waterhole. The condition of a number of animal bones recovered from the lowest two waterlogged deposits shows that they had been submerged in water for some time. Small quantities of middle–late Roman pottery were recovered from all the fills, though the lowest contained only a few sherds. Animal bones, Roman roof tile and fired clay were largely concentrated in its intermediate fills, with residual Iron Age pottery, flint, two mid-3rd-century Roman coins (SFs 22 and 37) and an iron bar fragment also recovered.

2.4.42 Located approximately 9.2m south-west of pit 1108 was pit 522, which cut middle Roman ditch 1695. Sub-circular in plan, measuring 1.26m by 1.16m and 0.34m deep, the pit had near vertical sides and a flat base (Fig. 16, Section 106). Its single fill contained small quantities of animal bone and pottery, which was largely of mixed Iron Age date, though a sherd of middle to late Roman (AD 120–410) pottery was also recovered.

2.4.43 Pit 1564 was located in the centre of the excavated area where it cut middle Roman ditch 1697 at its northern end. The pit was 1.6m by 1.1m wide and 0.4m deep with steep sides and a concave base. The single fill of the pit (1565) contained a radiate of Claudius II (AD 268–70) and a large, flat-headed iron nail.

2.4.44 A group of intercutting pits (1208, 1210, 1212) was excavated in the north-east of the site. Partially truncated by trackway ditch 1693, the pits were up to 1.1m deep and exhibited steep sides and slightly concave bases. They all contained single fills from which late Roman and residual earlier Roman pottery were recovered, as well as animal bones and shell. Adjacent to these pits and also truncated by ditch 1693 was pit 1214, which was *c* 8.4m wide and 0.98m deep. Its relationship with ditch 1694 to the south was not observed. This pit had moderately sloping sides and a concave and uneven base. It contained a sequence of three fills suggestive of natural infilling over some time. Its basal fill contained only broadly dated Roman pottery, while middle Roman pottery was recovered from its middle fill and late Roman pottery from its upper fill. Residual Iron Age pottery was present in all three fills. A moderate assemblage of animal bones, a piece of flint, a copper-alloy spoon handle fragment (SF 56) and a possible quern stone fragment were also recovered. It is possible that the pit originated in the middle Roman phase but did not become fully infilled until the late Roman period.

Roman (AD 50–400)

Ditches

2.4.45 Located in the eastern part of the excavated area was a small sub-circular annular gully (826) defining an area of *c* 8m^2 (Fig. 26). The gully was 0.24–0.58m wide and 0.12–0.20m deep, with a generally V-shaped profile (Fig. 16, Section 215). Its purpose is unclear, with its single fill having produced only seven sherds of broadly Roman pottery and a single residual sherd of early Bronze Age pottery, along with a few fragments of animal bones.

Pits

2.4.46 A sub-circular Roman pit (604) was located *c* 7m to the south of boundary ditch 1710. It was 2.3m wide and 0.82m deep, with near vertical sides and a slightly concave base. It contained three fills from which a small quantity of broadly Roman pottery and a moderate amount of animal bones was retrieved, the majority from middle fill 606.

2.4.47 Pit 126 was located in the western part of the site. This sub-oval feature was heavily truncated with only the lower 0.06m surviving. Despite this, a moderate quantity of broadly Roman pottery, some of which may have been *in situ*, was recovered from its single fill, together with small amounts of fired clay and slag (Figs 27 and 28).

2.4.48 Oval pit 112 was found *c* 1m east of ditch 1704. It contained three fills, one consisting of burnt waste material from which a small amount of broadly Roman pottery and animal bones were retrieved.

2.4.49 Located in the south-east of the excavated area, pit 417/549 truncated Iron Age pit 410/540, though it is possible that the earlier pit had subsided and was subsequently infilled at some point during the Roman period. The later feature, which was 2.95m by 2.30m and 0.44m deep, exhibited moderately sloping sides and a concave (Fig. 6, Section 128). Its single fill produced a few pottery sherds of broadly Roman and earlier Iron Age date, the latter having been residual. Small quantities of animal bones, burnt unworked stone and residual flint were also retrieved.

Burials

2.4.50 Two inhumation burials (SKs 426 and 450) were recovered from the fill of a NE–SW aligned ditch (424) in the south part of the excavated area. The remains were found close to those of SK 707, in proximity of boundary ditch 1710. The ditch was not fully excavated, and no dating evidence was recovered with the human remains. Nevertheless, a middle or late Roman date seems likely, either broadly contemporary with SK 707 or the disarticulated remains SK 709–712.

2.4.51 Cremation burial pit 1141 was located adjacent to Roman boundary ditch 1694 in the eastern part of the excavated area. Positioned approximately in the centre of the pit was a vessel (SF 53) dating to the middle–late Roman period (AD 120–410) that contained a deposit of dark greyish/brown gravelly silt with cremated human bones (1144) (Fig. 29). Within the same pit was another deposit that also contained unurned human remains (1142).

2.5 Phase 3: Early–middle Anglo-Saxon

2.5.1 The extent to which the site continued to be occupied immediately after the Roman period is unclear. A small number of inter-cutting pits and an inhumation burial, however, are indicative of activity during the early to middle Anglo-Saxon period (Fig. 30). Located in the southern part of the excavated area was the truncated remains of pit 1118, the base of which was not reached owing to its depth. The pit had moderately sloping sides and at least two fills (Fig. 16, Section 244). Although no dating evidence was hand recovered from this pit, environmental sample 49 (fill 1120) produced animal bones, charcoal, charred cereal grains including wheat, waterlogged seeds (predominately nettle and winder-cress), ostracods and terrestrial mollusc shells. A

sample of hazel charcoal produced a radiocarbon date of cal AD 647–772 (UBA-43703, 1346 ± 22, 95% probability; Table 1).

2.5.2 Pit 1118 was cut by pit 1115, the exposed extent of which measured 3.5m wide and exhibited moderately sloping sides. It was excavated to a depth of 1m, though its base was not reached as it exceeded safety regulations. Two fills were excavated from which small quantities of animal bone, CBM and pottery were retrieved. The pottery was of mixed, early and middle Iron Age and early to middle Roman date, all of which is thought to be residual. Pit 1115 was cut by pit 1121. This sub-circular pit measured 3.9m wide and 1.1m deep. Only one quarter of the pit was excavated, exhibiting a stepped, near vertical side to its north and a gently sloping side to its east, and a generally flat base. Three fills were recorded, all of which contained Anglo-Saxon pottery broadly dating to *c* AD 450–750, though a 6th- or 7th-century date is likely (see below). The majority (23 sherds) was recovered from its upper fill, 1124. The pit also contained residual Iron Age and Roman pottery and fired clay fragments. Large quantities of animal bones were also recovered from the upper and lower fills, with a smaller amount from the middle fill. These include pieces with signs of butchery and gnawing, as well as several dog bones possibly from the same animal, though they were not found in articulation. Given the size and form of the pit, together with the finds recovered, it may be interpreted as a potential Anglo-Saxon sunken-featured building (SFB).

2.5.3 An inhumation burial (SK 247) was excavated in the north-west of the site and comprises the only other feature of clear Anglo-Saxon date. The burial comprised a roughly NW–SE aligned sub-oval grave cut (246), which measured *c* 1.3m long and 0.35m wide and only *c* 0.05m deep. It contained the lower part of an adult (Fig. 30), and a sample of bone produced a radiocarbon date of cal AD 483–641 (UBA-43702, 1504 ± 28, 95% probability; Table 1). An iron knife (SF 2) and two iron nails/fragments (SF 3), possibly the remains of grave goods, were recovered from the grave fill.

2.5.4 Two fragments of fired clay identified as pieces of Anglo-Saxon loomweights were recovered from the fills of middle Iron Age roundhouse ditch 1288 and Roman trackway ditch 1692. The finds are considered intrusive within the uppermost fills of these features, but they provide further evidence of Anglo-Saxon activity on site.

2.6 Phase 4: Medieval/post-medieval

2.6.1 No later medieval features were discovered. Underlying the subsoil, a deposit of yellowish-grey sandy-clay silt with gravel inclusions (1649), 0.12–0.22m thick, was recorded in several areas in the south and south-west of the site, overlying Iron Age and Roman features (Fig. 16, Section 332; see Fig. 32 for location). This may have constituted the partial remains of a buried soil of potential medieval/post-medieval date, though no finds were retrieved from the deposit and an earlier date may be possible. A small number of medieval–post-medieval metal finds, comprising copper-alloy dress accessories and a lead pistol ball, were recovered during the excavation, some of which may have been intrusive in earlier features that had subsided. The general paucity of archaeological remains of medieval and later date is consistent with the results of the 2016 evaluation, which recovered medieval/post-medieval finds only from topsoil and subsoil deposits.

2.7 Undated

2.7.1 A number of archaeological features recorded across the excavation areas were undated, as they contained no diagnostic artefacts and shared no stratigraphic or spatial relationships with other dated features, and so have not been allocated to a specific phase (Fig. 32). Nevertheless, it is probable that the majority of these features were related to Iron Age or Roman activity. Most were discrete pits and postholes, and short sections of linear/curvilinear ditches. An undated inhumation burial was also encountered.

2.7.2 A large undated pit (1627) located in the northern central part of the excavated area was heavily truncated by Roman boundary ditch 1693. Machine excavation established that the sub-circular pit was *c* 2.4m wide and 2.1m deep, suggesting that it perhaps served as a well/waterhole (Fig. 16, Section 232). The sides of this feature were straight and vertical, breaking into a flat base. No finds were recovered from either of its two fills, though it is possible that the feature was Iron Age or early Roman in date.

2.7.3 SK 525 was placed in a roughly NE–SW aligned sub-rectangular grave cut (524), measuring 1.29m long by 0.64m wide and only 0.10m deep, within which the body of an adult individual had been placed. No finds were found within the grave fill (526). The grave cut truncated an earlier posthole (694), which was 0.32m wide and 0.20m deep, with near vertical sides and a flat base. No finds were recovered from its single fill, rendering the feature undated. The orientation and position of the burial, located towards the centre of the excavation area, did not aid in establishing a date, with Iron Age, Roman and Anglo–Saxon features recorded within the vicinity.

2.7.4 The remains of SK 223 were found within an undated posthole (222) measuring less than 0.4m across and located immediately east of boundary 1708. The skeleton of a baby was represented by skull, vertebrae and scapulae, and much of the remaining parts of the body may not have survived given the high degree of fragmentation noted.

3 ARTEFACTS

3.1 Prehistoric pottery *by Alex Davies*

Introduction

3.1.1 The excavation recovered 2558 sherds (33.702kg) of prehistoric pottery. Almost all of this (2556 sherds weighing 33.659kg from a maximum of 1069 vessels) was Iron Age in date, including material from the earliest Iron Age, early Iron Age and middle Iron Age. Single, probable early Neolithic and early Bronze Age sherds were also found, both in later contexts.

Methodology

3.1.2 The pottery was recorded broadly following the recommendations of the Prehistoric Ceramics Research Group (PCRG 2010; PCRG *et al.* 2016). Sherds from each context were separated into vessels and details of each were recorded. No cross-context refitting was attempted. Vessel quantities in this report are maximum figures, as it is possible that sherds from the same pots were found in multiple contexts. The following data were recorded on an Excel spreadsheet, which is available in the archive: fabric, level of abrasion, vessel form, rim form, number of body sherds, number of rim sherds, number of base sherds, weight, decoration, surface treatment, rim diameter, estimated vessel equivalent (EVE, or percentage of rim surviving; Orton and Hughes 2013, 210–3), features (eg handles or modifications) and presence of carbonised residue. Further details in fabric and vessel form are given below.

3.1.3 Dating was undertaken on a three-stage basis. Spot dates were first given solely based on vessel forms. This demonstrated that some fabrics belonged to single periods. The second stage of spot dating comprised the rationalisation of the initial broader spot-dates in relation to this fabric information. The third stage refined the dates with stratigraphic information. An example of this third-stage process would be pottery initially spot-dated to the Iron Age and recovered from an early Iron Age context could be re-dated to the early Iron Age. If residual Iron Age material was present in a feature, the second-stage spot date for all the pottery in that feature was retained.

Neolithic and Bronze Age

3.1.4 A single 5g body sherd of probable early Neolithic pottery was found in late Roman rectangular posthole structure 1101, posthole 616, fill 618. The fabric includes poorly-sorted coarse flint and quartz sand, and a large piece of quartzite.

3.1.5 A single 38g body sherd of early Bronze Age pottery was found in Roman feature 826, cut 807, fill 808. The fabric includes common medium-grade grog and rare quartz sand.

3.1.6 This earlier prehistoric pottery represents a limited early Neolithic and early Bronze Age presence at the site, also demonstrated by residual pieces of worked flint.

Early and Middle Iron Age

Fabrics

3.1.7 The two main fabric inclusions were recorded using a letter code based on those recommended by the PCRG (2010). The grade of each fabric was recorded using numbers 1 to 4, with 1 being very fine and 4 very coarse. The following fabric codes were used:

- Cp – Clay pellets
- Fl – Flint
- Qg – Glauconitic sand (can also include quartz sand)
- Gr – Grog
- Io – Iron oxides
- Md – Mudstone
- Qs – Quartz sand
- Qt – Quartzite
- Sh – Shell
- Ve – Vegetal (grass/chaff)

3.1.8 This generated 44 individual Iron Age fabrics, summarised in Appendix A, Tables A1–A4. The fabrics are more usefully grouped by major inclusions, as shown in Tables A5–A8 and Figure 33 (Graph 1).

Earliest Iron Age

3.1.9 Changes in fabrics throughout the Iron Age assemblage follow expected trends. The earliest Iron Age assemblage is small and must be treated with caution; relative portions change significantly if sherd count, weight or vessel count is used. Grog appears as a minor inclusion in the earliest Iron Age (see Davies 2018, 283–4), and flint is more common in the earliest Iron Age compared to later in the Iron Age. Shell is the most common inclusion during this period, followed by quartz sand.

Early Iron Age

3.1.10 Early Iron Age fabrics are the most diverse, with 30 individual examples recorded. No single fabric group dominates, with shell remaining as the most common inclusion type, almost equalled by quartz sand. An appreciable amount of glauconitic sand is found in the early Iron Age, and this was more often used in the production of finewares. There is about the same amount of Qg1 (fine glauconitic) as Qg2 (medium glauconitic), whereas with other inclusions grade 2 (medium) is much more common than grade 1 (fine).

3.1.11 Four of the seven vessels (57%) that are red-coated are in glauconitic fabrics (the others are in fabric Qs1), and 15 of the 49 (31%) early Iron Age burnished vessels are glauconitic (32 are Qs and two are Sh). Some 13.5% of the early Iron Age vessels are in glauconitic fabrics. A chi-squared test has shown that red coating is more likely to be present on glauconitic vessels than those containing quartz sand to a statistically significant degree (X^2 (1, N = 246) = 5.022, p = 0.025). A chi-squared test has shown that early Iron Age glauconitic vessels are not more likely to be burnished than those containing quartz sand to a significant level, although sandy fabrics (Qg and Qs) are more likely to be burnished than those in other fabric groups (X^2 (1, N = 407) = 29.323, p = <0.001).

Middle Iron Age

3.1.12 Fabrics in the middle Iron Age assemblage are much more homogeneous than in the earlier Iron Age. Over 90% of the pottery is in fabrics dominated by quartz sand, and over half of the material is in fabric Qs2. No diagnostic middle Iron Age vessels are in fabrics containing shell. Mudstone is present in 17–27% of the middle Iron Age pottery but never as a dominant inclusion type. Mudstone is only found in *c* 1% of the early Iron Age material.

Production and exchange

3.1.13 Shell, quartz sand and glauconitic sand are common inclusions in Iron Age pottery in the region, with lesser quantities of flint, iron oxides and other minor inclusion types also following expected patterns (eg Great Western Park, Didcot: Brown forthcoming; in prep; Mount Farm, Berinsfield: Lambrick 2010; Yarnton: Booth 2011a).

3.1.14 All these inclusions could have been procured within the immediate vicinity of the site, as it is on the Summertown-Radley gravel terrace where shell (probably all fossil shell), quartz sand and flint could have been obtained, while flint-yielding Cretaceous Chalk deposits are also found locally. Glauconitic inclusions derived from Greensand deposits, which are present very close to the site to the south. All of these inclusion types are geologically quite common, and the inclusions in the fabrics need not have been from these immediate sources. Therefore, they could have been exchanged some distance.

3.1.15 The presence of mudstone is more informative, as this is geologically less common, having almost certainly derived from the band of Gault found between the chalk of the downlands to the south of the site and clays of the Thames basin to the north, and upon which the site is located. Mudstone is much less common in pottery fabrics in the wider region, but it has been found locally at Great Western Park, Didcot (Brown forthcoming; in prep). At Great Western Park, mudstone forms a much larger element of the early Iron Age assemblage, diminishing in the middle Iron Age material. This is securer evidence that pottery production was at least in part very localised, and it is likely that vessels in other fabrics were also predominantly locally produced. The increasing homogeneity of fabrics that occurred in the middle Iron Age, with quartz and glauconitic sand having become dominant over much of southern Britain, suggests a degree of centralisation of pottery production, but none of the material from Sutton Courtenay Lane is demonstrably non-local.

Dating

3.1.16 At Great Western Park Phase 2, a sequence of well-dated independent Iron Age settlements was identified: the first (Area 102) probably dating to the 5th century cal BC and the last (Area 104) to the late 3rd and 2nd century cal BC (Davies *et al.* in prep). The frequency of quartz sand increases within the pottery assemblages from the settlements the later they are, with quartz sand dominating in less than 20% of the pottery at Area 102 and more than 80% in the middle Iron Age material at Area 104. Quartz sand is dominant in *c* 37–47% of the early Iron Age material at Sutton Courtenay Lane, suggesting that the assemblage dates to the latter part of the early Iron Age. If the frequency of quartz sand increased consistently through time across

the Didcot area, the dates from Great Western Park Phase 2 suggest that the early Iron Age assemblage at Sutton Courtenay Lane should belong to the 4th century cal BC, with the proportion of quartz sand comparable to the Western Pond area at Great Western Park and Area 103 (Davies *et al.* in prep).

Forms

3.1.17 Much archaeological work has recently been undertaken in and around Didcot and Wallingford. There is now an abundance of excavated Iron Age settlements in this area, and the new assemblages from Slade End Farm and Winterbrook, Wallingford, have prompted an assessment of the chronology of late Bronze Age and Iron Age forms in the Didcot–Wallingford area (Davies in prep). The assemblage from Sutton Courtenay Lane is included in this work and comments in the present section derive from this study.

3.1.18 Table A9 presents the typology showing the vessels present at the site. Each form has a three-digit number, referenced elsewhere in this report.

Earliest Iron Age

3.1.19 Six vessels can be assigned to the earliest Iron Age. This includes a shouldered jar with an out-turned neck/rim (Fig. 34 no. 3). Another out-turned rim was found, probably from the same vessel type. This is predominantly a late Bronze Age form but continued into the earliest Iron Age. During the earliest Iron Age shouldered jars develop to have upright necks, and these continue through the early Iron Age.

3.1.20 A closed jar was also discovered, and this has a cordon on its neck (Fig. 34 no. 2). This is not a common form in the region, and these are almost always in earliest Iron Age contexts. The example from the large deposit in Pit 5 at Knights Farm 1, Berkshire (Bradley *et al.* 1980, fig. 35.30v), is particularly comparable as it also has a neck cordon. A probable example was found nearby in pit 105 at Appleford (DeRoche and Lambrick 1980, fig. 21.1). Closed jars are a feature of the earliest Iron Age All Cannings Cross group (Cunliffe 2005, fig. A:2.2, 6; Potterne jar type 20: Morris 2000, fig. 51).

Early Iron Age

3.1.21 Development of pottery forms occurred during the early Iron Age, with angular forms of the earlier part of the period giving way to rounded and straight bodies that in turn developed into globular middle Iron Age forms. Despite the, albeit limited, earliest Iron Age presence, the assemblage lacks a substantial angular element. There is a single possible tripartite angular jar and three tripartite angular bowls (Fig. 34 no. 4). There are a few additional long flaring necks that could be from angular bowls (200/260) but might be from round bodied bowls instead.

3.1.22 The assemblage is instead dominated by expanded rim (usually fingertipped) vessels with straight or slightly rounded bodies (Fig. 34 nos 5 and 7–11). There are 14–17 examples of these. The form belongs to the later part of the early Iron Age and is particularly common in the Upper Thames Valley. Harding (1972, 75–8) considered these vessels to have derived from late Bronze Age metal cauldrons and phased them to the earliest Iron Age, thinking they were cauldron-shaped with rounded bases. No complete profiles appear to have been known at that time, and the only published

profile of the form known to this author is a jar with a flat base (Edwards 2010, fig. 6.2.67). An example from Sutton Courtenay Lane also has a flat base (Fig. 34 no. 9). The form is almost always straight or has slightly rounded sides, although an example from Winterbrook, Wallingford, is open and the full profile has been lost (Davies in prep). There is little need to see the form as having derived from late Bronze Age metal cauldrons, and the seriation of forms in the region shows that they date to the later part of the early Iron Age (ibid.). The assemblage also contains a high-shouldered jar (Fig. 35 no. 14). This is considered to have spanned the transition period between the early and middle Iron Age, as it is present in assemblages solely belonging to both periods elsewhere in the Thames Valley.

3.1.23 In the Didcot area, the forms identified in the early Iron Age assemblage share most similarities with the Western Pond sub-site at Great Western Park Phase 2. This material has been radiocarbon dated to the first half of the 4th century cal BC (Davies *et al.* in prep).

Middle Iron Age

3.1.24 Middle Iron Age forms are more homogeneous than early Iron Age forms, with types blending into one another. There are also fewer discernible changes through time. The most common middle Iron Age form is the globular vessel without a neck (Fig. 35 nos 15 and 16). About two-thirds of these have bead rims. Slack-sided vessels (Fig. 35 nos 14 and 17) are the next most frequent type: rims include plain, bead and flattened examples. Globular vessels with upright necks (Fig. 35 no. 18) are also present. About half have bead rims and half plan rims.

Associations

3.1.25 Associations between pottery forms is given in Table A10. This should be viewed with the caveat that the amount of residual pottery is no doubt large, especially with regards to the early Iron Age material (see below). For example, the angular bowl found in middle Iron age enclosure ditch 1691 is very likely to be residual in nature. Roundhouse ditch 405 produced three early Iron Age forms and a middle Iron Age form, suggesting it was in use during the late part of the early Iron Age.

Unparalleled sherd

3.1.26 An unusual sherd was found in early Iron Age pit 130 (Fig. 35 no.19). Its shape is an elliptic cylinder, although it is flattened on the inner side. One end is tapered, and the other is broken. There is some surface on the inner broken end, and the break shows that the piece expanded. The sherd is in fabric Qs2, and despite its unusual shape it fits well within the pottery assemblage and is not fired clay. No direct parallels could be found. The piece appears to be a leg, but it is possibly a handle.

Key contexts

Earliest Iron Age

3.1.27 A single feature has been dated to the earliest Iron Age: possible roundhouse ditch 837. Five vessels have been identified within the pottery assemblage recovered from the feature, including a closed jar in fabric Qs2 (Fig. 34 no. 2), a shouldered vessel in fabric Fl1 and an out-turned rim in fabric Gr1 (Fig. 34 no. 1).

Early Iron Age

3.1.28 The early Iron Age features that produced the most pottery were roundhouse/enclosure ditch 1677 and roundhouse ditch 405. These contained 17.2% and 11.4%, respectively, of the early Iron Age pottery by weight. Both produced 68 sherds, with the material from roundhouse/enclosure ditch 1677 being from 37 vessels and weighing 853g, and roundhouse ditch 405 from 31 vessels weighting 566g.

Middle Iron Age

3.1.29 Enclosure ditch 1683 produced 37.1% of the middle Iron Age pottery by weight, amounting to 313 sherds, weighing 5.928g. Some 17.2% of the material was found in enclosure ditch 1705, amounting to 159 sherds, weighing 2.753g.

3.1.30 Pit 448, located within an unexcavated roundhouse in the north-east of the site, contained a complete jar (SF 11), form 282, weighing 697g, with a rim diameter of 10cm and height of 13cm (Fig. 33; Fig. 35 no. 14). There is thick carbonised residue on the inside, although this is only present on one side of the vessel and not on the base, suggesting the pot had been lying on its side when it was used for cooking. The vessel had clearly been deliberately deposited. Sherds from four other vessels were also found in the pit, but these were fragmented and abraded in similar ways to the rest of the assemblage and do not appear to have been deliberately deposited.

Rim diameters

3.1.31 Rim diameters are shown in Figure 33 (Graph 2). The diameters of early Iron Age vessels vary significantly in size, ranging from 9cm to 38cm. There was no very clear peak observed, although 60% of the vessels are 16–24cm wide. Shouldered jars range from 15–30cm diameter, and vessels with expanded rims range from 18–38cm.

3.1.32 Middle Iron Age vessels are generally smaller than early Iron Age vessels and are more consistently sized, although the range is still wide, varying from 9cm to 36cm. Some 69% of the vessels have rim diameters between 13cm and 18cm.

Decoration

3.1.33 Twenty-six of the early Iron Age vessels are decorated. Five of the shouldered jars have fingertipped shoulders: one of these also has an incised triangle on the shoulder, and one shouldered jar has slashes on the shoulder and the rim. The tripartite angular jar has fingertipping on the shoulder and rim. Six of the vessels with expanded rims have fingertipping on the rim. The other early Iron Age decorated sherds could not be assigned a vessel typology. The techniques on these include nine examples of

fingertipping on the shoulder and/or rim, one example of slashes on the shoulder, an incised triangle with diagonal lines inside, a horizontal line and vertical lines on the shoulder.

3.1.34 Only two of the middle Iron Age vessels are decorated, both globular vessels without necks. One of these has a line of stabs below the rim and an arc of stabs beneath this, similar to some of those found at Frilford (Harding 1972, pl. 67e, f). The other decorated middle Iron Age vessel has faint horizontal lines across the body.

3.1.35 Five Iron Age vessels are decorated. Two have fingertipping, and three have incised lines.

Surface treatment

3.1.36 Table A11 summarises the levels of burnishing and red coating on vessels. Of those of early Iron Age date, the red-coated vessels are bowls, and the only vessels fully burnished are also bowls. Burnishing was found across the three middle Iron Age vessel types. The relationship between burnishing and fabrics is discussed above.

Residue

3.1.37 Carbonised residue showing pots were used for cooking was found on 46 vessels. This is present on 13 (3%) early Iron Age, 17 (9%) middle Iron Age and 16 (3%) Iron Age vessels. None of the early Iron Age examples are typologically distinctive, and all the middle Iron Age forms are represented.

Depositional patterns

3.1.38 Site phasing relies on pottery, with features dated by the latest pottery that is present. This is standard practice, but it is problematic as the stages between original breakage and discard to final deposition in the features they are found needs to be better understood before confident phasing and other aspects of site interpretation can move forward. Key to this is the issue of residuality, ie the extent to which pottery is earlier in date than the features in which it has been found.

3.1.39 This issue was explored some time ago on Iron Age sites in the Upper Thames (Lambrick 1984) and has more recently been discussed in relation to the Iron Age sites at nearby Great Western Park and other Upper Thames sites (Davies *et al.* in prep). It is argued in this more recent discussion that Iron Age pottery has very often been subject to a large degree of residuality and redeposition, with early Iron Age material having been more affected by this than middle Iron Age pottery. Depositional patterns at Sutton Courtenay Lane replicate the findings seen elsewhere.

Fragmentation and residuality

3.1.40 Early Iron Age pottery is more fragmented than middle Iron Age pottery, with each vessel represented by fewer sherds and the material more likely to have been discovered in later contexts (Table A12; Fig. 33, Graph 3). Similar percentages of early and middle Iron Age sherds were found to have been residual in later contexts, although almost half of the early Iron Age pottery by weight was residual compared to a fifth of middle Iron Age material. While this must in part be due to the fact that

early Iron Age pottery is older and has therefore had more opportunity to become fragmented and redeposited through activity in the middle Iron Age, the residual early Iron Age pottery was mostly (75% by weight) found in Roman rather than middle Iron Age contexts. Further analysis of the data also suggests that high degrees of fragmentation were occurring in the early Iron Age prior to deposition in early Iron Age contexts.

3.1.41 The mean sherd weight (MSW) of the early Iron Age material is lower than that of the middle Iron Age pottery. As expected, the MSW of middle Iron Age pottery in middle Iron Age contexts is higher than similar material in later contexts, but this pattern is not followed in the early Iron Age. Early Iron Age pottery found in later contexts is less fragmented than material in features dated to the early Iron Age. This suggests that, even in the early Iron Age, pottery was subject to significant levels of attrition prior to deposition. Pottery appears to have been deposited in perhaps multiple intermediary contexts before it found its way into features phased to the early Iron Age.

3.1.42 Each early Iron Age vessel is represented by an average of two sherds, with the vast majority of the recorded vessels only represented by a tiny fraction of the total pottery. The total early Iron Age estimated vessel equivalent (EVE, or combined percentage of rim lengths) is 2.82. This means that the equivalent of fewer than three early Iron Age pots are present by the measurement of rims (Orton and Hughes 2013, 210–13) despite a maximum of some 407 vessels being recorded by context. Figures are better for the middle Iron Age, as each vessel is on average represented by 3.9 sherds, and the EVE total is 6.14 compared against a maximum of 189 vessels recorded by context.

3.1.43 This pottery signature has significant implications on site interpretation. Early Iron Age pottery in particular must have been subject to a high degree of attrition, deposition and redeposition between intermediary contexts, and a time-lag between discard and sub-soil deposition. The pottery, and presumably other material, appears to have been regularly stored in above-ground middens that rarely survive ploughing and truncation by later activity. More significantly, the implication of this signature is that it suggests that there were relatively few early Iron Age sub-soil features that captured contemporary pottery, instead largely being preserved in later features. Certainly, there are usually few early Iron Age enclosure or roundhouse ditches, with both of these features much more common in the middle Iron Age (Davies 2018, 218–20). This further suggests that early Iron Age settlements are less archaeologically visible than their middle Iron Age counterparts and that many of the features dated to the early Iron Age might be later, having only contained residual pottery. Analyses of site chronologies and population densities need to consider this finding.

Pit position

3.1.44 The pottery found in pits was analysed by its fill position. In pits with multiple fills, pottery was much more likely to have been found in upper fills. There was only a single pit, 1226, that produced more pottery in its lower fill than its middle and/or upper fill(s). Pottery was only found in the upper fills of five pits, and the upper fill dominated the overall pit assemblages in a further four pits. Pottery was solely found in the middle fill(s) of two pits. The number of pottery-producing pits with multiple fills was

limited to 12 examples, and there were too few to discern any difference between the early and middle Iron Age.

3.1.45 Pottery more commonly derived from the upper fills of pits has been noted elsewhere (Hill 1995; C Evans *et al.* 2018, 139–40; Hayden *et al.* forthcoming; Davies *et al.* in prep). The implication is that pits were not primarily dug to receive rubbish, at least not rubbish that included broken pottery. This may have been a secondary function after the pits had largely filled or material might have found its way into depressions left by pits. This finding also has an implication to dating, as pottery might only have been deposited in the upper fills of pits long after the pit was dug, perhaps even after the abandonment of the site.

Discussion

3.1.46 The Iron Age assemblage from Sutton Courtenay Lane compares well with other sites in the region. A small earliest Iron Age element is present, dating to *c* 800–600/550 cal BC, although forms belonging to the early part of the early Iron Age (*c* 600/550–400 cal BC) are rare, suggesting either the site was abandoned during this period or that activity was focused outside of the excavated area. The early Iron Age assemblage is dominated by forms that belonged to the late part of the period (*c* 400–350 cal BC), and the high proportion of quartz sand fabrics supports the likelihood that the early Iron Age assemblage has a late focus, probably in the first half of the 4th century cal BC. The ceramic assemblage chronologically leads into the middle Iron Age.

3.1.47 The late Iron Age material is discussed with the Roman pottery below. The late Iron Age is ceramically defined by the presence of 'Belgic'-type grog-tempered wares unaccompanied by Romanised fabrics. Although the date in which the inception of 'Belgic'-types wares took place within the region is not confirmed, it has been suggested that it belonged to the early/mid 1st century AD (Booth 2011a, 370; 2018, 298; forthcoming). Secure late Iron Age pottery groups are rare at Sutton Courtenay Lane, and only burial 1570 (and possibly the ditch in which the remains may have been buried) could be specifically dated to the period. This late dating of 'Belgic' material compresses the ceramic late Iron Age to a period of less than half a century. This is further complicated, as it is uncertain when essentially 'middle Iron Age' material—hand-made forms usually in sandy fabrics—ceased to have been produced, and it is possible that they could have continued up to, and perhaps into, the 1st century AD. The apparent lack of late Iron Age activity identified on site may be biased by the pottery, and the extent that this represents a real decline in occupation can only be answered when the cessation of middle Iron Age pottery and the introduction of 'Belgic' pottery is better understood through independent dating.

3.1.48 Much of the pottery, especially the early Iron Age material, is highly fragmented and had clearly arrived in the contexts within which it was found after initial deposition in intermediary contexts. Levels of attrition, redeposition and the dispersal of vessels appears to have been high, suggesting significant time lags between initial discard and final deposition. This has significance in the interpretation of the site and the period more widely.

Illustration catalogue

1. Earliest Iron Age; outturned rim (122?); fabric: Gr1; fill 838, earliest Iron Age roundhouse 837

2. Earliest Iron Age; closed jar (151); fabric: Qs2; fill 838, earliest Iron Age roundhouse 837

3. Earliest Iron Age; shouldered jar with outturned neck/rim (122); fabric Sh2; fill 1217, late Roman pit 1214

4. Early Iron Age; angular bowl (135/200); fabric Qs1; fill 1481, cut 1480, middle Iron Age enclosure ditch 1691

5. Early Iron Age; expanded rim vessel (240); fabric ShIo3; fill 83, early Iron Age pit 82

6. Early Iron Age; round-bodied vessel; fabric Qs1, red coated; fill 83, early Iron Age pit 82

7. Early Iron Age; expanded rim vessel (240); fabric ShQs3; fill 90, early Iron Age pit 82

8. Early Iron Age; expanded rim vessel (240); fabric Qs2; fill 907, Iron Age ditch 906

9. Early Iron Age; expanded rim vessel (240); fabric ShIo3; fill 1217, fill 1217, late Roman pit 1214

10. Early Iron Age; expanded rim vessel (240); fabric ShIo3; fill 1231, cut 1229, Roman ditch 1710

11. Early Iron Age; expanded rim vessel (240); fabric Sh2; fill 1512, early Iron Age ditch 1511

12. Early Iron Age; shouldered jar (153); fabric Qg1; fill 1512, early Iron Age ditch 1511

13. Early Iron Age; shouldered jar (153); fabric Sh2; fill 151, cut 150, Roman ditch 1708

14. Early/middle Iron Age; high-shouldered jar (241); fabric Qs1; fill 714, cut 713, early Iron Age roundhouse/enclosure ditch 1677

15. Middle Iron Age; globular vessel (284); fabric Qs2; fill 301, cut 299, Roman ditch 1710

16. Middle Iron Age; globular vessel (284); fabric Qg1; fill 1255, cut 1253, middle Iron Age roundhouse ditch 1288

17. Middle Iron Age; slack-sided vessel (282); fabric Qs2; fill 1357, cut 1333, middle Iron Age enclosure ditch 1705

18. Middle Iron Age; globular vessel with upright neck (280); fabric Qs2; fill 1492, cut 1490, middle Iron Age enclosure ditch 1691

19. Possible leg; fabric Qs2; fill 131, early Iron Age pit 130

3.2 Late Iron Age and Roman pottery *by Kate Brady*

Introduction

3.2.1 The excavation produced an assemblage of 3763 sherds (69.25kg) of late Iron Age and Roman pottery. This was fully recorded on an Access database using the OA system for later prehistoric and Roman pottery (Booth 2016), with sherds assigned to subgroups or individual fabrics/wares within major ware classes. Quantification of wares within individual context groups is by sherd count and weight. Vessel types were quantified by rim equivalents (REs) and by a more subjective vessel count (MV) based on rim sherds. Details of decoration were recorded, as well as evidence of use and reuse where identifiable.

3.2.2 The pottery is in moderate to good condition. The mean sherd weight (18.4g) indicates a well-preserved assemblage, and the surface condition of sherds is variable but ranges from good to heavily eroded in a few cases. The assemblage includes material that may date from the late Iron Age/early Roman period onwards, but the majority of the pottery is of middle and late Roman date.

Fabrics and forms

3.2.3 The Roman fabrics are listed and quantified in Table B1 within the series of major ware groups defined by the OA system on the basis of significant common characteristics. Relatively summary fabric descriptions or labels are given. Fuller descriptions can be found in the handbook to the *National Roman Fabric Reference Collection* (Tomber and Dore 1998). Fabric codes from the latter are cross referenced in the table. Attribution of sherds to ware groups or to individual fabrics was on the basis of macroscopic inspection, with use of a binocular microscope at x10 or x20 magnification as required.

3.2.4 The majority of the pottery is from local or regional sources, and the only imported material consists of 58 sherds of samian ware (Central, South and East Gaulish) and three sherds of South-Spanish amphora. This constitutes 1.62 % of the assemblage by sherd count and 2.3% by EVE.

Coarsewares

3.2.5 The dominant reduced coarse ware fabrics (R10, R20 and R30) constitute 73.7% of the assemblage by sherd count and 56.6% by EVE, and are probable or certain Oxford products. However, general fabric codes have also been used because the rather undiagnostic character of these fabrics means that attribution to an Oxford source cannot always be certain; material from other (unknown) local sources using similar clays in the same tradition would not be distinguishable macroscopically. There are 120 sherds of Savernake ware (R95) making up 3.2% of the assemblage by sherd count and 2.3% by EVE.

3.2.6 There are also an additional 370 sherds of coarse grog-tempered ware from a less certain source, some of which may have been from the Savernake kilns. The presence of Savernake ware, and the end date of the wider distribution of the products around *c* AD 150, reflects the presence of activity, albeit on a relatively low scale, on the site before this date.

3.2.7 Oxidised fabrics from a probable local origin (O10, O20 and O21) or slightly further afield are much less common and make up 5.8% of the assemblage by sherd count and

5.7% by EVE. They include coarse usually grog-tempered sherds from storage jars comprising a small contribution to the oxidised assemblage, of probable fairly local origin, along with one sherd of O81: classic pink grogged ware (dated to AD 160–410). This is close to the southern limit of the distribution of this fabric.

3.2.8 There is a relatively small group of black-burnished ware (138 sherds) imported from the South-Dorset industry (B11), which represents 2.6% of the assemblage by sherd count and 4.6% by EVE.

3.2.9 Shell-tempered wares form another small component of the assemblage, making up 1.3% by sherd count and 0.9% by EVE, and includes three possible sherds of characteristic late Roman 'Harrold type' products (fabric C11). It is possible that more of the sherds recorded as fabric C10 are also from this source, but some of these fragments lack diagnostic features, such as horizontal rilling of the surfaces characteristic of C11, and may have been from other more local sources.

3.2.10 Other coarse wares recovered include whitewares, which make up a small contribution, numbering 127 sherds (3.4% of the assemblage by sherd count). The contribution by EVE is comparable (9.1%). A very small number of white-slipped wares are also present (9 sherds, 0.2% by sherd count).

3.2.11 In terms of vessel form, jars dominate the assemblage across all phases by EVE. Overall, the proportion of jars to other forms is 48.4% and bowls 19.9%. The proportion of jars to other forms decreased between the middle Roman and late Roman phases from 57.5% to 42.2%, reflecting the increased use of tablewares in the late Roman period, as Roman dining practices became more widespread and finewares from the late Roman Oxford industry were available.

Fine and specialist wares

3.2.12 The fine and specialist ware assemblage constitutes 7% of the whole assemblage by sherd count and much greater 14.6% by EVE, and consists of Oxford colour-coated wares (F51), samian wares (S20, S30, S40), a single sherd of New Forest ware (F57), a single sherd of Nene Valley ware (F52) and five sherds of colour-coated ware possibly from the North Wiltshire kilns (F66/67). The group also includes white ware mortaria (M22) and amphorae (A11).

3.2.13 A total of 32 individual vessels (including mortaria) in Oxford colour-coated ware were identified by rim sherds. Of these, 19 were closely identified to type with reference to the Oxford type series (Young 1977). Those more broadly identified to type could not be closely matched with the Oxford corpus, mainly due to the small size of the rim fragments present. Bowls are the most numerous form type in this fabric, there being at least 15 vessels recorded. There are three flanged bowls (Young C51, *c* AD 240–400) and one with a lightly hooked rim (C44, *c* AD 270-350). There are three curving-sided bowls with a bead rim (Young C45, *c* AD 270–400) and a variant of that form with a fat bead rim that is much later in date (C46, *c* AD 340–400). There is also a shallow bowl with a wide rim, rolled under at the tip (C47, *c* AD 270–410). A single bowl/platter with an out-turned flat-topped rim, up-turned at the tip, is uncommon and not closely dated (Young C42). There are eight Oxford colour-coated mortaria (M41) and both of the types recorded in Young (1977) are present. The collared form (C97) is the most

common and is broadly dated to AD 240–400, but there are also a minimum of two bead and flange forms (C100) and these are 4th-century in date. One of the former is a particularly nice example; the whole profile is present, and the wall is decorated with a moulded mouse or devolved lion imitating the samian prototype, with a spout formed by the mouth hole (which goes through the wall of the vessel). This vessel also has graffito scratched on the base.

3.2.14 There are at least 15 samian ware vessels, and all the main areas of production are represented: South (S20), Central (S30) and East (S40) Gaul. Four small body sherds could not be identified to source and were recorded under the code 'S'. Ten vessels are identified to form. In Central Gaulish samian (S30), there are three (and possibly another) Drag 31/31R dishes dated to the latter half of the 2nd century, as well as a Drag 18/18R dish in South Gaulish samian (S20) that had been modified with at least three post-firing holes drilled in its side and dates to *c* AD 70–100. This vessel is likely to have been curated, as it was found in a middle Roman context. Another curving-sided bowl is a Drag. 38 form, also dating to AD150-200. A carinated bowl from the East Gaulish industry is a Curle 23 form, which may have functioned as a bowl or possibly a large cup and may have been imported up to AD 240. Also in fabric S40 is a wall-sided mortaria: a Drag. 45. This form appeared in AD 170 and was imported up until AD 240. There are two Drag. 33 conical cups identified by rim, both in the East Gaulish fabric.

3.2.15 There are five Oxford White Ware mortaria (M22) represented by rim in the assemblage. There are four different forms, as identified by Young (1977), with two M18 type (AD 240–300), two M14 (AD 180–240), one M22 (AD 240–400) and one M20 (AD 240–300).

3.2.16 There are three sherds of South Spanish amphora (A11), one of which is a rim sherd.

Context and chronology

Phases 2.1 (late Iron Age/early Roman) and 2.2 (Early Roman)

3.2.17 The very small pottery assemblage from contexts assigned to Phase 2.2 comprises 18 sherds (349g). This represents 0.5% of the site assemblage by both sherd count and weight. Although with such a small assemblage it is impossible to draw any detailed conclusions about this phase, it is clear that the group dates to the latter half of the 1st century AD due to the presence of both late Iron Age/early Roman E-ware fabrics and reduced and oxidised Roman coarsewares. The group is dominated by E-wares of late Iron Age/early Roman date, alongside a smaller number of Romanised wares in some contexts, dating these groups to the latter half of the 1st century. Only two vessels have been identified by rim: a jar and a medium-mouthed jar in sand-tempered E-ware (E30) and grog-tempered E-ware (E80) respectively.

Phase 2.3 (Middle Roman)

3.2.18 The pottery assemblage from contexts assigned to Phase 2.3 (middle Roman) numbers 995 sherds (14.17kg). This represents 26.4% of the assemblage by sherd count and 20.5% by weight. The group includes a minimum of 105 vessels (MV) represented by rim and 12.7 vessels by EVEs (26% of the overall EVEs total).

3.2.19 The middle Roman assemblage includes one rim sherd from a South-Spanish olive oil amphora (A11), as well as one ring-necked flagon (BA) in sandy white ware (W20), which is scorched. There are 54 jars (C), of which seven are narrow mouthed (reduced ware R30); 21 are medium mouthed (CD) in reduced wares (R10/R20/R30), shell-tempered ware (C10), Savernake ware (R95), coarse grog-tempered ware (R90/R97) and sandy white ware (W20); one is a cooking pot (CK) in black-burnished ware (B11); and one a larger storage jar (CN) in fabric R90. There are a minimum of six beakers, and all the forms are characteristic of a middle Roman date. There is one fine oxidised (O10) bag-shaped beaker (EC) and two globular beakers (ED) in fine reduced ware (R10). There are also two poppy-head beakers (EF). Two samian ware cups (S30 and S40) are included in this group. One is a campanulate form (Drag. 27) and one a conical cup (FC; Drag. 33). There are 16 bowls, including four carinated bowls in reduced wares and white ware; all are forms common in the 2nd century, including two in Young form R64, which is a cordoned form. Straight-sided bowls are in fabric R30 and are forms imitating black-burnished ware vessels, including one with an 'incipient flange', a form that developed into the full flanged form by the late Roman period. Three curving-sided bowls (HC) in fine oxidised ware (O10) are in this phased group. One has a white painted exterior and paint drips on the inside. It is a Young form O45 and dates to the 2nd century. Another (not painted) was recovered from the same feature. One plain rim dish in black-burnished ware was recovered: a Gillam form 79, with arc decoration on the sides and a burnished squiggle design on the base. This form is dated to AD 180–240 by Gillam (1976). There are six other dishes, one plain-rimmed form in fabric R30 with an unusual, burnished zig-zag decoration on the interior. There are two Central Gaulish samian ware bowls/dishes of uncertain form and one 31/31R dish. There is also a samian mortaria in East Gaulish fabric S40; it is almost certainly a Drag. 45. A single lid is in fine burnished oxidised ware. There is one Oxford white ware mortaria (M22): it is a wall-sided form (Young form M14) and is dated to AD 180–240.

Key Groups

3.2.20 Trackway ditch 1692 contained 337 sherds (5.2kg) of pottery recovered from the fills assigned to this phase. Late Roman pottery was recovered from the later fills and is discussed below. Pottery context groups assigned to the middle Roman phase have date ranges of AD 120–150 to AD 180–240, suggesting that cuts of the ditch were being infilled throughout the middle Roman period. There was a greater amount of material that could be assigned this later date range, and this may suggest increased deposition in the latter part of the phase, either due to an intensification of activity nearby or a change in the use of the boundary ditch. The mean sherd weight for the assemblage from this ditch is 15.7g, suggesting that the pottery was used fairly close by, and although may have been middened prior to deposition, was probably not redeposited many times. The group contains sherds representing several vessels typical of a domestic assemblage of solely coarsewares, with jars, bowls, beakers, dishes, a single mortaria and a single amphora.

3.2.21 Trackway ditch 1693 was also in use during the middle and late Roman. This group contains a similarly varied domestic assemblage numbering 145 sherds (2.31kg). Forms include medium-mouthed jars, fineware cups, bowls, dishes and a mortarium in reduced ware, oxidised ware, shell-tempered ware, whiteware and black-burnished

coarse wares. This group also includes samian fine wares. The combination of fabrics suggests a date between AD 120 and AD 200, and several forms are diagnostic of a 2nd-century date, including a whiteware beaker with barbotine decoration and a flagon with red painted decoration. Two vessels have painted decoration: a whiteware flagon with red painted dot decoration and the fine oxidised ware bowl described above that was painted white over the exterior. The samian mortaria and may have been in the East Gaulish fabric. The mean sherd weight for this group is 15.9g, suggesting as with ditch 1692, that the material was originally in use relatively nearby.

3.2.22 Ditch 1700 contained an assemblage of 113 sherds (1.6kg) of pottery well dated to the middle Roman period. The group includes medium-mouthed and narrow-mouthed jars in reduced wares, and a cooking pot in black-burnished ware with a short, fairly upright rim and acute burnished lattice decoration, which dates to the 2nd century. There are two bowls in reduced ware, one of which is a carinated form (Young R64), and date to the later 1st to 2nd century. This group does not contain material assigned to Phase 2.4, suggesting that infilling had been completed by the end of the middle Roman period. The MSW for this group is 11.3g and may suggest that the assemblage was redeposited before its final deposition, perhaps middened close to the settlement and dumped in this ditch at a later date.

3.2.23 Boundary 1708 contained a smaller assemblage (110 sherds, 1.8kg), but this also has elements that have enabled dating to the middle Roman period. Vessels identified by rim include a narrow-mouthed jar (Young form R15) with a burnished crude scroll decoration around the shoulder and a poppyhead beaker in fine reduced ware dating to the latter half of the 2nd century. There is also a fine oxidised bag-shaped beaker of 2nd-century date.

3.2.24 Another smaller group, from ditch 1709, also consists of material characteristic of this middle Roman period. A whiteware ring-necked flagon, a narrow-mouthed jar and three medium mouthed jars were recorded, along with a straight-sided bowl in reduced ware. There is also a dish in Central Gaulish samian ware. Several of the ditch contexts date to the latter half of the 2nd century and is likely to represent the overall date of this group.

Phase 2.4 (Late Roman)

3.2.25 The pottery assemblage from contexts assigned to Phase 2.4 (late Roman) numbers 1813 sherds (38.12kg). This represents 48.2% of the assemblage by sherd count and 55% by weight. The phased group includes a minimum of 229 vessels (MV) represented by rim and 27.8 vessels by EVE (56.5% of the overall EVE total).

3.2.26 The phased assemblage includes forms characteristic of the late Roman period and includes three flagons (two reduced ware Young form R8), with a triple bead rim. A jar in coarse-tempered ware R90 is a Young form R20 or R21 and has a slight bifid squared rim. A jar in soft pink grogged ware (O81) is a hooked rim form. A jar in South Midlands shell-tempered ware (C11) is rilled underneath the rim. Another jar is in oxidised white-slipped ware (Q20) and has a rim with a fattened hooked bead that is burnt. Another oxidised jar, a Young form O6, has an out-turned rim that thickens towards the end and a groove on the shoulder. A narrow-mouthed jar with a flat out-turned rim is in an oxidised fabric, possibly Parchment Ware, and is similar to Young form O6.

There are 18 certain or probable narrow-mouthed jars, and some are in distinctive form. This includes a reduced ware vessel in a coarse hard fabric (Young form R15) with a sharply turned back rim and high shoulder. A narrow-mouthed jar in sandy white ware is a Young form W32. Three narrow-mouthed jars in reduced ware (R30) include one each of Young forms R15, R17 and R18. The latter two are late Roman forms, and the first was produced throughout the Roman period. There are 17 medium-mouthed jars, of which all forms (such as Young R23 and R24) were manufactured throughout the Roman period.

3.2.27 There are 15 beakers in the phased group, including a Young form C30 with rosette stamped decoration in colour-coated fabric F51. This form is notably late in date, placed by Young at after AD 340.

3.2.28 There are several carinated bowls (HA) in reduced ware, including at least three Young form R64 vessels, a local variant of the London ware style, one with an incised dot-and-arc decoration. A bowl with a chamfered base (Young form R51) in fabric R30 is clearly influenced by a black-burnished ware form and is decorated with a lattice decoration. Another carinated vessel has a roulette decoration. There are a minimum of 25 straight-sided bowls (HB), with black-burnished ware and reduced ware imitations recorded. The flanged forms are characteristic of the late Roman period. Curving-sided bowls (HC) are also numerous, with 15 vessels identified by rim. Most are in Oxford colour-coated ware (F51), with more common flanged Young form C51 represented, along with form C44, the carinated form C45 and the very late form C46 (AD 340+). Another reduced ware curving-sided bowl was from the North Wiltshire kilns, with the characteristic streaky and speckly appearance of those products. A large curving-sided bowl in reduced ware has a curving flange and is similar to Young form R48. Three black-burnished ware dishes were identified by rim in this phased assemblage: two are plain rimmed dishes with arc decoration on the side. There are also two dishes and one platter in Oxford colour-coated ware (F51). Both are paralleled in the Oxford corpus; form C42, with a flat-topped out-turned rim that up-turns at the tip, is uncommon but is only broadly dated to the late Roman period. A Young C45 dish/platter post-dates AD 270. Both forms of Oxford colour-coated mortaria are represented in this phase. The wall-sided form (C97) is dated more broadly to the late Roman period, and three vessels are present in this phase assemblage. One vessel in this form is decorated with a moulded animal face (probably a lion or mouse) and a functioning spout through the mouth. There is one bead and flange mortarium in the ware (C100), which has roulette decoration on the flange, dating to the 4th century.

Key groups

3.2.29 Trackway ditch 1692 was initially constructed in the middle Roman phase (see above), while later recuts and fills date to the late Roman period. The assemblage numbers 358 sherds (4.21kg) and several contexts indicate that much of the infilling occurred in the latter part of the 3rd century and in the 4th century. The group includes a flagon and 17 jars in reduced wares, white wares and oxidised wares, along with two cooking pots in black-burnished ware. There are two fine reduced ware beakers of unclear form and six bowls, one of which is a straight-sided flanged bowl in black-burnished ware, a late Roman form. An Oxford white ware mortarium is present (late Roman form M22).

3.2.30 The construction and use of trackway ditch 1693 was chronologically similar to 1692, with the later recuts being infilled predominantly in the late Roman period. The assemblage numbers 513 sherds (17.89kg). The MSW is 34.8g, which is very high, showing that this is a well-preserved assemblage, probably used close to the ditch, and may have been dumped directly into it at the time of initial discard. One 4th-century flagon rim was recovered (Young form R8), along with 22 jars, including Young's Oxford narrow-mouthed forms R15 and R18, and medium-mouthed forms R23 and R24. The seven beakers, mainly in fine reduced and oxidised ware include one in colour-coated ware (form C30) that dates to after AD 340 according to Young. This demonstrates that the ditch was still being infilled in this very late part of the period.

3.2.31 There are 20 bowls, including a distinctly late Roman straight-sided black-burnished ware form with burnished arc decoration. A straight-sided bowl in reduced ware is a Young form R55.2 and has a bifid rim defined by a groove on top. This form is not common and occurs sporadically from the late 2nd century onwards (Young 1977, 222). Another, from the same context (1130) has a chamfered base (form R52) and dates from AD 180–300. The distinctive late Roman flanged bowl form is also present in reduced ware. There are seven dishes/platters, a single wall-sided mortarium (form C97) in Oxford colour-coated ware and a reduced ware lid.

Use

3.2.32 The most common indicators of use or modification recorded are sooting or burning and post-firing holes in the sides or bases of vessels, of which there are seven occurrences each.

3.2.33 The burning or scorching was seen around the rims of vessels, including on a colour-coated Oxford mortarium (ditch 142, Phase 2.4) and on a ring-necked flagon in sandy white ware (W20) from ditch 1709 (Phase 2.3). A jar in white-slipped ware (Q20) is also burnt around the rim (ditch 1693, Phase 2.3). A sandy whiteware jar (W20) is sooted on the interior and is the only vessel on which this was observed. Two whiteware mortaria are burnt/scorched from use. One almost complete vessel (ditch 1692, Phase 2.3) is scorched on the interior gritted surface in the centre, possibly from processing hot foodstuffs. Another (pit 1208, Phase 2.4) is burnt under the flange, suggesting that it was used over heat.

3.2.34 Deliberately made holes were recorded on seven vessels. Two reduced ware flat bases have post-firing holes, both from contexts phased broadly to the Roman period. Another reduced ware vessel has three post-firing holes in the side of the vessel, positioned just above a girth groove. Similarly, a body sherd in Central Gaulish samian ware (S30) has three holes in what would have been the vessel side.

3.2.35 A flat base in shell-tempered ware from ditch 1693 (Phase 2.4) also has post-firing drilled holes. Two vessels in E-wares have been modified with holes, both from the early Roman phase of ditch 1710; one has a small hole under the rim, perhaps for suspension, and the other (a wheel-thrown grog-tempered vessel) has a hole made in the lower part of the wall.

Status

3.2.36 At 6.7% by sherd count and 14.6% by EVE, the proportion of fine and specialist wares is low. The range for all sites analysed by Booth (2004) is between 11% and 30% by sherd count, with all sites with above 20% fine and specialist wares being either nucleated settlements, villa sites or towns. The sites confirmed as lower status rural sites generally had percentages between 13% and 18%. This indicates that the site was a low-status rural settlement, albeit with some access to finewares and exotic products, where Roman dining practices were undertaken.

Conclusions

3.2.37 The late Roman (Phase 2.4) emphasis of the assemblage is clear and suggests that ditches initially constructed in Phase 2.3 (middle Roman) were receiving more pottery in Phase 2.4, indicating continuation of activity. Although the pottery amounts deposited increased in this latter phase, it may be that in the earlier phases the ditches were sporadically cleared of rubbish, which perhaps did not occur later when the ditches were allowed to infill.

3.2.38 A small assemblage in Phase 2.2 suggests that activity in the early Roman period was minimal or that the focus of activity was further away from the ditches within the site. Activity intensified during the middle Roman period and the main settlement ditches continued in use into the late Roman period. Closely dated vessels in Oxford colour-coated ware show that deposition was still occurring into the latter half of the 4th century.

3.2.39 The site was receiving pottery mainly from the kilns around Oxford and other fairly local sources. Other coarse wares came from the west, from the Savernake and black-burnished ware industries, and from the north (the South Midlands), which was the likely source of most of the shell-tempered wares from Phase 2 and the very small amount of soft-pink grogged ware from *c* AD 160 onwards.

3.2.40 As discussed above, the assemblage contains a low proportion of fine wares as would be expected of a low status rural settlement in the region. That said, the inhabitants were clearly using fine table wares and taking part in Roman dining practices as the norm and had access to olive oil from southern Spain.

Catalogue of illustrated pottery (Figs 36 and 37)

1. Body sherd with scratched decoration/graffito. Reduced ware (R30). Context 689, Group 1709, Phase 2.3.

2. Medium-mouthed jar with rilled decoration on neck, grog-tempered ware (R97). Context 1134, Group 1693, Phase 2.3.

3. Small medium-mouthed jar with chevron decoration and groves around girth, reduced ware (R30). Context 1134, Group 1693, Phase 2.3.

4. Curving-sided bowl with grooves on upper and lower body. Fine oxidised wear (O10). Context, 1134, Group 1693, Phase 2.3.

5. Curving-sided cordoned bowl with white paint decoration. Oxidised ware (O20). Context 1134, Group 1693, Phase 2.3.

6. Carinated bowl with red paint decoration. Fine white-ware (W12). Context 1134, Group 1693, Phase 2.3.

7. Globular beaker with painted dot decoration. Fine white ware (O10). Context 1134, Group 1693, Phase 2.3.

8. Carinated bowl, oxidised ware (O20/21). Context 1130, Group 1693, Phase 2.4.

9. Carinated bowl with incised circle and dot decoration, reduced ware (R30). Context 1130, Group 1693, Phase 2.4.

10. Straight-sided flanged bowl with burnished intersecting arc decoration, South-Dorset black-burnished ware (B11). Context 1130, Group 1693, Phase 2.4.

11. Straight-sided bowl with bifid rim, reduced ware (R30). Context 1130, Group 1693, Phase 2.4.

12. Curving-sided bowl with bead rim defined by groove, North-Wiltshire reduced ware (R35). Context 1130, Group 1693, Phase 2.4.

13. Necked jar/bowl with cordon around girth, reduced ware (R30). Context 1130, Group 1693, Phase 2.4.

14. Wide-mouthed necked bowl, reduced ware (R30). Context 1130, Group 1693, Phase 2.4.

15. Miniature beaker with impressed decoration, Oxford colour-coated ware. Context 1130, Group 1693, Phase 2.3.

16. Collared mortarium with mouse or devolved lion decoration, Oxford colour-coated ware (F51). Context 1130, Group 1693, Phase 2.4.

17. Base sherd with post-firing holes. Shell-tempered ware (C10). Context 923, Group 1693, Phase 2.4.

18. Flagon with triple-beaded rim. Reduced ware (R30). Context 1140, Group 1693, Phase 2.4.

19. Narrow-mouthed jar with bifid rim. Reduced ware (R30). Context 1140, Group 1693, Phase 2.4.

20. Carinated bowl with incised arc and dot decoration. Reduced ware (R30). Context 1078, Group 1694, Phase 2.4.

21. Curving-sided carinated bowl with cordon. Reduced ware (R30). Context 1078, Group 1694, Phase 2.4.

22. Dish with post-firing holes in side of vessel. Central-Gaulish samian ware (S30). Context 1078, Group 1694, Phase 2.4.

23. Narrow-mouthed jar. Sandy white ware (W20). Context 1351, Group 1694, Phase 2.4.

24. Carinated bowl with cordon below rim, decorated with burnished lattice. Reduced ware (R30), Context 1351, Group 1694, Phase 2.4.

25. Straight-sided bowl with flat rim and burnished lattice decoration. South-Dorset black-burnished ware (B11). Context 1351, Group 1694, Phase 2.4.

26. Curving-sided bowl with out-turned rim. Reduced ware (R30). Context 1351, Group 1694, Phase 2.3.

3.3 Anglo-Saxon pottery *by John Cotter*

Introduction

3.3.1 Pit 1121 produced a small assemblage of hand-built Anglo-Saxon pottery consisting of 28 sherds, weighing 351g, with a total EVEs of 0.11. Three contexts (fills) were recorded and produced pottery, although two of these appear to have been different parts of a single (secondary) fill. On the basis of rim sherds (only two) and a single decorated sherd in a finer fabric, a minimum of three vessels are represented, but textural and other differences in the body sherds suggest that several more vessels may be present. The average sherd weight is 12.5g, which is fairly good for quite soft, friable, material such as this. The sherds are quite fresh, with post-deposition abrasion noted on only a few examples. The very limited range of fabric and vessel forms present, together with the single decorated sherd, allows only a broad dating of 5th–8th century to be suggested, although a 6th- to 7th-century date is possibly more likely.

Methodology

3.3.2 All the pottery was catalogued following standard procedures (details in archive). The catalogue includes per context and per fabric, quantification by sherd count, weight and rim EVEs (estimated vessel equivalents, a measure of surviving rim circumference). Other details of note, such as vessel form, rim form and evidence of use etc, were recorded in a comments field. A breakdown of pottery distribution is presented in Table C1.

Fabrics

3.3.3 Fabrics were identified and coded using a system of 'F' prefixes that have been used for other Anglo-Saxon assemblages published from the region (Blinkhorn 2001; 2003; 2007). These are not fixed but site-specific, with the commonest fabric usually designated 'F1'. In this case, F1 is organic-tempered ware, the only fabric from the assemblage.

3.3.4 Organic-tempered ware (F1) is also known as chaff-tempered or grass-tempered ware and contains moderate to abundant coarse organic temper. The organic material occasionally includes plant structures (fibres and possible glumes?). The clay matrix is generally smooth or slightly sandy, with moderate fine quartz sand and rare coarser, rounded, quartz grains up to 1mm across. The matrix also contains moderate to abundant very fine mica. Rare flint inclusions (in one instance up to 8mm across) and light grey rounded sandstone (or mudstone) inclusions were noted in a few sherds. A large rounded inclusion (8mm across) identified in one sherd appears to be a light grey sandstone (greensand?) containing fine black grains of glauconite. Other scattered grains of fine rounded glauconite also occur in some sherds.

3.3.5 Firing colour is mainly black or grey-black. A few sherds have light grey-brown external surfaces. Surface finishing is fairly rough, but a few sherds (including the decorated

one) have smoothed external surfaces, but no burnishing is present. Sooting occurs on the outside of most sherds and sometimes on the inside. Local production seems highly likely. The fabric is very similar in character to a much larger assemblage of organic-tempered pottery from another Anglo-Saxon feature recently reported on from Great Western Park, Didcot (SFB 13350; Cotter forthcoming).

3.3.6 Across much of southern England, organic-tempered wares are considered characteristic of the 6th–7th centuries, although they were already present from the start of Anglo-Saxon occupation in the 5th century. At Mucking in Essex, for example, organic-tempered ware was the predominant pottery type found in huts of 7th-century date (Hamerow 1993, fig. 17). Production continued into the following centuries but is likely to have disappeared from most areas by *c* AD 850.

Vessel form and dating considerations

3.3.7 The only vessel form identified is the plain globular jar with a gently everted plain rim on a short curved neck. Only two rim sherds from two vessels are present (both from fill 1124; not illustrated). The better-preserved example has a diameter of *c* 190mm and could be from a jar or a bowl. This is relatively thinly potted and has a faint horizontal groove or wipe-mark on the neck, which might represent a trace of decoration (although not counted as such). The other rim sherd (diameter *c* 180mm) is of the same form but much cruder and thicker. The one definite base sherd identified is from a globular jar with a rounded or slightly flattened base. Other thick, flattish, sherds are probably from other bases. A single small body sherd has very probable traces of incised decoration (not illustrated). This comprises two lightly incised parallel lines (*c* 3mm apart). It has a sandier fabric than most other sherds, with a noticeably smoother surface finish (sherd thickness 6mm).

3.3.8 The dating of early Anglo-Saxon pottery is almost entirely dependent on the presence of decoration and one or two distinctively early vessel forms. These are almost entirely lacking here, apart from the single decorated sherd. The presence of decoration is usually considered typical of 5th- and 6th-century assemblages (Myres 1977). This fact, coupled with the complete predominance of organic-tempered ware, might indicate that the assemblage here belongs to the 6th or 7th century rather than earlier.

3.4 Worked flint *by Mike Donnelly*

3.4.1 A total of 60 struck flints and 12 fragments of unworked burnt flint, weighing 18g, were recovered. The flints were widely distributed across site, and many are lightly damaged, suggesting that most were no longer in their primary depositional context. However, the lack of heavily damaged pieces suggests that they had not moved far. Tools are especially common in numbers that suggest either selective recovery or that the site had a strong domestic or industrial function. These tools are largely undiagnostic and poorly dated, though one leaf-shaped arrowhead of early Neolithic date was recovered, as was an end-of-blade borer and a backed knife of Neolithic or Bronze Age date. There is a limited amount of later prehistoric flake debitage that could be contemporary with some of the Iron Age features, but it is in numbers that would suggest nothing more than occasional flint use.

The assemblage

3.4.2 The assemblage has a high blade index of 16.27% indicating that some flints are early in date (Table D1). Figures of around 15% are suggested for early Neolithic material (Ford 1987), which is represented by the arrowhead. Both of the cores recovered are undiagnostic, and the figure of 3.33% for cores and related debitage is quite low for a residual assemblage. A single bladelet core has more flake scars than bladelets but is still likely to be early but broadly ranging in date, from anywhere between the late Upper Palaeolithic and the end of the Neolithic. The percentage of tools may be due to recovery bias or represents a specialised site. Recovery bias is perhaps unlikely given the low number of cores, which are also usually over-represented. Thus, the high tool figure may be genuine, perhaps reflecting an area of tool use or selected deposition. It is possible that a domestic setting with a processing area lay nearby.

3.4.3 It is possible that all the flints could belong within an early Neolithic context. Two broken fabricators are of note (one from the surface of the natural and the other from the upper fill (550) of Roman pit 417/549) as they are rare items, and it is very unlikely that the two were part of the same object. These tools are often associated with the production of other flint tools, as they may have been used for retouching. This would support the view that the high number of tools is the result of specialised production. Two quite finely made retouched flakes, also from the surface of the natural, are likely to be Neolithic date. One heavy boring tool on a blade (from early Iron Age posthole structure 1687) is also clearly early in date, with an early Neolithic date being likely.

Distribution

3.4.4 The flints were recovered from a variety of contexts, with just under three-quarters being recovered individually or as two flints in any context. Most of the flints came from ditches followed by pits (Table D2). Ten came from postholes, probably aided by recovery bias, including six from fill 479 from four-post structure 1687. Although dating to the early Iron Age date, the lithics appear to be earlier, being early Bronze Age at the latest but probably much earlier.

Condition

3.4.5 The flints recovered are dominated by lightly damaged pieces that account for exactly half of the assemblage (Table D3). Fresh pieces are also common, with 18 examples (32.14%), and seven pieces have moderate levels of damage (12.5%), with three plough damaged flints (5.36%). The focus on lightly damaged and fresh pieces suggests an assemblage that was largely no longer in its primary depositional context but in one that had also not moved far. Cortication can also be used to identify how mixed an assemblage is, and the fact that nearly all the flints have light cortication, with the remainder displaying moderate levels, could also support the view that the assemblage belongs broadly to one period.

3.5 Ceramic building material *by Cynthia Poole*

Introduction

3.5.1 A small assemblage of ceramic building material (CBM) amounting to 17 fragments (weighing 2757g) was recovered from ditches and a pit (Table E1). The material comprises broken fragments but is fresh and unabraded and has a higher-than-

average mean fragment weight of 147g. The CBM is Roman in date, apart from two post-Roman tiles. The assemblage has been recorded on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007). Fabrics were characterised on the basis of macroscopic features supplemented by the use of x20 hand lens for finer constituents. The terminology for Roman tile follows Brodribb (1987). The coding for markings, tegula flanges, etc., follows that established by OA for the recording of CBM, and tegula cutaway types are linked to those classified by Warry (2006).

Roman CBM

3.5.2 The Roman tile (13 fragments, 2725g) comprises all the standard forms, including tegula and imbrex roofing tile, plain flat tile (probably the central sections of tegulae), flue tile and brick.

3.5.3 The tegulae (3 fragments, 392g) and flat tile (2 fragments, 261g) measure 21–26mm thick, with one notably thicker example of 28–33mm. Two examples of tegulae flanges survived, both with rounded profiles similar to examples illustrated by Brodribb (1987, figs 5.2 and 5.4). One is a fragment of flange top measuring 33mm wide, and a second measuring 31mm wide and 53mm high with a narrow finger groove along its base angle. No lower or upper cutaways survived. One of the plain fragments has part of a signature mark of two finger grooves forming an arc, which is one of the most common varieties. Three of the tiles had been burnt or were heat discoloured to varying degrees resulting in grey and black surfaces or edges.

3.5.4 A single example of an imbrex (187g) was found. It has a rougher finish than the tegulae, a rounded profile and measures 22mm thick.

3.5.5 Bricks (four fragments, 1624g) have an even, regular finish and measure 34–45mm thick. One example has a narrow, indented border, 7mm wide, alongside the edge on the upper surface. Such features are rare on Roman bricks but have been noted at Maylands, Hemel Hempstead (Poole forthcoming a), where it was suggested that they resulted from stacking the bricks for drying. One has chaff impressions as well as moulding sand across the base and could be a fired clay hearth plate, but otherwise firing and surface finish suggest this was a brick, not a fired clay artefact.

3.5.6 Three box-flue tiles or tubuli (261g) have neat regular finishes and appear to fall into two sizes, one thin example measuring 13mm thick and two of 19mm and 22mm thick. One has a heat-discoloured surface and lightly burnt edge. Two of the fragments came from the plain, unkeyed side surface, one of which has part of a circular vent, *c* 60mm in diameter, cut through it. Only one exhibits combed keying, which consists of two bands of combing, one aligned vertically and the second intersecting at a diagonal, possibly forming part of a saltire pattern. The comb had eight or more teeth and measured over 35mm wide, and had sharp, V-shaped contiguous teeth.

3.5.7 The tile was made in a small number of sandy fabrics, all fired red/orange in colour. The most common is fabric C, which contains a sparse to moderate density of medium quartz sand. Fabric D is a hard, dense, fine sandy clay. Fabric E is a mixed, sandy, laminated, slightly micaceous clay with cream streaks, clay pellets and red ferruginous grits. Fabric G contains a high density, rounded to sub-rounded, fine to medium quartz

sand. The fabrics are similar to those found generally in the area around Oxford and probably represent regional products, though no definite kiln sites have been identified.

Post-Roman CBM

3.5.8 Two features produced roof tile (four fragments, 32g) of flat rectangular type, probably peg tile, made in a red sandy fabric akin to Oxford fabric type IIIB (Robinson 1980). The tile measures 15mm thick but retains no other features. It is probably medieval or early post-medieval in date.

3.5.9 The tile was found in roundhouse ditch 1675 assigned broadly to the Iron Age phase and a late Roman phase of ditch 1692. The tile must either be intrusive or had settled in the top of the features as the sediments compacted and subsided, and it is likely to relate to agricultural activity.

3.6 Fired clay *by Cynthia Poole*

Introduction

3.6.1 A modest assemblage of fired clay amounting to 183 fragments (weighing 8291g) was recovered from a variety of features but especially ditches, together with pits, postholes and gullies. The material comprises broken fragments that have suffered moderate abrasion but has a high mean fragment weight of 45g, well above average for a standard fired clay assemblage. The fired clay comprises both Iron Age and Roman forms, which at both periods represents mainly portable oven or hearth furniture. In addition, there are some small objects including a spindle whorl and fragments of Anglo-Saxon loomweight. The assemblage has been fully recorded on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007).

Fabrics

3.6.2 Fabrics were characterised on the basis of macroscopic features supplemented by the use of x20 hand lens for finer constituents. Throughout all periods the fabrics derived from local clay deposits originating from the Gault and Greensand Formations characterised by quartz, mica, glauconite and fine cream-white sandstone/siltstone grits in varying quantities and proportions. They are very similar in character to fired clay fabrics found at other sites in Didcot, and also sites at Wantage and elsewhere in the region situated on or close to the same geology. The coarser fabrics containing cream sandstone/siltstone grits up to 12mm were largely confined to use in the Roman period, while the finer glauconitic micaceous clay fabrics were predominating in the Iron Age and continued in use into the Roman period. The addition of organic temper in the form of chaff is confined to material from the middle–late Roman phases.

Iron Age fired clay

3.6.3 Fired clay phased to the Iron Age (86 fragments, 2580g) based on the ceramic dating is dominated by pieces identified with varying degrees of certainty as triangular perforated bricks, together with a small quantity of other portable furniture and a

single small object. Structural material is poorly represented by fragments with a single moulded surface or amorphous scraps. The largest group from pit 82, recovered entirely from the residue of environmental sample 1, was associated with charcoal and carbonised grain and seeds and probably represents debris from the internal walls and floor of an oven dislodged while raking out fuel cinders.

Portable furniture

3.6.4 The triangular perforated bricks are a regular form of Iron Age assemblages introduced in the early Iron Age and continuing in use into the Roman period. None survive complete nor do any retain a complete length, the maximum surviving being 100mm. Two have a complete thickness of 62mm and 71mm, while a further two have been estimated to be *c* 80mm thick and a third *c* 65–70mm thick. These all fall within the standard size range. Typically, these objects have a perforation across each corner, piercing the side surface at an angle. Perforations were identified on 11 fragments, half of which are unusually small measuring 8–10mm in diameter. The remainder are more typical measuring 13–15mm with one large example being 19mm in diameter. Surface finish is quite variable, with some left quite rough, while others more typically have a smooth, even triangular face and slightly rougher edges, occasionally with finger marks visible. Only one has a groove or hollow, 8mm wide, moulded over the corner apex.

3.6.5 A single fragmentary example of rectangular or pyramidal perforated block (enclosure ditch 1683) measures 62mm wide and over 120mm high. This is probably part of a pyramidal perforated brick of late Bronze Age–earliest Iron Age type, though from the surviving fragment it is not possible to be certain that it tapers to the top, as expected of the pyramidal form. A single perforation, 12mm in diameter, occurs close to the end as is usual in the pyramidal form and is set 20–26mm from one side somewhat off-centre.

3.6.6 The perforated bricks have been interpreted traditionally as loomweights, though clear-cut evidence of such a function is lacking, while evidence as oven or hearth furniture is more apparent in associations with structural fired clay or burnt debris in the form of carbonised plant remains or burnt stone. Although an early occurrence of triangular bricks found in an Iron Age oven or kiln near Guildford was reported by Lowther (1935), the function as oven or hearth furniture was explored only relatively recently in relation to examples from Danebury (Poole 1995). Since then, a few direct associations with kilns or kiln debris have been noted at Dagenham (Poole 2012) and Bricket Wood (Poole 2020a, 52–3), but the most convincing evidence for use as pedestals has come from East Kent Access (Poole 2015, 304) where the bricks had clear discolouration from use in salt working. There is no suggestion at Sutton Courtenay Lane that the triangular bricks had a specialist function in craft activity, but they may have served as pedestals or supports in relation to domestic ovens or hearths.

Spindle whorl

3.6.7 A discoidal spindle whorl, *c* 75% complete, measuring 34mm in diameter and 21mm thick, was recovered from early Iron Age pit 82. It has the form of a cylindrical disc

with concave ends and straight sides with rounded angles. It is pierced off centre by a perforation measuring 8mm by 6.5mm.

Roman fired clay

3.6.8 The Roman fired clay (87 fragments, 5566g) almost exclusively comprises discs or baking plates, apart from a small quantity of indeterminate fragments (7 fragments, 101g) tentatively identified as oven or hearth structure. These pieces are either amorphous or have a single rough, flat moulded surface and are generally thin fragments at 10–15mm thick apart from one measuring 48mm thick.

3.6.9 Both circular/oval discs and rectangular plates are represented, varying in thickness and size. Very smooth and well finished surfaces are typical, though occasionally surfaces were more roughly finished. The upper surface is sometimes very slightly dished. The base surface is often covered with coarse chaff and straw impressions, the organic material serving to prevent the clay sticking to the moulding surface. A standard feature is for one surface, most commonly the base, to be heavily burnt black or grey. However, in some cases, the upper surface was burnt and on occasions both surfaces could have been burnt or heat discoloured. Two examples had been coated with a cream veneer, apparently over burnt surfaces. Only five examples have edges fully surviving and include straight vertical, convex rounded and concave or bevelled edges, with some evidence of knife trimming present. One complete flanged edge has a triangular profile measuring 28mm wide and 46mm high, and another has a low rounded flange *c* 30mm wide.

3.6.10 No complete examples were found, though several large blocks have surviving lengths of 125–200mm and one with a curving edge was probably in the order of *c* 400mm in diameter. Thickness ranges from 16mm to over 49mm, with over 40% measuring 30–35mm. Four have evidence of a rounded flange, lip or thickening at the edge, which measure 35mm, 41mm and 46mm thick, and were sometimes emphasised by a finger groove around the internal edge. Flanged examples include both rectangular plates and discs.

3.6.11 The plates and discs are a typical component of Roman fired clay assemblages in Oxfordshire and neighbouring regions. The circular discs are more widespread with examples known from Watkins Farm (Allen 1990, 53), Farmoor (Lambrick and Robinson 1979, 53–4) and Alchester (Booth 2001; Poole 2018b). The rectangular plates have been found at Castle Hill (Booth 2010, 67). Both discs and plates were found at Gill Mill, where the main period of use was during the 2nd and 3rd centuries AD (Poole 2018a, 473–5). At Didcot they occurred throughout the Roman period, though quantities decreased during the late Roman phase (Poole forthcoming b). The complete dominance of discs/plates in a fired clay assemblage is unusual though it has also been noted at Dunmore Road, Abingdon (OA 2021b) and at Lay Wood, Devizes, Wiltshire (Poole 2020b).

3.6.12 The function of the discs/plates has not been established, but they are generally assumed to have been used in domestic cooking or food preparation, though a group from Didcot (ibid.) was associated with pottery wasters and may have been used as kiln furniture in pottery production. The appearance of this form is very much linked to the Roman period and suggests significant changes in the preparation or method of

cooking certain foods were introduced at this time. The presence of burning certainly suggests some were used for cooking in conjunction with ovens or hearths, though the differences in burning on upper or lower surfaces suggests they may have been used in a variety of ways. A recent analysis of similar objects from Worcestershire referred to as baking plates have been linked to oven bases and prefabricated ovens (J Evans *et al*. 2018), where it has been suggested they formed oven floors. Such a function would account for burning on the upper surface, but in Oxfordshire evidence for prefabricated ovens is lacking, and there is no evidence associating plates with structural fired clay from permanent ovens. They may have been used solely in conjunction with open hearths, perhaps having been placed in the hot embers to bake bread, which would account for burning on the lower surfaces. Baking in low-status rural households was probably carried out on the hearth, and various methods are mentioned or described in classical texts. Frayn (1978) describes with reference to various classical authors the use of leaves or broken tiles to hold loaves laid in the hot embers of the hearth, usually constructed at floor level. Roman writers also mention the use of an earthenware pot or *testum* for baking placed inverted over bread or cake placed on leaves or broken tiles on the hearth. The development of clay discs or plates may represent a further step to a more standardised arrangement and represent the introduction by the Romans of a new style of baking related perhaps to new types of bread.

Anglo-Saxon fired clay

3.6.13 A very small quantity of fired clay (9 fragments, 130g) has been identified as Anglo-Saxon in form. Recovered from Iron Age and Roman features, these fragments were either intrusive or had settled in the top of the features as the sediments compacted and subsided.

3.6.14 Fragments from roundhouse ditch 1288 and Roman boundary/trackway ditch 1692 have been identified as pieces from two Anglo-Saxon bun-shaped loomweights. One (ditch 1692) was made in a light brown, fine sandy micaceous glauconitic sandy clay fabric and has a very smooth curving convex, well-finished surface, partly burnt or fired black. It forms a ring with an estimated diameter of *c* 120mm and is pierced by a central hole of *c* 40mm diameter.

3.6.15 The second loomweight (roundhouse ditch 1288) was made in a dark grey clay fabric containing a very high density of fine, well-sorted quartz sand. The fragments have very smooth, well-finished surfaces, one curving convex and the other flat, joining in a well-rounded angle. No evidence of the central perforation survives, and the exact form of loomweight is uncertain, though it probably had a lentoid or possibly hemispherical cross-section.

3.6.16 Both loomweights probably fall within Hurst's (1959, 23–4) intermediate type, which is generally dated to the middle Anglo-Saxon period, though examples from Mucking of very similar size have been found together with the early Anglo-Saxon annular type in 5th- and 6th-century contexts (Hamerow 1993, 66). Anglo-Saxon loomweights of both annular and intermediate form occur commonly on sites in Oxfordshire and neighbouring regions, with large groups found in sunken feature buildings at Sutton

Courtenay (Leeds 1923), Eynsham (Chadwick Hawkes and Gray 1969), Radley (Ford 2007) and Swindon (Webster and Cherry 1977, 214).

3.7 Worked stone *by Ruth Shaffrey*

3.7.1 A total of three worked stone objects were found: two querns and a whetstone.

3.7.2 A single fragment of grey siltstone whetstone was found in the secondary fill (57) of early Iron Age posthole 56. It appears to be of slab form, but it is broken across opposing edges so could actually be a fragment of a bar whetstone. It has been utilised across both faces.

3.7.3 Two quern fragments were recovered from Roman features. One of these is a small fragment of indeterminate morphology of a well-known quern material, Lodsworth stone, with a segment of smoothed slightly convex grinding surface. It was found in the primary fill (941) of Roman ditch 940. Lodsworth stone was imported from West Sussex but was widely used in the area during the Roman period specifically for querns, so we can be confident that this was the stone's purpose. A second fragment of a known quern material is a piece of Culham Greensand from the fill (1217) of late Roman pit 1214. It does not retain any worked surfaces, but this material was used for the production of saddle querns in the local area. The quern fragments are typical of Roman sites (Shaffrey 2009).

3.7.4 The stone assemblage also contained 38 fragments of burnt stone (weighing 1.7kg). Most of this is heat cracked and one of these heat-cracked cobbles was found in association with a complete middle Iron Age jar (SF 11) in pit 448.

Catalogue of worked stone (not illustrated)

Whetstone. Small slab whetstone, broken across two opposing edges, so could actually have been a bar form but now roughly square. Flat with use wear to both faces, which are flat and smoothed. The arrises are gently rounded but not facetted. Measures >50mm length by 60–62mm width by 7–18mm thickness. Weighs 121g. Grey siltstone. Ctx 57. Secondary fill of posthole 56. Early Iron Age. Phase 1.2.

Possible quern. Fragment of relatively local stone that was used for querns during the Iron Age and Roman periods. This fragment does not retain any worked surfaces, but it is possible that it represents a quern. Measurements are indeterminate. Weighs 176g. Oxfordshire Grits: Lower Greensand (Culham). Ctx 1217. Secondary fill of pit 1214. Late Roman. Phase 2.4.

Quern. Fragment with part of smoothed surface, which is flat/very slightly convex. Heavily burnt and blackened. Measurements are indeterminate. Weighs 67g. Lodsworth Greensand. Ctx 941. Primary fill of ditch 940. Roman. Phase 2.2 to 2.4.

3.8 Coins *by Paul Booth and Anni Byard*

Introduction

3.8.1 A total of 47 Roman coins were recovered during the excavations. All are of copper alloy, with a small number retaining some surface silvering. Most coins are in worn or very worn condition, and many are incomplete and eroding, restricting accurate

identification. Of the coins, 23 belong to a hoard discovered in the lower fill of late Roman ditch 142. The hoard coins have been catalogued by Paul Booth (PMB) and reported to the Coroner under the Treasure Act 1996 (case number 2019 T1021).

Methodology

3.8.2 Detailed identifications were made where possible, with notes on obverse and reverse types and mintmarks. The variable condition of the coins makes it difficult to judge how many issues are irregular. Standard references referred to include the *Roman Imperial Coinage* (RIC) volumes (Mattingly *et al*. 1923–84) and *Late Roman Bronze Coinage* (Carson *et al.* 1960). An updated catalogue was produced and forms the basis of the information presented herein.

Results

3.8.3 Coins were recovered from ditch and pit fills dating to Phases 2.2–2.4, while a small number were unstratified (Table F1). Of the identifiable issues, only seven date to the late 3rd century AD ('radiate' issues), while the remainder are of 4th-century date. The dating of the coins aligns with the phasing of the parent features and in some cases provides refined, narrowed dates.

Stratified non-hoard finds

3.8.4 Three coins were recovered from pits, all radiate issues of the late 3rd century. The upper fills of pit 1108 produced a coin each of Gallienus and Postumus (AD 260–8; Fig. 38 nos 1 and 2). Pit 1564 produced a radiate of Claudius II (AD 268–70).

3.8.5 Trackway ditches 1692 and 1693 produced five and two coins respectively. The identifiable coins from ditch 1692 are from the House of Constantine and include a CAESARVM NOSTRORVM issue of Constantine II as Caesar (Fig. 38 no. 3), issued in Trier and struck AD 323–4. Two coins are commemorative issues depicting Victory on a ship's prow, one of which was also struck in Trier, while the other is a contemporary copy. These date from AD 330–40. Two are very worn nummi, one possibly from the House of Valentinian (AD 364–78). These coins were found in the fills of the latest recuts of the boundary ditch.

3.8.6 Ditch 1693 produced a worn barbarous radiate (AD 275–85) and a worn commemorative issue (Victory on prow) from the House of Constantine struck in Trier and dated to AD 332–3. These coins were recovered from the uppermost fill of the latest recut of the boundary ditch.

3.8.7 Boundary ditch 1710 produced two late Roman coins from its secondary fill: one of Constantius II dating from AD 347–8 (Fig. 38 no. 4) and another of Eugenius (dated AD 392–4), an infrequently encountered emperor in comparison with other late 4th century rulers (Fig. 38 no. 5).

The hoard

3.8.8 A hoard of 23 copper-alloy late Roman coins were recovered from the lower secondary fill of ditch 142 (Table F2). Four were recovered during excavation, while the remaining 19 were retrieved from bulk soil sample 74. During initial assessment, arbitrary PMB

identification numbers were assigned to the 19 coins from sample 74. These identifiers have been retained herein to allow easy reference to the Coroner's report. The remaining four coins were issued small find (SF) numbers 14–17 inclusive.

3.8.9 A number of the coins are very worn and incomplete, having suffered some edge damage (not necessarily in the course of the environmental processing), and a couple consist only of a large fragment. The smallest coin in the hoard (PMB19) is broken in two. Despite these problems, there is no doubt about the general character of the hoard, which is dominated by coins probably or certainly struck in the period AD 388–402 (Reece period 21).

3.8.10 Of the four coins recovered during excavation, only two are partially identifiable due to their condition. One (SF 17) may be an issue or Arcadius (AD 388–402) and therefore fits well with the other coins in the hoard. The second coin (SF 15) is a PIETAS ROMANA issue of Theodora and can be dated to AD 337–40 (Reece Period 17). This is somewhat earlier than the rest of the coins in the hoard. While the small coin (PMB19) mentioned above may be of the same date as the majority of the coins, its size (8mm) is of a module more commonly encountered in the irregular issues (eg imitation *Fel Temp Reparatio*) of the period *c* AD 350–64. The remaining coins, all AE4 pieces with a size range of 11–13mm, are all most probably (13 of the 15 fairly certainly) of the issue period AD 388–402. Three obverse legends, one of Theodosius and two of Arcadius, are partly legible. One of the Arcadius coins (PMB5) has the reverse VICTORIA AVGGG. Three more coins, one (PMB4) a Trier issue, have this reverse type, and there is a single example of *Salus Reipublicae* (PMB15). Six of the remaining eight coins appear to have reverse figures of Victory (the other two are encrusted), but the present condition of the coins does not permit distinction between these two common reverse types.

3.8.11 Two very worn and unidentified AE4 pieces were recovered from the upper secondary fill of the ditch containing the hoard. One is worn beyond recognition, while the other (SF 1) has a pearl diademed bust and probably dates from *c* AD 348–402. These may be strays from the hoard, which would take the total to 25 coins.

Unstratified

3.8.12 Five coins were recovered from the spoil heap associated with the excavation of boundary 1708. These coins are all very worn, but the three that are identifiable appear to be Reece Period 21 issues of Arcadius and Theodosius (AD 388–402). It is possible that these coins reflect late Roman activity associated with ditch 142 and the coin hoard, just to the south-east of boundary 1708, which otherwise dates to the early and middle Roman phases.

3.8.13 An unstratified radiate of Gallienus (sole reign, AD 260–8) is not associated with this group.

Discussion

3.8.14 Of the 22 non-hoard coins, the number of issues of Reece Periods 13, 17 and 21 are equal (five coins each). The five Reece Period 21 coins were scattered across the site and do not appear to have any connection to the hoard. The earliest identifiable coins from the site are issues of Gallienus (AD 260–8). Generally, the frequency of late

Roman issues is characteristic of rural settlements in the region and more widely, and represents a common rural coin-loss pattern. However, the small size of these assemblages mean that they cannot be pressed too far in terms of detailed interpretation.

3.8.15 The hoard is dominated by coins of Reece Period 21, the last significant period of coin use in Roman Britain. Such hoards are fairly common in south-eastern Britain, and a distinct concentration of very late Roman activity, reflected in hoards of this type and also in notable representations of coins of this period in occupation site assemblages such as that from Didcot, Great Western Park, is a feature of the area around Dorchester-on-Thames, where Reece Period 21 issues form a remarkable proportion of recorded coins. The present hoard, while small, constitutes a useful addition to this picture, the more important for coming from an archaeologically recorded rural settlement context.

Catalogue of illustrated coins (Fig. 38)

1. Radiate of Gallienus. Obverse: Radiate head right, GALLIENVS AVG. Reverse: Antelope right, (DIANAE) CONS AVG. Cu alloy. Dia: 19.8 mm. Pit 1108. Deliberate backfill. SF 22. AD 260–8.

2. Radiate of Postumus. Obverse: Radiate draped and cuirassed bust right, […]POS[…]. Reverse: Pax left with transverse sceptre and branch, (P)AX (A)V(G). Cu alloy. Dia: 20.2 mm. Pit 1108. Deliberate backfill. SF 37. AD 267–8. RIC VII 318.

3. AE2 of Constantine II as Caesar. Obverse: Laureate head right, CONSTANTINVS IVN NOB C. Reverse: Wreath enclosing VOT X, CAESARVM NOSTRORVM. Mintmark: //STR crescent (Trier). Cu alloy. Dia: 18.7 mm. Boundary/trackway ditch 1692. Primary fill. SF 25. AD 323–4. RIC VII Trier 441s.

4. AE3 of Constantius II. Obverse: Laurel and rosette-diademed, draped and cuirassed bust right, CONSTANTI-VS PF AVG. Reverse: Two victories facing each other, each holding a wreath and palm branch, NA monogram in centre, VICTORIAE […]VG QNN. Mintmark NA // PARL (Arles). Cu alloy. Dia: 15.9 mm. Boundary ditch 1710. Secondary fill. SF 29. AD 347–8. RIC VIII Arles 78p.

5. AE4 of Eugenius. Obverse: Diademed, draped and cuirassed bust right, DN EVGENI[…]. Reverse: Victory advancing left with wreath and palm, […]IA A[…]. Cu alloy. Dia: 12.3 mm. Ditch 1710. Secondary fill. SF 10. AD 392–94.

3.9 Metal finds *by Anni Byard*

Introduction

3.9.1 The metalwork assemblage comprises 42 objects in 47 pieces, weighing 566.7g (Table G1). These include *c* 26 iron objects (468.9g), 12 copper-alloy objects (53g) and four lead-alloy objects (44.8g). These totals exclude the coins, which are reported separately above.

3.9.2 A small number of metal objects came from Iron Age features, but the majority were Roman. Many finds, for example nails and miscellaneous iron bars/rods, are undiagnostic on their own and dating has been achieved through association with the

ceramic evidence. These are detailed in the finds catalogue and are not discussed further. There are also several diagnostic artefacts that require more detailed discussion. These are highlighted below by ceramic phase.

Middle Iron Age (Phase 1.3)

3.9.3 Of the three objects recovered from features dated to this phase, only two are identifiable but neither are of middle Iron Age date. They are either intrusive or they represent later deposits within earlier features.

3.9.4 An incomplete bow brooch (SF 55) of the Nauheim derivative style was recovered from the uppermost fill of the latest ditch recut of enclosure ditch 1705. This type of brooch dates to the final pre-Roman Iron Age, *c* AD 25–100 (Phase 2.1). A hobnail from the deliberate backfill of the same ditch is of broadly Roman date.

Late Iron Age/early Roman (Phase 2.1)

3.9.5 Two probable hobnails were recovered close to SK 1570 in ditch 269/896, which was radiocarbon dated to 120 cal BC–cal AD 63 (UBA-43690, 96.7% confidence; Table 1). They are incomplete and corroded. No other metal finds were recovered from features dated to this phase, although the Nauheim derivative brooch mentioned above is of this period.

Early Roman (Phase 2.2)

3.9.6 An early Roman Colchester derivative 'dolphin' style brooch (SF 28) dating from *c* AD 40–65 was recovered from the single fill of ditch 1113, which was possibly an early cut of ditch 1710. A section of spring axis bar is retained, but the spring and pin are missing. There is double or triple-banded cord-like mouldings on each arm with a thin central panel of similar design down the length of the bow (Fig. 39 no. 6).

Middle Roman (Phase 2.3)

3.9.7 An iron agricultural tool known as a spud (SF 34) was recovered from the secondary fill of ditch 1696. This tool has a worn, broad, flat blade and socket, and was used for weeding or clearing, or possibly stripping bark.

3.9.8 A copper-alloy developed T-shaped brooch dating to *c* AD 75–175 was recovered from ditch 1697. This example has a head loop and hinged pin.

Late Roman (Phase 2.4)

3.9.9 Apart from a very small number of hobnails, nails and miscellaneous iron rods/bars, a decorated copper-alloy strip (SF 36), probably a fragment of a bracelet, was recovered from enclosure ditch 1704. The strip is decorated with a cast design of raised lentoid or linear pellets down its centre, bounded by slightly raised edges (Fig. 39 no. 1). The strip has a white metal coating (possibly tin or silver). A similar bracelet illustrated by Crummy (1983, 40, no. 1679) is dated *c* AD 320–450.

3.9.10 A copper-alloy rod (SF 56), with a rectangular cross section that gradually tapers into a circular section, may be the remains of a spoon handle. It was recovered from the secondary fill of pit 1214.

Roman (Phases 2.2–2.4)

3.9.11 Several iron and copper-alloy objects were recovered from ditched boundaries that spanned the Roman period. Trackway ditch 1692 yielded the highest proportion of metalwork, comprising five objects (three copper-alloy, two iron). Among nails and miscellaneous iron fragments were objects of a personal nature. A complete wire armlet or bracelet (SF 47) with wound-wire sliding catch appears to have a white-metal coating but no other decoration (Fig. 39 no. 2). Similar bracelets have been found in contexts of late 3rd- to 4th-century date (eg Crummy 1983, nos 1601, 1656). A second, incomplete bracelet (SF 24), also of late Roman date (*c* AD 300–450) was recovered from the same fill. This strip bracelet has ring-and-dot motifs separated by linear mouldings on its outer face and has a white-metal coating on all sides (Fig. 39 no. 3).

3.9.12 One of the most unusual metal artefacts from the site is a copper-alloy seal-box lid (SF 48) from the same context as bracelet/armlet SF 47 noted above, which also contained a disarticulated human skull (931) (Fig. 39 no. 4). Seal boxes were probably used to secure bags, having a notch in the side of the box to allow for a cord, which was secured in place by wax that had been poured into the box (Andrews 2012). The seal box lid from this site is an elongated lozenge shape in plan and has an outer field of blue enamel and an inner field of yellow enamel with three central pellets. White metal coating survives on the pellets and cell borders, while the hinge lug survives on the back. The opposing tip of the box lid is broken and missing, but the side knops survive. This is a very rare type of seal box and can be categorised as an Andrews type L2D7 (ibid.), who, when conducting his study, knew of only eight other examples, plus two from the Continent (ibid., 28–9). Their suggested date range is AD 100–300.

3.9.13 A complete copper-alloy toilet spoon, or ligula (SF 4), was recovered from ditch 1708. The ligula is a thin rod with a cupped scoop forming the head and a spiral groove decoration beneath the head as decoration. The rod tapers to a sharp point (Fig. 39 no. 5). Ligulae were used as toilet articles.

Early–middle Anglo-Saxon (Phase 3)

3.9.14 A small number of iron objects were recovered from the fill of grave 246. These comprise two nail fragments (SF 3) and miscellaneous pieces of uncertain use/origin, along with the remains of a whittle tang knife (SF 2). The knife is corroded and incomplete, retaining most of the blade, which has a slightly curved back, but missing the tang. Knives are common finds in graves of this period.

Discussion

3.9.15 Nails are the most common artefact on Roman period sites, and smaller undiagnostic pieces of iron are also common. Most of the ironwork from this site consists of nails and iron fragments of various sizes, found across all phases and mostly in ditches. The lack of large nails and other structural fittings suggests that there were no substantial Roman buildings or structures within or immediately adjacent to the excavated area. The assemblage is mostly suggestive of agricultural activity (as evidenced by the spud), and the objects of a personal nature (such as bracelets) representing the local inhabitants.

3.9.16 The small collection of white-metal-coated dress accessories from the site is of interest. Jewellery could denote social status, cultural practices and affiliations, wealth, or status (not necessarily synonymous). Brooches were worn by both men and women during the pre-Roman Iron Age and much of the Roman period. The three brooches recovered from the site are all early forms (late pre-Roman Iron Age/early Roman). Although personal items are few, in comparison to other local, rural sites of similar nature, the assemblage is of note.

A note on the seal box

3.9.17 Recovered from the uppermost fill of trackway ditch 1692, the seal box was directly associated with a complete wire bracelet/armlet and a fragment of a second strip bracelet. These finds were not located in a ditch terminus, a location often associated with the deliberate placement of objects, especially in prehistoric periods; however, when compared to other finds from the ditch, their juxtaposition may suggest a deliberate deposit. It is also noteworthy that a disarticulated human skull (SK 931) was also found within the same ditch fill.

3.9.18 The seal box is an important find. Seal boxes were assumed to be associated with literacy—sealing closed a document (such as a tablet or scroll) to ensure privacy (eg Holmes 1995), either via wax and string secured within the box or sewn to a bag enclosing the document via the holes on the base of the box (seen for example on a parcel from the Snettisham jeweller's hoard, see Johns 1997). Derks and Roymans' (2002, 95) study of continental seal boxes concludes both a ritual (at urban and rural sites) and military association, suggesting either 'letters to the gods' or soldiers writing home to family in the countryside. However, the lack of evidence for a purely literary association has been challenged in recent years (cf Andrews 2012) and other uses, such as sealing money bags, has been posited.

3.9.19 Lozenge-shaped seal boxes (type L1) are the most common type found in Britain (ibid., 49), making up 21% of Andrews' corpus. Conversely, the elongated lozenge-shaped boxes (type L2) comprise only 1% of his national corpus (eight examples). Andrews (ibid., 53) suggests a link between seal boxes and trade and commerce, while forts on the northern frontier have yielded a good number of seal boxes, showing a link with the military (ibid., 71). Silchester and Cirencester produced over 10 seal boxes each (although only Cirencester produced a L2 type), but the apparent 'votive' deposition of many seal boxes should not be overlooked (ibid.). The Portable Antiquities Scheme (PAS) records 12 seal boxes from Oxfordshire, all from rural sites and with one or two associated with sites with a known religious element. The base of a piriform seal box was recently recovered from Grove Airfield (OA 2021a), another rural Roman site.

Catalogue of illustrated finds (Fig. 39)

1. Bracelet. Decorated bracelet fragment. Lentoid or linear pellets down its centre, raised edges. Cu alloy. L: 34.5mm; W: 5.1mm. Ditch 1704. Secondary fill. SF 36. 3rd to mid-5th century AD.

2. Bracelet/Armlet. Complete wire bracelet with sliding wire fastening. Cu alloy. White metal coated. Int. dia: 82.2mm; T:2.7mm. Trackway ditch 1692. Primary fill. SF 47. 3rd to 4th century AD.

3. Bracelet. Fragment of a strip bracelet. Decorated with ring-and-dot and linear motifs on its outer face. Cu alloy. White metal coated. L: 38mm; W: 4.9mm. Trackway ditch 1692. Primary fill. SF 24. 3rd to mid 5th century AD.

4. Seal box lid. Elongated lozenge-shape with panels of blue and yellow enamel with three central pellets. Andrews type L2D7. Cu alloy. White metal coated? L: 43.4mm; W: 22.9mm. Trackway ditch 1692. Primary fill. SF 48. 1st to 3rd century AD.

5. Ligula. Small, cupped scoop forming the head, spiral grooved decoration beneath the head. Tapers to sharp point. Cu alloy. L: 104.2mm; W: 4.9mm. Fill of ditch 1708. SF 4. Roman.

6. Brooch. Incomplete Roman Colchester derivative 'dolphin' style brooch. Section of spring axis bar retained, spring and pin missing. Double or triple-banded rope or cord-like mouldings on each arm with thin central panel of similar down length of bow. Solid catch plate. Cu alloy. L: 50.7mm; W: 26.6mm. Ditch 1113 (1710?). Primary fill. SF 28. Early Roman.

3.10 Glass *by Ian Scott*

3.10.1 There are two fragments of vessel glass, both recovered from middle to late Roman phases of trackway ditch 1693. A small shard from a cylindrical vessel or bottle in blue glass from a secondary fill (917) of this ditch could be Roman in date, but it has no diagnostic features. A small, thin-walled body shard in very pale green glass with iridescent weathering and no diagnostic features was also recovered (tertiary fill 1130, cut 1127).

3.11 Worked bone and antler *by Leigh Allen*

3.11.1 A small assemblage of worked bone was recovered from the site comprising a decorated object collected during the excavation and two weaving combs found during the previous evaluation phase. A fragment of worked antler was also recovered during the evaluation.

Decorated object

3.11.2 The worked-bone object (31g) recovered during the excavation was from the secondary fill of middle Iron Age enclosure ditch 1683 and is probably early or middle Iron Age in date. The object is a fragment of a rib bone from a large mammal (L: 142mm). It is rounded at one end and broken at the other. The long edges are decorated with closely spaced, incised, and angled notches on the upper and lower faces, so that the edges resemble a saw blade, although the teeth are rounded and smooth. There is no sign of wear at the tip or along the edges.

3.11.3 The decorated rib is not a robust object, and it is unlikely that it was utilised in any way, as any pressure exerted on the object would have broken it, while the notches are not deep enough to have held thread or fibre. The object is decorated on both faces and was therefore designed to be seen from both sides. It vaguely resembles a leaf or frond and is reminiscent of Roman leaf-shaped ornamentation such as those recovered from the Butt Road bone-working industry in Colchester (Crummy 1983, 152–6, fig. 159).

Weaving combs

3.11.4 The two bone weaving combs (evaluation SFs 1 and 2) were found together in the subsoil in Trench 7, which was located in the centre of the site (Fig. 40). Although residual in the subsoil and found alongside mixed middle Iron Age, Roman and post-medieval material, they are both of Iron Age date.

3.11.5 Evaluation SF 1 is a relatively short weaving comb (L: 108mm) with a decorated rectangular butt or terminal, a tapering shank or handle and six of its eight teeth remaining. The teeth, which were cut parallel with the long axis of the comb, are rectangular at the base where they join the handle and taper to rounded points; the interdentate notches are V-shaped. The four middle teeth are longer than the two teeth on either edge. This appears to be by design rather than wear. All the surviving teeth show a degree of wear on one side in the form of a slight thinning just below the tip. The shaft, which is undecorated, is widest at the dentate end (W: 26mm) and tapers quite markedly towards the butt end. The rectangular butt or terminal of the comb is decorated with two incised crosses side by side inside an incised rectangular frame.

3.11.6 Evaluation SF 2 is an incomplete weaving comb with only one of the six teeth surviving (L: 114mm). The narrow shaft (20mm) is roughly straight sided, and although lightly polished through wear, the surface appearance is undulating and unworked. The surviving tooth has a rectangular section where it joins the shaft and tapers to a rounded point; it flares outwards from the shaft and the interdentate notches are U-shaped. There are two crude incised grooves running across the comb just above the interdentate notches and traces of another groove (decoration or possibly wear) across the base of the surviving tooth and two of the tooth stumps. The other end of the comb is missing, and it is possible that this is in fact a double ended weaving comb.

3.11.7 Weaving combs are generally believed to have been used to separate the threads on vertical warp weighted looms. Collections of weaving combs have been recovered from Glastonbury and Meare, Maiden Castle and Danebury. The majority of the combs from Danebury have square/rectangular terminals (Sellwood 1884, 371), but the closest parallel for the decoration on the butt end of evaluation SF 1 comes from Meare Village East (Coles 1987, fig 3.38, no. HH16).

Worked antler

3.11.8 A fragment of antler was recovered from the fill of a middle Iron Age ditch investigated in evaluation Trench 9 in the west of the site. It is from the tip of a tine, and the base shows evidence of cut marks and hints at bone working having been carried out in the vicinity.

3.12 Industrial debris *by David Dungworth*

3.12.1 All the industrial waste material submitted was examined visually, recorded and weighed following standard guidance (Historic England 2015). Five types of debris were identified, comprising slag cake (SC), non-diagnostic ironworking slag (NDFe), hammerscale (SS), vitrified ceramic lining (VCL) and vitrified fuel ash (VFA). Full

definitions of these types are presented in McDonnell (1991), Dungworth and Wilkes (2009) and Historic England (2015).

3.12.2 Just over 0.8kg of material was examined (Table H1). Most of this material (*c* 61%) was recovered from Iron Age contexts, and it is possible that the debris from later contexts is residual. The waste includes ironworking slag, including a smithing slag cake and a hammerscale sphere, as well as some non-diagnostic ironworking slag.

3.12.3 The nature of the slag is consistent with small-scale iron smithing. The quantity of smithing debris recovered could have been generated in just a few days. Small-scale iron smithing is a regular feature of many early agricultural settlements. The evidence from Sutton Courtenay Lane suggests that the settlement did not have a full-time dedicated smith. It is unclear whether smithing was carried out part-time by members of the settlement, or full-time but by an itinerant smith.

4 ENVIRONMENTAL AND OSTEOLOGICAL EVIDENCE

4.1 Animal bone *by Martyn Allen*

Introduction

4.1.1 A total of 5436 animal bone fragments were recorded, of which 4378 (80.5%) were recovered by hand and 1058 (19.5%) were recovered from environmental samples. The material was predominantly of Iron Age (2370 fragments) and Roman (2749 fragments) date, with a small amount being recovered from early medieval (Anglo-Saxon) features (317 fragments). Tables detailing the animal bone data are in Appendix I The Iron Age assemblage includes a very small amount of earliest Iron Age material, larger amounts dated to the early and middle Iron Age, and a group that could not be dated more accurately within the earlier Iron Age (termed broadly as 'Iron Age'). Most of the Roman material could not be closely dated to a sub-phase, although some groups of bone were attributed to the early, middle and late Roman periods. A single bone was attributed to the late Iron Age/early Roman sub-phase. Because of the lack of phasing for much of the assemblage, most of the zooarchaeological analysis has focused on differences between the Iron Age and Roman settlements in general. Small quantities of bone were also recovered from the evaluation (215 fragments) and the watching brief (19 fragments), though these add little to the overall picture presented here and have been reported on elsewhere (OA 2016; 2018).

4.1.2 Fragments identified to taxon total 2421 specimens, accounting for 44.5% of the assemblage. Cattle is the dominant species in terms of the number of identified specimens (NISP), although sheep/goats are more abundant in terms of the minimum number of individuals (MNI) represented in both the Iron Age and Roman assemblages. Remains of both sheep and goats were discovered in small numbers in both periods. Horse, pig and dog bones were found in sizable numbers, while cat, red deer and a possible hare bone make up the remainder of the large- and medium-sized mammal assemblage. Small mammals, predominantly rodents, were primarily recovered from environmental samples. Most rodent bones could not be identified to species, although mice, bank voles and water voles are all present, while shrew and frog bones were also identified in Iron Age and Roman samples.

4.1.3 Distribution patterns, levels of fragmentation and species representation all appear to be remarkably similar in the Iron Age and Roman period, despite the clear change in the type and layout of the respective settlements. Notable evidence for sheep and goat breeding, particularly in the Iron Age, was identified alongside a change in the slaughter patterns of sheep/goats, with animals more often surviving to older ages in the Roman period, perhaps suggesting an increased emphasis on wool exploitation.

Methodology

4.1.4 Each fragment was identified to taxon and element where possible with the aid of the author's skeletal reference collection. The assemblage was quantified in terms of the number of identified specimens (NISP) for each taxon. Refitting fragments, mostly damaged through modern breakage, were counted as single specimens. Long-bone shaft fragments, ribs and vertebrae were recorded according to a relative size

category, either as large-, medium- or small-sized mammals. Elements were recorded according to anatomical zone following Serjeantson's (1996) scheme, allowing for the minimum number of elements (MNE) and the minimum number of individuals (MNI) to be calculated, the latter by taking body side into account. Articulating specimens were recorded where present, although these are very rare.

4.1.5 Ageing data were collected from the analysis of tooth-wear patterns following Grant (1982), and estimated ages were drawn from comparisons with modern livestock data following the work of Jones and Sadler (2012) for cattle and Jones (2006) for sheep. Pig tooth-wear data were collected and relative age stages attributed following O'Connor (1988), with estimated ages based upon eruption timings using data collected by Legge (2013). Epiphyseal fusion of post-cranial elements was also recorded, and age estimates were calculated using the timings presented by Sisson and Grossman (Getty 1975).

4.1.6 Measurements were taken using the standards of von den Driesch (1976). Additional measurements were taken on the depth of the distal fusion point (Ddf) of cattle metapodials (Maltby 2010, 343), the basal circumference (BC), outer curve (OC), minimum (BB) and maximum (BA) basal dimensions of cattle horncores (Sykes and Symmons 2007), and horse tooth crown heights (CH) (Levine 1982). Withers' heights for cattle and sheep/goats were calculated using the factors published by von den Driesch and Boessneck (1974), and those for horses used the factors modified from Vitt (1952) by May (1985; after Johnstone 2004, 156). Cattle metapodials were sexed using the breadth/length ratio formulated by Howard (1963), calculated as the distal breadth divided by the greatest length multiplied by 100 (Bd/GL*100), with results below and above 30 estimated to represent females and males respectively.

4.1.7 Butchery marks were described in detail in terms of mark type and location on the bone. Evidence of burning was recorded based on colour (eg black, grey or white, ie calcined). Gnaw marks were recorded where present. Signs of pathology were recorded in detail.

Taphonomy

4.1.8 The assemblage was generally well preserved throughout all the periods represented. The percentage of bones displaying butchery marks shows little variation, affecting between 2.4% of the Iron Age material, 2.3% of the Roman material and 3.2% of the Anglo-Saxon remains (Table I1). Almost three-quarters of the butchered Iron Age material consists of fine knife marks, while 22% exhibits heavier chops from carcass dissection (Fig. 41a, Graph 1). Around 22% of the Roman assemblage also consists of chop marks, although a slightly higher percentage of other types of butchery mark was found in this phase, such as scoop marks made by heavy blades being run along the bone. However, butchery practices do not appear to have impacted the Iron Age and Roman assemblages one more than the other.

4.1.9 Burnt remains account for a very small number of specimens overall, affecting less than 2% of Iron Age and Roman material and none of the Anglo-Saxon material. The degree of burning observed is also remarkably consistent between phases, with around two-thirds of burnt bones having blackened edges, just less than 30% heated to a grey colour and 6–7% being fully calcined white (Fig. 41a, Graph 2).

4.1.10 The proportion of bones with carnivore gnawing marks is also very low, consisting of 1.1% of the Iron Age assemblage and 0.6% each of the Roman and Anglo-Saxon assemblages. All the gnawed bones had been chewed by dogs (or possibly foxes/wolves), except for one middle Iron Age specimen that exhibited rodent tooth marks.

4.1.11 While each of these taphonomic factors appear to have affected a relatively small number of bones overall, the assemblage is quite highly fragmented. Comparison of the completeness of the limb bones, mandible, pelvis and scapula shows that around 40% of elements are less than a quarter complete and about the same proportion between a quarter and half complete (Fig. 41a, Graph 3). Such fragmentation has caused a bias towards larger mammals (mostly cattle) in terms of fragment count, as these were broken to a greater degree than those from smaller mammals such as sheep/goats. This variation is further highlighted by differences in MNI and NISP counts, where sheep/goats dominate the former and cattle the latter (see below for detail). Nonetheless, the degree of fragmentation is very similar between the Iron Age and Roman assemblages, suggesting that these biases did not variably affect the data from each period.

Taxonomic representation

4.1.12 The Iron Age faunal assemblage contains bones of cattle, sheep, goat, pig, horse, dog, red deer, possible hare, goose and frog (Table I2), and these were added to by the remains of mouse sp., bank vole, water vole and shrew from the environmental samples (Table I3). The Roman assemblage contains the same range of taxa, except for hare, goose and water vole, but additionally includes bones of possible cat, chicken, raven and a passerine. One rabbit bone is thought to have been intrusive in a feature of this date, owing to its fresh appearance. The Anglo-Saxon assemblage is much smaller in terms of NISP but contains bones of cattle, sheep/goat, pig, horse, dog and mouse/vole.

4.1.13 The four main livestock species (cattle, sheep/goat, pig and horse) are represented in very similar proportions in terms of NISP in the Iron Age and Roman assemblages when all the sub-phases were combined (Fig. 41b, Graph 4). Cattle bones are the most commonly identified taxon, representing *c* 47% of the fragment count in both periods. Sheep/goat bones account for *c* 37%, while pig bones account for 7% and 6% respectively, with horse bones constituting 8% and 10%. Greater variation was noted when material from well-dated deposits was examined, with a notably high proportion of cattle in early Iron Age features but with higher percentages of sheep/goat remains in middle Iron Age, early/middle Roman and late Roman features (Fig. 41b, Graph 5). This is particularly true of the early/middle Roman phase, where sheep/goat remains outnumber cattle bones by over 10% NISP, although this phase is marked by a small sample size. Pig bones comprise 7–8% in most phases, except for the late Roman phase where they account for 5%. Horse bones are more common than pig in the middle Iron Age and late Roman phases where they account for *c* 12% and 10% NISP, respectively, of the four main taxa.

4.1.14 As mentioned above, when MNI counts are examined, a very different picture of livestock representation emerges (Fig. 41b, Graph 6 and Fig. 41c, Graph 7). Excessive

fragmentation has caused an over-representation of the larger mammals, cattle in particular, by NISP count. In the Iron Age assemblage, the minimum number of sheep/goats represented outnumbers cattle by almost 2:1 and a very similar ratio is also apparent in the Roman assemblage. In both periods (although more marked in the Iron Age), the number of pigs outnumber horses, when the opposite is true for NISP counts. The Anglo-Saxon assemblage was too small for meaningful results to be analysed by MNI, though all four livestock taxa are represented.

4.1.15 Calculated against the four main livestock taxa, dog bones account for just 2.4% of the hand-collected remains. They are represented by seven bones in the early and middle Iron Age phases (nine in total for the Iron Age) and 16 bones in the early, middle and late Roman phases (24 in total for the Roman period). Seven dog bones were also recovered from Anglo-Saxon features. Two possible cat tibiae were tentatively identified, one each from a late Roman phase of ditch 1692 and broadly Roman pit 112. Both specimens are fragmentary, consisting of small and slender proximal shafts. The position of the nutrient foramen in the example from ditch 1692 compares well with cat.

4.1.16 Red deer elements are represented by six specimens, three each from early Iron Age and broadly Roman-period features. The Iron Age examples are all antler fragments recovered from pit 1226. These are poorly preserved but likely derived from the same element. The Roman specimens consist of two upper molars from ditch 1692 and a skull fragment from ditch 1693. The skull includes part of the antler pedicle and a sizable portion of the brain case (the parietal bone). The antler appears to have already shed or was possibly about to shed when the animal died. No sign of the antler was found in the deposit, but several superficial chop marks were observed on the pedicle, just below where it would have been attached to the antler burr. A possible hare bone was tentatively identified from a small radius fragment recovered from middle Iron Age ditch 1683.

4.1.17 Birds are represented by seven bones. A goose coracoid is the earliest avian find, recovered from early Iron Age pit 390. A chicken scapula was recovered from Roman ditch 1710 and single duck bones from late Roman ditch 1694 and late Roman pit 1214 (the latter almost certainly from a mallard). A corvid humerus recovered from late Roman pit 1212 is likely to be a raven bone; it is much larger than crow and appears to be too big for rook (for comparison the smallest breadth of the corpus measures 8.5mm). Two bones from a passerine species, a humerus and a femur, were recovered via environmental sampling of late Roman ditch 142.

4.1.18 Microfauna were largely confined to recovery via environmental sampling. The majority of these are rodent bones that could not be differentiated between mice and voles (Fig. 41c, Graph 8). By far the most commonly identifiable elements to species are the skulls and mandibles with *in situ* dentition, which are easily distinguishable between mice and voles. Bank voles were the most commonly identified rodent in the Iron Age group, with several specimens recovered from early Iron Age roundhouse ditch 405 and middle Iron Age roundhouse ditch 1707. These features also produced three mouse bones, one of which is a maxilla of harvest-mouse size, and a shrew femur was also identified from ditch 1707. Being slightly more widely distributed, frog bones were recovered from early Iron Age roundhouse ditch 405, middle Iron Age

roundhouse ditches 1288 and 1707, and Iron Age pit 249. The Roman sample was larger in comparison to the Iron Age group, dominated by a huge collection of 599 bones sieved from fill 850 of pit 849. The vast majority of these are rodent sp. bones, but also include 91 frog bones, 46 of mouse, nine of bank vole and two of shrew.

Provenance

4.1.19 Although a range of feature types were recorded across the site, the majority of the animal bone assemblage was deposited in roundhouse ditches, enclosure ditches and pits in the Iron Age, and ditches and pits in the Roman period (Table I4). The Anglo-Saxon material was entirely recovered from three pits: 1115, 1118 and 1121, with the vast majority coming from the last of these.

4.1.20 Comparison of the percentage of material deriving from different feature types suggests a similar distribution pattern for the Iron Age and Roman periods (Fig. 41d, Graph 9). Pits accounted for 39–43% of the assemblages in both periods, while *c* 53% of the Iron Age material and 58% of the Roman material derived from ditches. The Iron Age assemblage recovered from ditches is roughly equally divided between roundhouse ditches and enclosure ditches. Much smaller quantities of material were encountered in a range of other features, mostly postholes.

4.1.21 Despite the broadly similar Iron Age and Roman distribution patterns, greater differences are apparent when the better-dated sub-phases are examined (Fig. 41d, Graph 10). The early Iron Age and middle Iron Age phases present a clear shift from a high proportion of material (56%) being recovered from pits, around one-third (35%) from roundhouse ditches and a small but notable quantity (6%) from postholes, towards an increased proportion (54%) deriving from enclosure ditches with a reduction in material deriving from pits (24%) and roundhouse ditches (22%).

4.1.22 The middle Roman assemblage, by contrast, was almost exclusively recovered from enclosure ditches, but this pattern differed markedly to the late Roman assemblage, which was derived in much greater quantities from pits (42%) and postholes (11%), with 47% recovered from ditches in this phase. It should be reiterated here that the not inconsiderable quantity of material from poorly dated Iron Age and Roman features are not included in these sub-groups but have a considerable effect on the patterns observed in Figure 20d, Graph 9, particularly for the Roman period.

4.1.23 The distribution of carcass waste within Iron Age contexts shows that the proportions of livestock taxa found in each feature type varied (Fig. 41e, Graph 11). While cattle are the most common taxa recorded from Iron Age features in terms of NISP, the material recovered from roundhouse ditches presents a strong bias towards sheep/goats (*c* 58%), which were present in these features in almost double the number of cattle bones. Pig bones also outnumber horse bones by more than double. Compared to roundhouse ditches, the proportion of cattle found in enclosure ditches increases by about 12% with an associated increase in horse bones by about 10%, both at the expense of sheep/goat remains. Material from Iron Age pits produced the highest proportion of cattle bones, which comprises some 65% from these features, and the lowest proportion of sheep/goats (*c* 23%). This is a somewhat surprising result since it is widely acknowledged that pits tend to produce higher quantities of sheep, goats and pigs, while ditches often contain more cattle and horse remains, owing to

differential preservation and common patterns of carcass-processing and disposal across Iron Age settlements (Maltby 1985; Wilson 1996).

4.1.24 By the Roman period, such variation in carcass disposition does not appear to have been as much of a factor. The relative frequencies of the main livestock taxa are largely identical between ditches and pits (Fig. 41e, Graph 12). Cattle remains account for half or almost half of all the identified livestock remains in both feature types, while sheep/goats comprise exactly 35% in each and horse roughly 10% in each. Very few bones were recovered from postholes, and these are not comparable with other feature types, although there is some hint that sheep/goats were much better represented than cattle and horses in postholes.

Cattle

Skeletal representation

4.1.25 Cattle remains are best represented by mandibles in the early and middle Iron Age phases, and within the Iron Age assemblage overall (Tables I5–I7). At least 10 mandibles are present within the early Iron Age assemblage, with a minimum of 11 present in the middle Iron Age assemblage. Other than mandibles, elements present in greater than 50% MNE in the early Iron Age assemblage include humerus, radius, metacarpal, pelvis and tibia. In the middle Iron Age assemblage, a slightly greater emphasis on rear-limb elements is apparent, with higher percentages of pelvis, femur, tibia and metatarsal.

4.1.26 The Roman-period data are hampered by smaller samples sizes in the early/middle Roman and late Roman assemblages (Tables I8–I10). For example, the high %MNE of calcanei in the early/middle assemblage is an indication of random collection bias, although the high %MNE of mandibles and tibiae in the late Roman assemblage is a better reflection of typical taphonomic bias.

4.1.27 Comparison of element representation in the combined Iron Age and Roman assemblages indicates similar patterning in both periods (Fig. 41f, Graph 13). Mandibles and tibiae expectedly dominate. However, there is a higher proportion of bones from the forelimb in the Roman assemblage, with scapulae, humeri, radii and metacarpals all better represented in the later period, while the unusually high number of calcanei also stands out.

Ageing

4.1.28 Epiphyseal fusion data are fairly abundant for the Iron Age and Roman assemblages (Tables I26–I31). The early Iron Age assemblage does not include any undeveloped elements that fuse prior to 24 months old, while a small number were found of those that fuse between 26–36 months (distal tibia and distal metapodial) and 36–48 months (distal radius, proximal ulna and proximal tibia), suggesting limited culling of young, prime-beef animals. Culling of younger animals was recorded in the 7–15-month and 15–24-month age groups in the middle Iron Age assemblage, represented by unfused pelvis and 1st phalanx specimens, though a similar proportion of unfused elements that mature in the third and fourth years for cattle suggest that most of the Iron Age herd was kept to older ages.

4.1.29 A slightly different pattern was observed in the Roman phases, which suggests a higher cull of animals in their fourth year. This is particularly marked in the late Roman phase where 37.5% of elements in the 36–48-month age group were found to be fully developed. Smaller numbers of earlier-fusing elements were identified in the two earlier Roman phases, similar to the Iron Age pattern.

4.1.30 Comparison of the combined data from both periods bears out the patterns identified in the sub-phases (Fig. 41h, Graph 17). The Iron Age and Roman assemblage both suggest limited early culling, each with more than 92–95% of the population surviving beyond their second year. An increased cull of third-year animals in the Iron Age reduced the survival rate to *c* 80%, while the Roman group remained at 92%. However, although further culling of the Iron Age group was noted in the fourth year, this was limited in comparison with the Roman group, which reduced from 92% to *c* 56% at this age.

4.1.31 Dental-wear data suggest a similar pattern to the epiphyseal fusion results, although the overall number of specimens available was rather limited (Table I42). The early Iron Age sample consists of specimens from individuals that were culled between 16–28 months and 40 months–6.5 years, along with a couple more from older animals. This contrasts with the middle Iron Age sample, which produced a group of younger specimens (0–28 months) and an older group (5–16 years). The samples are too small to suggest any meaningful change in husbandry practice but together can be compared with the combined Roman sample (Fig. 41i, Graph 19). This is fairly similar to the bimodal middle Iron Age sample, with a younger group (0–28 months) and a slightly larger, older group (40 months–20 years+). The similarity between the middle Iron Age and Roman samples is indicated by the respective cull profiles (Fig. 41i, Graph 20).

4.1.32 A total of seven neonatal cattle bones were recovered from seven contexts (Table I45). All date to the Iron Age, with four having derived from middle Iron Age contexts. Elements include maxilla, radius, ulna, femur, tibia and metatarsal bones. The presence of this number of neonatal cattle bones from a range of contexts attests to the good level of recovery during excavation and suggests that cattle breeding and rearing was occurring at the site in the Iron Age. The corresponding absence of neonatal cattle bones from Roman features may be significant.

Butchery

4.1.33 Cattle bones were far more commonly found with butchery marks than other taxa (Table I46). A total of 74 butchered cattle specimens were identified, 30 from Iron Age features, 37 from Roman features and seven from Anglo-Saxon pits. Table I47 shows the breakdown of butchered cattle specimens by period and by mark type (some specimens include more than one type of mark) and includes vertebrae, ribs and long bones shafts identified as ‘large mammal’.

4.1.34 For Iron Age specimens, knife cuts were observed on twice as many specimens as chops or other mark types. Butchery is most commonly found on mandibles, pelves and ribs in this period. Cut marks focused on the metapodials and phalanges derived from skinning, while defleshing cuts were noted on long bones such as the femur,

humerus and pelvis, while chopping of the scapula and pelvis, for example, is likely to reflect disarticulation of the carcass.

4.1.35 In the Roman assemblage, butchery marks were most commonly observed on the skull, scapula and radius. Cut marks were often seen close to the horncore bases, but it was difficult to identify whether these are purely skinning marks or associated with removal of the horn, though none of the horncores had been cleanly removed. Chopping was particularly noted on the scapula, specifically around the glenoid and at the base of the spine. One scapula exhibits trimming marks along the dorsal side of the blade.

4.1.36 The Anglo-Saxon cattle assemblage has a higher proportion of specimens with chop marks but is a much smaller sample overall compared with the Iron Age and Roman assemblages. Butchery marks were noted on a skull fragment, a vertebra, two scapulae, a humerus, a radius and a pelvis fragment.

Pathologies

4.1.37 Only two cattle specimens exhibit pathological lesions (Table I48). Both belonged to broadly dated Roman features and include a tibia with a small region of bone degeneration on the tubercle tuberosity and a 1st phalanx with an area of exostosis lipping on the dorsal side of the distal end.

Size, shape and sex

4.1.38 Just over 300 measurements were taken from almost 100 cattle bones enabling information on size, shape and sex to be examined (Table I53). A total of 10 complete or almost complete long bones provided measurements that allowed for withers' heights to be calculated (Table I50). The majority of these are metatarsal bones that could not be sexed as either female or male. Since sex differentiation is required for accurate withers' estimations to be calculated on cattle metapodials using von den Driesch and Boessneck's (1974) factors, heights for both females and males have been given here. Withers' heights based on the Iron Age metatarsals range between 986.5–1024.6mm for females and 1004.6–1054.5mm for males respectively. These are complimented by a taller individual (1110.0mm) estimated from an unsexed metacarpal. Heights calculated from the Roman specimens suggest the presence of slightly taller cattle with some overlap in size with the Iron Age group. The size range measures between 1008.0–1193.6mm for females (which include one certain female metacarpal) and 1065.6–1215.5mm for males. While a general increase in height over time can be suggested, the lack of sexing information hinders our understanding of potential differences between the Iron Age and Roman groups.

4.1.39 Estimation of sex can be considered through biometric analyses alongside a small number of pelvis bones that were sexed on non-metric criteria (Table I49). These include one male middle Iron Age specimen, single female and male specimens dated to the Roman period, and one male Anglo-Saxon example. While male cattle were more commonly identified by non-metric traits, female cattle appear to have been more frequently represented by biometric data. One metacarpal specimen is complete enough for the distal breadth/length ratio to be calculated, giving a factor of 28.6, which according to Howard's (1963) work suggests that it was from a female (<30).

Analysis of the distal breadth (Bd) versus the depth of the distal fusion point (Ddf) in this specimen and two other metacarpals with complete distal ends was compared to sexed individuals from Grove Airfield (OA 2021a), with all three plotting within the female size range and clearly separate from several of the Grove males (Fig. 41k, Graph 24). Measurement of the distal metacarpal is a good differentiator of cattle sex (cf Maltby 2010, 147–8).

4.1.40 A high proportion of females is also suggested by the distribution of humeral trochlea measurements (Fig. 41l, Graph 25). These data show a clustering of specimens that measure between 60mm and 66m along the breadth (BT) and 26mm and 30mm across the height of the trochlea constriction (HTC). Five are dated to the Iron Age and another five to the Roman period. One slightly larger individual came from a Anglo-Saxon context, and two notably larger specimens derived from Iron Age and Roman contexts.

4.1.41 A less-clear separation was observed when comparing the breadth (Bp) and depth (Dp) of proximal metacarpals (Fig. 41l, Graph 26). These data divided into three groups, measuring along the breadth at 45–49mm, 52–54mm and 55–59mm. It seems likely that the smallest and largest groups represent cows and bulls respectively, while the central group could feasibly belong to either sex. Distal tibiae measurements are evenly distributed but with no clustering that might suggest sexual dimorphism (Fig. 41l, Graph 27). However, three outliers include two small specimens dating to the Iron Age and Anglo-Saxon periods and one exceptionally large specimen of Roman date.

4.1.42 Numerous cattle horncores, mainly dating to the Roman period, allowed for examination of horn size and shape. A correlation exists between the length of the outer curve (OC) of the horncore and the circumference around the base (BC) (Fig. 41m, Graph 28). Four Iron Age specimens were found to have comparatively short horns (<120mm) with narrow circumferences (<130mm). Five Roman horncores plotted with the Iron Age group, while six have longer outer curves (>135mm): three within the upper range of the Iron Age basal circumference and three with broader circumferences (149–175mm). Another late Roman specimen has a comparatively broad basal circumference measuring 152mm but could not be measured along the outer curve.

4.1.43 An even more consistent correlation was observed when comparing the basal circumference with the minimum basal diameter (BB), which shows seven Roman specimens and two Anglo-Saxon specimens with narrow circumferences and minimum diameters of less than 35mm plotting alongside the Iron Age group (Fig. 41m, Graph 29). These are separate from a group of four Roman and one Anglo-Saxon specimen that had distinctly larger bases. Analysis of the ratio of the minimum basal diameter to the maximum basal diameters (BB/BA*100) provided an indication of horncore shape (Fig. 41m, Graph 30). The Iron Age specimens tend to have proportionately low minimum diameters, suggesting that these horncores were comparatively more oval in shape. The Roman specimens range from those with more oval horncores to a greater number with proportionately higher minimum diameter ratios and thus rounder shapes. The Anglo-Saxon horncores plotted alongside the rounder Roman group.

Sheep/Goats

Skeletal representation

4.1.44 As discussed above, sheep/goat remains are comparatively well represented when anatomical zones are taken into account, suggesting the bias towards cattle is caused by excessive fragmentation. All parts of the body are represented in the Iron Age and Roman assemblages, although there is considerable variation in the relative abundance of different elements, caused by different taphonomic factors. The distal tibia is the most common element in all the Iron Age groups (Tables I11–I13). In the early Iron Age assemblage, mandibles, distal humeri, proximal radii and metatarsals are represented by more than 50% of the total MNE, alongside the tibia, while metacarpals are also fairly well represented. The same range of elements are best represented in the middle Iron Age phase but at lower rates of %MNE.

4.1.45 The smaller sample sizes of the Roman sub-phases means that it is more difficult to directly compare the MNE data at this level, though these samples are also dominated by the distal tibia indicating the robust character and identifiability of this element (Tables I14–I16). When the combined data from the Iron Age and Roman assemblages are compared, the pattern of %MNE for each element is almost identical (Fig. 41f, Graph 13). These data further highlight the similarity in which taphonomic factors impacted material in both periods.

Ageing

4.1.46 Epiphyseal fusion data are fairly abundant for the Iron Age assemblage (Tables I32–I34). Unfused elements are present in each of the three age stages in early and middle Iron Age contexts. In the earliest stage (3–10 months), unfused proximal radius, scapula, pelvis, 1st and 2nd phalanx specimens (accompanied by a distal humerus from an Iron Age context) suggest some deaths of lambs in their first year. The proportion of fused specimens in the middle age group (15–36 months) increased in the early Iron Age but decreased in the middle Iron Age (possibly biased by the small sample). However, the combined Iron Age data suggest an increase in lamb deaths by almost double owing to a high proportion of unfused distal metapodials. The rate remained similar in the later age group (36–42 months), with unfused specimens of each of the elements being represented.

4.1.47 The Roman assemblage is represented more poorly by material from early/middle and late Roman contexts (Tables I35 and I36). However, the combined data from Roman contexts enabled a comparison with the Iron Age assemblage where a lower percentage of fused elements is present in each age group (Table I37; Fig. 41h, Graph 18). Thus, culling of young sheep/goats appears to have been more intensive during the Iron Age in the first, second and third years, up to 42 months, compared with the Roman period.

4.1.48 The epiphyseal fusion results are supported strongly by a similar pattern exhibited by the dental ageing data (Table I43). The combined Iron Age sample indicates a marked kill-off of young sheep/goats between the ages of 1–3 months and 20–36 months, with just a few specimens from older animals (Fig. 41j, Graph 21). In contrast, the combined Roman data, while exhibiting a small number of animals being culled up to 24 months

old, have a clear focus of culling at 20–36 months and 2.5–4.5 years, suggesting the maintenance of sheep/goats to older ages. This is also supported by the presence of several specimens recorded in the oldest age group (e. 8–e. 13+ years) in the Roman assemblage, which are otherwise absent in the Iron Age sample. The difference in the pattern of culling is demonstrated by the data curves shown in Figure 41j, Graph 22.

4.1.49 The excavation produced a relatively large number of perinatal sheep/goat bones, including one positively identified as goat (Table I45). These include both foetal and neonatal individuals, and it was not always possible to distinguish between pre- and post-birth animals. The majority of the perinatal remains, 13 in total, derived from Iron Age contexts, including both early and middle Iron Age examples. Each context produced single bones, except for one (fill 81 of pit 79/121) that produced two specimens. Seven Roman contexts produced single neonatal specimens, including two that were phased as late Roman, while one produced the goat bone. A range of elements are represented by the perinatal material in both periods, including the mandible, scapula, humerus, radius, ulna, femur, tibia and metatarsal.

Butchery

4.1.50 A total of 16 sheep/goat bones were identified with butchery marks, eight each in the Iron Age and Roman assemblages (Table I46). Three of the Iron Age specimens are tibia fragments with cut marks on the shaft, while one femur has similar marks on the shaft. Two pelvis specimens exhibit cut marks, one on the pubis and one on the dorsal ridge between the ilium and the ischium. A metacarpal had been chopped through at the distal end to remove the toes. Perhaps the most interesting specimen is a perinatal metatarsal fragment that had yet to fuse down the centre but had a possible cut mark on the anterior of the shaft.

4.1.51 The Roman assemblage includes an axis with superficial chops on the ventral side (posterior-anterior) made when removing the skull after the severing of the neck. Two pelvis fragments exhibit cut marks, one around the acetabulum and the other on the ilium. Cut marks were also observed on a humeral trochlea, a femur shaft, a tibia shaft and on the lateral side of a mandible ramus.

Pathologies

4.1.52 Four sheep/goat specimens exhibit pathological lesions (Table I48). Two Iron Age specimens include a radius with some ossified tissue around the proximal end and a mandible with alveolar degeneration around the 1st molar. The Roman specimens are both mandibles, one with similar degeneration to the Iron Age specimen and the other with some malocclusion on each of the permanent molars.

Size

4.1.53 A total of 116 measurements were taken from 36 sheep/goat specimens (Table I53). Five metapodials are complete enough for their lengths to be measured and withers' heights to be estimated, consisting of two from Iron Age contexts and three from Roman contexts (Table I51). These estimate at between 535.5mm and 602.9mm, which fall within the ranges commonly cited for sheep/goat remains recovered from

late Iron Age and Romano-British sites, although generally towards the lower end (Allen 2017, 105).

4.1.54 Because of the comparatively small number of sheep/goat measurements, those presented here have been examined against Roman-period data from Grove Airfield (OA 2021a). Analysis of the proximal metacarpal suggests the presence of two clusters of specimens and one larger outlier (Fig. 41n, Graph 31). One group of eight specimens plotted between 18.5–20.0mm across (Bp) and 12.5–15.2mm deep (Dp), while the second group of three specimens (two from Grove Airfield) were notably broader at *c* 21–22m across and 15–16mm deep. These results perhaps suggest that the division relates to sexual dimorphism. The single outlier from Grove Airfield, which measures almost 24.5mm across, was tentatively identified as a goat, which might explain the broad stature of this individual.

4.1.55 Two possible clusters were also noted in the proximal metatarsal measurements, separating prominently on the breadth measurement (Fig. 41n, Graph 32). The smaller group contains Iron Age and Roman specimens and specimens from Grove Airfield, ranging between *c* 18.0–17.5mm in both breadth and depth. The larger group includes one Roman specimen that is just below 19mm across along with six Grove Airfield specimens that are all broader than 19mm and all have depths of greater than 18mm with two over 20mm. As with the metacarpal results, these data may also indicate sex differences. If so, the Sutton Courtenay Lane specimens suggest a prominence of females, while males may have been more common at Grove Airfield. A correlation between the distal breadth and depth of tibiae was also observed, though no distinctive clustering was apparent in these measurements.

Pigs

Skeletal representation

4.1.56 Pig remains were not abundant enough to provide robust skeletal representation data. Iron Age data can be viewed by phase, although the numbers from the early and middle Iron Age phases are too few to discern any clear patterns (Tables I17 and I18). Combined Iron Age data suggest a dominance of scapulae (100% MNE), mandibles (87.5%), tibiae (87.5%) and ulnae (62.5%) (Table I19). These elements are often well represented in pig assemblages, owing to their comparatively robust morphology, which biases towards their preservation. Multiple examples of pelves, radii, calcanei and metapodials are also present.

4.1.57 Roman-period data highlights a dominance of tibiae (Table I20). Only mandibles and scapulae register 50% or more in terms of MNE. Front-limb elements tend to be more frequent than those of the hind limb, although the numbers are insignificant (Fig. 41g, Graph 15).

Ageing

4.1.58 Very few pig specimens are complete enough to provide epiphyseal fusion data. The Iron Age and Roman samples both lack elements in the late fusing groups, making it impossible to identify animals aged 36–42 months or older from post-cranial remains (Tables I38 and I39). A relatively high proportion of unfused elements in the early and

middle fusing groups are present in the Iron Age assemblage, suggesting a cull of about one-third of the population in the first year and up to 2.5 years old respectively.

4.1.59 Dental ageing data are also sparse for pigs, amounting to seven Iron Age specimens, two Roman specimens and one Anglo-Saxon specimen (Table I44). The Iron Age data largely support the epiphyseal fusion data for culling of animals less than one year old and up to two years old. One middle Iron Age specimen was aged at 3–5 years, providing evidence of some older animals. One of the Roman specimens is from a perinatal animal, providing evidence that pigs were being bred on site or nearby (see also Table I45). The Anglo-Saxon specimen was from a notably older animal over six years old.

Butchery

4.1.60 Six pig specimens were found with butchery marks (Table I46). Five came from Iron Age features, including a scapula with cuts around the neck, a scapula with cuts on the blade and a chop mark on the spine, a pelvis with deep cuts on the ilium, an ulna with cuts on and around the articulating surface, and an atlas bone with several heavy chop marks on the ventral side suggestive of beheading. A scapula with cut marks around the neck derived from a Anglo-Saxon context.

Sex

4.1.61 Sexing data was gathered from entirely from canines (Table I49). Two early Iron Age specimens represent female and male animals respectively, while Roman specimens are represented by two females, a probable female and two males.

Horses

Skeletal representation

4.1.62 Horse bones in the early Iron Age assemblage are inclined towards elements of the fore limb, particularly the humerus, but also the ulna, scapula and radius (Table I21). The middle Iron Age assemblage is more diverse in terms of elements represented with both fore- and rear-limb bones present (Table I22). In this group, the pelvis is the best represented element; however, femora are absent, which suggests that recovery bias and the sample size is an issue. Horse bones were not abundant enough to examine the early/middle Roman sample. The late Roman sample was better represented, with both fore- and rear-limb bones present, but also suffered from a small sample (Table I24). Comparison of the combined Iron Age and Roman assemblages indicates some variation in skeletal representation, notably the higher relative abundance of fore-limb bones, with fewer surviving bones of the rear limb such as the tibia, astragalus, calcaneus and metatarsal (Fig. 41g, Graph 16). The Roman assemblage exhibits a less-marked but similar bias towards the front limb, although it is biased by a dominance of 10 metacarpal bones representing at least five horses (Table I25).

Ageing

4.1.63 Epiphyseal fusion data for horses are fairly limited. In the Iron Age assemblage, early (9–12 months) and middle fusing (12–24 months) elements are all skeletally mature (Table I41). The immature bone from the late fusing group is a proximal ulna, which derived from an animal less than 42 months old. Data from the Roman assemblage is almost identical to the Iron Age sample, including a single, late fusing proximal tibia (Table I42). Although a few young horses may have been kept and exploited at the site, there is no evidence that horses were bred here.

Butchery

4.1.64 A total of 13 horse bones exhibit butchery marks (Table I46). Seven date to the Iron Age, of which six are middle Iron Age while none were recovered from early Iron Age features. These include a scapula with cut marks around the neck and another that had been chopped through the ventral side, a pelvis with long cuts along the medial side of the ilium from defleshing and a radius with a cut on the anterior shaft. Two metapodial have cuts on the shafts from skinning, while another had been sawn through horizontally near the proximal end, possibly indicating that the bone was going to be further worked.

4.1.65 The Roman material includes mostly pelvis specimens with cut marks and one with a superficial chop on the acetabulum. An astragalus has several cuts on the lateral side. A tibia has two superficial chops on the shaft, and a radius has a scoop mark made by a heavier blade being run along the shaft towards the proximal end.

Pathologies

4.1.66 Two horse specimens exhibit pathological lesions. This consist of a 2nd phalanx with an osteophyte and some cortical degeneration on the dorsal surface, and a lower molar with pitting on the buccal of the posterior cusp, possibly signifying an area affected by bacterial infection.

Size and shape

4.1.67 A total of 107 measurements were taken from 30 horse bones (Table I53). Seven long bones are complete enough for withers' heights to be calculated, three from Iron Age contexts and four from Roman contexts (Table I52). These range between 1250.9–1278.5mm and 1189.9–1311.9mm respectively, and both compare similarly to heights recorded at other contemporary sites, although there is a lack of the taller equids sometimes found at Roman (Allen 2017, 129). This is notable when the data are compared with Roman horse withers' heights calculated at nearby Grove Airfield (Fig. 41p, Graph 37). These range from *c* 1180mm up to *c* 1440mm and include an outlier that was found to be taller than 1540mm, thought likely to have been a castrated horse or mule (OA 2021a). Withers' heights can be compared with the results from shape analyses to stockiness in relation to height in horses. Ratios of the proximal breadth versus the greatest length of the metacarpal suggest that two Roman horses were notably broader than a group of four that plotted together in terms of shape and height (Fig. 41p, Graph 37). One of the stockier individuals was no taller than the main group at *c* 1250mm, while the second individual was around 60mm taller.

4.1.68 Measurements of the humeral trochlea show two clusters of individuals (Fig. 41o, Graph 34). Five smaller specimens—four Iron Age and one Roman—measure between 64–66mm along with breadth of the trochlea and between 29–33mm at the height of the trochlea constriction, the group together exhibiting minimal variability. A second, larger group measures 70–76mm and 37–39mm, respectively, and exhibits much greater variability along the breadth of trochlea. The two largest examples date to the Roman period, while the other two are Iron Age and Anglo-Saxon in date. It is possible that these differences/clusters relate to sexual dimorphism, although this has not been proven for horses. Measurement of the proximal metacarpals shows good correlation between the maximum breadth and depths of these bones (Fig. 41o, Graph 35). However, there is less distinctive clustering than was observed in the humeral trochleae, although the smallest specimens (Iron Age and Roman) plot fairly tightly, while the larger specimens (all Roman) spread out to a greater degree. These data perhaps suggest that the Roman period either saw the introduction of some larger horses or that male horses were more often exploited at the site in the Roman period.

Dogs

4.1.69 A total of nine dog bones were recovered from Iron Age contexts, all of which were disarticulated and dispersed across separate contexts. These include four mandible specimens, three teeth, a pelvis and a skull fragment.

4.1.70 The 24 dog bones found in Roman contexts are biased towards groups of elements discovered in ditch 1696 (fill 1348) and ditch 1697 (fill 800). Each of these represent the remains from a minimum of one animal and may be considered as associated bone groups, although the remains were not found in articulation. Ditch 1696 contained a scapula, two ribs, a tibia and a fibula, while ditch 1697 contained radius, ulna, pelvis and femur fragments. Although these ditch numbers are consecutive, the excavated interventions that produced the dog bones were spatially separate.

4.1.71 Seven dog bones were recovered from Anglo-Saxon pit 1121, all potentially from the same animal, though none of the bones were found in articulation. These include an axis, a mandible, two lower canines, a scapula, a pelvis and a tibia.

4.1.72 All the dog bones recovered were from skeletally mature animals, and there is no evidence of juveniles in the assemblage.

4.1.73 Three dog bones were found with butchery marks, two from Iron Age contexts and one from a Roman context (Table I46). All are mandibles displaying knife cuts made during skinning. One mandible from early Iron Age roundhouse ditch 1680 exhibits several cuts along the ventral surface below where the 1st molar is positioned. A mandible found in middle Iron Age 1705 ditch exhibits one deep cut at the base of the ascending ramus on the lateral side. A mandible found in Roman ditch 1708 has a small cut on the ventral side of the ramus, anterior to the molar row.

Discussion

Iron Age

Livestock husbandry and wild animal exploitation

4.1.74 As with most Iron Age rural settlements in this period, animal husbandry centred around the management of sheep and cattle, with evidence for goat, pig and horse exploitation as well (Hambleton 2008). If NISP counts are viewed in isolation, cattle appear to be the most common livestock. However, comparison of taxonomic representations through MNI calculations suggest that this is a misleading result. When zonal recording of elements and fragmentation are taken into account, sheep/goat remains considerably outnumber those of cattle. This demonstrates the importance of examining and comparing the results of both quantification methods at individual sites.

4.1.75 A relatively high number of perinatal sheep/goat bones highlights the good levels of preservation and recovery of the assemblage, but it also shows that breeding and rearing was undertaken at the site and emphasises the economic importance of these livestock to the settlement. Ageing data recorded from post-cranial and dental specimens indicate that sheep/goats were often killed at fairly young ages, particularly within the first and third years, which may suggest an annual culling strategy of lambs and older juveniles. The reasons behind this pattern are likely to reflect a host of social and economic concerns but perhaps indicate the presence of a fairly large flock that would have otherwise been difficult to maintain over the winter and thus required a certain number of younger animals to be removed each year. Biometric data suggest that ewes were more common than rams, which would reflect a 'normal' flock structure in terms of sex but does not take account of any possible trade and exchange of livestock into and out of the settlement. Wool was no doubt an important product, and on-site textile manufacture is demonstrated by the two Iron Age bone weaving combs recovered during the evaluation (see *Worked bone and antler*).

4.1.76 Cattle husbandry appeared to have some focus on the maintenance of mature/older animals. While cattle may have been yoked to the ard plough, there are no signs of traction pathologies on the foot bones that might suggest overworking and intensive arable production. It is perhaps more likely that cattle were kept in a relatively small herd that was moved around to different pastures through the year. A small number of neonatal cattle bones, although not as prevalent as sheep, would suggest the presence of a locally bred herd.

4.1.77 Pigs were fairly rare and may have been kept in small numbers and bred near the site, with both young and older animals represented in the assemblage. Horses, too, appear to have been of some importance. Although there is evidence of a juvenile horse, this individual was not young enough to indicate on-site breeding.

4.1.78 Hunting and wildfowling were not undertaken to any great degree. The presence of a poorly preserved red deer antler is not evidence of hunting but may have been a shed specimen brought into the site for working. The identification of the hare radius is only tentative, while the presence of a goose bone indicates very occasional exploitation of local wetland.

Carcass processing, consumption and disposal

4.1.79 As mentioned above, cattle may have been kept in small numbers primarily for their meat. However, the potential presence of a small herd suggests that culling was undertaken on a relatively limited basis and was not an 'everyday' occurrence. Also, if

it is accepted that the culling of sheep/goats was more often undertaken on an annual basis to alleviate pressures from overwintering, this would suggest that meat from livestock was mostly eaten at specified times of the year and/or for special occasions.

4.1.80 Butchery marks suggest low-intensity methods of carcass processing using knives, although some chopping of major joints indicates a degree of dissection, and this was noted on bones of cattle, sheep/goats and pigs. Cut marks found on horse limb bones also suggest that horse meat was consumed on a limited basis in the early and middle Iron Age.

4.1.81 There is no good evidence for horn extraction from cattle or sheep/goats. Cut marks around the foot and toe bones indicate skinning and possibly suggest that hides from cattle and sheep/goats were exploited, as were the skins from horses as suggested by cut marks on metapodials. The discovery of two dog mandibles with cut marks also strongly suggests that furs were exploited.

4.1.82 The distribution of bones in different features provides some information about the spatial structuring of particular activities throughout the settlement and potentially about different consumption practices. Material recovered from roundhouse ditches revealed a strong bias towards sheep/goats, which were almost twice as common (NISP) as cattle bones in these features, while pig bones were also well represented. In contrast, cattle and horse bones were relatively more common in enclosure ditches, while pits produced an exceptionally high proportion of cattle bones, being almost three times as common as sheep/goat bones. The high proportion of cattle and horse remains in enclosure ditches is expected, but the patterns demonstrated by roundhouse ditches and especially pits are more unusual (cf Maltby 1985; Wilson 1996) and likely reflect spatial patterns of processing and discard at the settlement during the Iron Age. The high proportion of sheep/goat remains in roundhouse ditches is suggestive of the accumulation of finer debris from activities associated with individual households and less likely to include waste from primary cattle and horse butchery of larger mammals, which was more often disposed of in ditches further from household settings. The high proportion of cattle in pits is intriguing and may relate to specific episodes of carcass disposal that differed to the manner in which roundhouse ditches accumulated household waste over time, perhaps being used more often for the remains leftover from communal feasting. Thus, the differences in feature-use may relate to different private and public activities within the settlement.

Roman

Livestock husbandry and wild animal exploitation

4.1.83 Similar patterns of taxa representation are notable between the Iron Age and Roman assemblages. Although the site was clearly reorganised very differently in the later period, patterns of livestock exploitation appear in many respects to have remained rather similar. The relative frequency of sheep/goat bones compared to cattle in both NISP and MNI calculations are very similar, again perhaps suggesting the greater reliance of sheep. Sheep/goat breeding continued to be practised on site, as evidenced by perinatal bones from both species, and although not as frequently

encountered as in the Iron Age assemblage, they are at least present in some number while neonatal cattle bones are absent in the Roman assemblage.

4.1.84 A key aspect of the sheep/goat assemblage, however, is a potentially significant change in the ageing patterns, evidenced by both post-cranial and dental specimens, which suggest that animals were being maintained to older ages in the Roman period. A reduction in the proportion of lambs slaughtered within their first two years is evident and coincided with an increase in the number of animals killed between 20 months–4.5 years old, particularly towards the latter end of that range. These are accompanied by several specimens indicating the maintenance of some fairly elderly animals (*c* 8–13 years +), which are otherwise absent from the Iron Age assemblage. As with the Iron Age assemblage, multiple decisions are likely to have lay behind the culling of sheep at different ages, but the general trend seen here would apparently point towards an increased emphasis on wool production. As noted above, however, wool production was clearly important in the Iron Age, so perhaps the Roman-period data more accurately reflect changes to the size and perhaps structure of sheep flocks. One possibility could have been a move from one large flock that was communally managed and required annual culling within the Iron Age settlement towards the maintenance of several smaller flocks by individual households during the Roman period. In the latter, the site appears to have more likely taken the form of a nucleated settlement with multiple enclosures focused on the trackway, allowing for stocking and transport of animals.

4.1.85 Data for cattle represent a bimodal distribution of aged dental specimens, with some infant and juvenile animals being culled (0–28 months) and a larger number of specimens at older ages (40 months upwards), with none apparently in between these ages. Although not a large sample, the pattern perhaps suggests a fairly small herd maintained for meat and dairy. Cows appear to have been more common than bulls, and it is possible that young bulls were culled at an early age to enable milk exploitation. Several Roman pottery vessels from the site exhibit post-firing holes, and while some may have been for suspension, others were made towards the base of the vessels suggesting a drainage function, possibly for cheese production (see Roman pottery). As in the Iron Age, there is very little evidence for traction-related pathologies (one phalanx with mild exostosis lipping could have occurred through age-related degeneration). This suggests that cattle were not intensively used on the plough as has been seen at other contemporary rural sites, where such pathologies and a prominence of bulls have been a phenomenon (eg Allen 2017, 112–3; OA 2021a).

4.1.86 Local pig breeding and husbandry likely continued much in the same way that it did in the Iron Age, evidenced by the presence of both female and male pigs and some perinatal bones. The same can be said for horses, bones of which occurred in similar proportion, while only one late-fusing element suggests the presence of a juvenile but not necessarily on-site breeding.

4.1.87 Evidence of wild animal exploitation is rare in the Roman assemblage, as it was in the Iron Age. The presence of the butchered deer skull is clear evidence of a hunted animal, and it was possibly exploited for its meat and its antler, although it is not clear

whether the antler had fully shed by the time the deer had been killed. The presence of two duck bones equally suggests limited wildfowling.

Carcass processing and consumption

4.1.88 Although butchery patterns did not appear to change in any significant way, there are limited signs of the introduction of heavy blades, most notably for filleting raw meat as evidenced by some long bones exhibiting scoop marks along the shaft (cf Maltby 2007). The consumption of horse meat on a limited scale is evident and suggests further similarity (if not continuity) with Iron Age practice. A butchered horse pelvis indicates dissection and meat removal, while a radius with the characteristic scoop mark mentioned above suggests filleting. This type of butchery indicates that meat was more often cooked and eaten off-the-bone than it was in the Iron Age, when joint roasting may have been more common.

4.1.89 The presence of a dog mandible with a cut mark also chimes with the two specimens found in Iron Age features and indicates the processing for furs. The presence of two associated groups of dog bones may represent disturbed burials.

Saxon

4.1.90 The Anglo-Saxon assemblage was recovered entirely from three pits and contained evidence of processing of cattle, horse, sheep/goat and pig bones. Cattle and horse bones predominate, although the MNI counts suggest that the overall number of animals present were fairly similar for each taxa. Butchery marks are present on cattle and pig bones. Measurements are limited but suggest that animals did not vary in size much from those found in the Iron Age and Roman assemblages.

4.2 Human skeletal remains *by Iulia Rusu and Louise Loe*

Introduction

4.2.1 This report details the full analysis of 14 articulated inhumations, two burnt bone deposits, and a number of disarticulated unburnt bones from three contexts. Articulated inhumations include Iron Age skeleton (SK) 1498, three late Iron Age/early Roman skeletons, seven Roman skeletons, early–middle Anglo-Saxon SK 247 and unphased SKs 223 and 525. The disarticulated bones were from Roman features, including one phased as late Iron Age/early Roman, and comprise a total of seven bones. The burnt bone, also Roman in date, includes one urned (1144) and one unurned (1142) deposit from pit 1141.

Methodology

4.2.2 Analysis was undertaken in accordance with the guidelines set out by Mitchell and Brickley (2017) and Historic England (2018). Different methods applied to the articulated skeletons and the burnt bone deposits.

4.2.3 Articulated skeletons were scored to record their condition (grade 0–5+; after McKinley 2004, 16), completeness (0–25%, 26–50%, 51–75%, 76–100%) and degree of fragmentation ('low', <25% of the skeleton fragmented, 'medium', 25–75% of the skeleton fragmented, or 'high', >75% fragmented). Relevant standards for the

estimation of sex (Phenice 1969; Buikstra and Ubelaker 1994) and age (Miles 1962; 2001; Moorrees *et al.* 1963; Brothwell 1981; Lovejoy *et al.* 1985; Brooks and Suchey 1990; Buckberry and Chamberlain 2002; Scheuer and Black 2000) were employed. Non-metric traits were recorded following Buikstra and Ubelaker (1994) and Mann *et al.* (2016), and stature was estimated by employing the maximum length of available complete long bones and applying them to the regression equations devised by Trotter and Gleser (1952; 1958) and revised by Trotter (1970). Bones with the lowest error margin were used, and in keeping with standard convention, calculations that used measurements from the left side were employed over those from the right side. Where possible, the platymeric and platycnemic indices were calculated as indicators of proximal femur and tibia shaft shape.

4.2.4 Unurned cremation deposit 1142 was fully excavated in the field. Urned cremation burial 1144 was lifted and excavated in the laboratory in three spits (numbered 1 to 3): an upper (sample 53), middle (sample 54) and lower (sample 55). The bone from both contexts was wet sieved and sorted into fractions of >10mm, 10–4mm, 4–2mm and 2–0.5mm. As standard, bone recovered from the >10mm, 10–4mm and 4–2mm fractions was separated from extraneous material, which included flint fragments and pebbles. Fractions of 2–0.5mm were inspected macroscopically to estimate the bone content only.

4.2.5 The burnt bone was analysed to record colour, weight and maximum fragment size. Each sieve fraction was examined for identifiable bone elements and the presence of pyre and/or grave goods. Deposits were also examined to estimate the minimum number of individuals (MNI) present, based on the repetition of elements and/or the presence of adult and juvenile bones. Sex and age were also considered, with reference to the methods described above.

4.2.6 All human skeletal remains were examined for pathology and trauma and, where present, was described and differential diagnoses explored, with reference to standard texts (Aufderheide and Rodríguez-Martín 1998; Ortner 2003; Roberts and Connell 2004). Lesions were classified as either: congenital/developmental, non-specific inflammation/infection, specific infection, metabolic conditions, joint disease, trauma, circulatory disease, neoplastic disease or miscellaneous and undiagnosed conditions.

Phase 1: Early and middle Iron Age

SK 1498

4.2.7 This juvenile was found in the fill of a middle Iron Age roundhouse ditch (1681). Between 0% and 25% of the skeleton has survived, including remains of the right femur, left tibia and a limited number of skull fragments. Fragmentation of bones was judged to be low, and the bones generally lack post-mortem surface erosion, consistent with McKinley's (2004, 16) grade 1.

4.2.8 The individual was a neonate (between 40 weeks in utero and 1 month old), based on post-cranial measurements (Scheuer and Black 2000). No dentition was recorded, and no pathology was observed.

Phase 2: Late Iron Age and Roman

4.2.9 The late Iron Age and Roman assemblage comprises six adult (SKs 364, 426, 428, 450, 531, 707 and 1570) and three juvenile (SKs 271, 997 and 1105) articulated inhumations, four disarticulated bones (SKs 709, 710, 711 and 712) found overlying SK 707, three disarticulated bones (931, 1535 and 1575) from ditches and two cremation deposits (1142 and 1144) from one pit.

4.2.10 SKs 271, 364, 1570 and disarticulated bone 1535 all date to the late Iron Age/early Roman period (Phase 2.1), while the others all date to later Roman phases. SK 1570 is described here in detail, owing to the extensive level of pathology and trauma observed on the skeleton, while all the others are presented as a group at the assemblage level. Osteological observations are summarised for each skeleton/bone/cremation deposit in Appendix J (Tables J1–J5) and presented below by type (articulated skeletons, disarticulated bone and cremation deposits).

SK 1570

4.2.11 SK 1570 was recovered from the fill of ditch 269/896 and was lying on their left-hand side in a crouched position with their head towards the north-east. The grave was shallow, having been truncated by modern activity.

4.2.12 Between 76% and 100% of this skeleton is present. In general, the skeleton shows only low levels of fragmentation, but where present, it is primarily concentrated in the lower region of the skeleton. Bone surfaces are relatively uneroded, consistent with McKinley's (2004, 16) grade 1. The preservation of the skeleton was judged to be good overall.

4.2.13 Morphological traits of the skull and pelvis, and post-cranial measurements, indicate that the skeleton is female. The individual was estimated to have been 25–36 years of age (prime adult), based on the appearance of the pubic symphysis and dental attrition.

4.2.14 Cranial non-metrics include an ossicle on the left lambdoid suture, bilateral parietal foramen, absent zygomaticofacial foramen on the left zygomatic bone, an open left posterior condylar canal and a double left anterior condylar canal. Post-cranially, bilateral lateral bridges were identified on the atlas, medial squatting facets were identified on the tibiae, and there was a lateral squatting facet on the left tibia.

4.2.15 Fragmentation precluded detailed metrical analysis of the skeleton, but bones were sufficiently intact for the calculation of stature and the platymeric index. Measurement of an intact right fibula indicate a stature of 145.17cm ± 3.57cm, or 151cm (*c* 4 foot 11 inches). This is relatively short, compared with the mean of 159cm (*c* 5 foot 3 inches), calculated for females from a number of sites in Roman Britain (Roberts and Cox 2003, 142). The platymeric index, which expresses the degree of flattening of the femur shaft, is 68.97cm, placing the individual in the platymeric range, reflecting flattened (anterior to posterior) femur shafts.

4.2.16 No maxillary teeth or tooth sockets are present. The mandibular dentition comprises 14 teeth and 15 tooth sockets. All of the teeth exhibit slight to medium deposits of calculus (after Brothwell 1981). In addition, one small occlusal caries was identified on the right second molar.

4.2.17 Several lesions of pathology and trauma were observed on the skeleton, classified as congenital/developmental defects, non-specific inflammation, ante-mortem trauma and peri-mortem trauma. Congenital/developmental defects include posterior vertebral fusion abnormalities and spondylosis. Both halves of the neural arches of the 11th and 12th thoracic vertebrae had failed to fuse. The 11th thoracic spinous process is hypoplastic (underdeveloped). In addition, the right side of the first sacral vertebra was not fused to the rest of the sacrum, consistent with partial/unilateral lumbarisation. Lastly, the neural arch of the fifth lumbar vertebra had separated at the level of the pars interarticularis from the body. This condition, known as spondylolysis, is thought to be a developmental or acquired stress fracture, secondary to chronic low-grade trauma (Leone *et al*. 2010).

4.2.18 Non-specific inflammation is evidenced by the presence of healed periostitis on the right femur and fibula in the form of localised lamellar bone. This lesion occurs when the periosteum (the fibrous sheath that covers bone) becomes inflamed, in response to infection, other disease or trauma.

4.2.19 Ante-mortem trauma includes fractures on the shafts of the left distal ulna and the left second metarcarpal. The ulna fracture was still healing when the individual died, while the metacarpal fracture, which was slightly misaligned and had no visible callus, had fully remodelled, suggesting it had been sustained some time before the individual died.

4.2.20 Peri-mortem trauma was observed on several bones, predominantly from the left side of the skeleton, including four left ribs (9th to 12th), two right ribs (possibly the 9th to the 11th), the left humerus, left radius and left innominate bone (Fig. 42). The lesions are all sharp and straight, consistent with bladed weapon injuries. On the humerus, the blade had fully penetrated the bone, completely separating the humeral head from the shaft at an oblique angle. The cut appears to have been delivered from behind the individual by a diagonal downward swing, starting from the lateral left side. All the other bones exhibit blade marks, identified as sharp, straight, V-shaped striations that had cut into the cortical bone but had not fully penetrated the bone. Five and three cuts were identified on the left and right ribs respectively, the features of which were obscured by post-mortem damage and soil in some cases, but their overall appearance indicates a combination of stabbing and a blow or blows. One cut is present on the posterior aspect of the distal end of the radial shaft; this location is consistent with trauma sustained when raising the arm to 'parry' a blow. In addition, two fine cut marks are present on the posterior aspect of the left ilium and the anterior iliac spine of the pelvis, measuring 23mm by 1mm and 3.5mm by 1.5mm respectively. The location of these cuts suggest that they were incapacitating injuries, perhaps delivered to the victim while they were lying on the ground or fleeing their attacker.

Other articulated skeletons

Preservation

4.2.21 Four of the nine skeletons were judged to be between 76% and 100% complete (SKs 271, 364, 531 and 707) and have most areas of the skull, axial and upper and lower limb bones present. SKs 428 and 1105 are between 51% and 75% complete,

represented by most skeletal regions but to varying degrees. SK 426, recorded as 26–50% complete, primarily comprises bones from the left side (left upper limb, left innominate and partial left lower limbs) and fragments of bone from the right side and axial skeleton (right hand vertebrae and sternum). The least complete skeletons, recorded as 0–25% complete, comprise a left foot and fragments of the right tibia, fibula and foot (SK 450), and remnants of skull, right ribs, left arm (humerus and ulna), pelvis (right and left ilium) and right femur (SK 997).

4.2.22 The bone surfaces of the skeletons are generally well preserved having undergone limited (SKs 271, 364, 426, 450, 531, 997 and 1105) or slight (SKs 428 and 707) post-mortem erosion, consistent with grades 1 and 2, respectively, of McKinley's (2004, 16) system. Most of the skeletons were relatively unaffected by fragmentation; only one (SK 450) had more than 75% of their bones affected.

Sex and age

4.2.23 Six of the skeletons are adults and three are juveniles (Table J1). Three of the adult skeletons are male (SKs 364, 531 and 707) and two (SKs 426 and 428) were recorded as possible male, as they lack sexually dimorphic traits. The sex of one skeleton (SK 450) could not be estimated because no indicators have survived. No attempt was made to estimate the sex of the juvenile skeletons, as there are currently no accepted macroscopic methods available (Mitchell and Brickley 2017)

4.2.24 Of the juveniles, two (SKs 997 and 1105) were aged between birth and 1 month old (neonate) and one (SK 271) was aged between 1 and 5 years (young child). The adult skeletons were estimated to have been aged 18–25 years (young adult; SK 364), 26–25 years (prime adult; SK 428) and 36–45 years (middle adult; SKs 531 and 707). SK 450 could not be assigned to an age category, other than adult (>18 years) due to the absence of age indicators.

Non-metric and metric data

4.2.25 Some cranial and post-cranial non-metric traits were recorded (Table J2) and are among those commonly observed in archaeological populations from all time periods. Non-metric traits are minor variants of phenotypic expression (Tyrrell 2000), resulting in small variations in human bone morphology that are not usually indicative of pathology. They may consist of extra bones in the cranium ('wormian' bones or 'ossicles'); retained sutures or variations in openings in bone (eg extra foramina) and in articular surfaces (for example, tibial squatting facets). Some of these variations have been found to have a heritable factor in their aetiology, suggesting some level of population affinity, while others have been linked to biomechanics and behavioural patterns. Until relatively recently, traits were used to explore family groups within cemeteries, but their heritability is now considered to be more complex than previously thought, with most not being readily definable (Tyrrell 2000, 289). The traits observed in the present assemblage include extra bones in the cranium, variations in openings in bone and in articular surfaces. Meaningful analysis of the prevalence and distribution of these traits in the assemblage is precluded by the limited the number of skeletons that could be observed for non-metric traits.

4.2.26 Stature was calculated for five skeletons by employing the maximum lengths of the left femur (SKs 364, 428 and 531) and the left humerus (SKs 426 and 707). The tallest individual was SK 428 at 179.67cm (*c* 5ft 10in), and the shortest individual was 165.99cm ± 4.45cm (*c* 5ft 5in). The femur is the most reliable bone for estimating stature with an error margin of ± 3.27cm, while the humerus is the least reliable bone with an error margin of ± 4.45cm.

4.2.27 The degree of flattening of the femur shaft, front to back (platymeric index), was calculated for four of the skeletons. Two (SKs 364 and 428) are platymeric, reflecting flattened (anterior to posterior) femur shafts, while two (SKs 426 and 531) are eurymeric, reflecting more rounded shafts. Calculation of the tibial shaft index, which reflects the degree of medio-lateral flattening of the shaft (platycnemic index), was undertaken for four skeletons. Two skeletons (SKs364 and 707) are eurycnemic (flattened front to back) and two (SKs 428 and 531) are mesocnemic (rounded).

Dental status

Juvenile dentitions

4.2.28 The dentitions of all three juveniles were preserved, all of which comprised sockets and teeth (Table J1). In total, there are 21 teeth, including 20 deciduous and one permanent. Forty teeth are unaccounted for due to missing jaws; no teeth had been lost ante-mortem. Nineteen tooth spaces/sockets have survived.

4.2.29 No pathology is present on the juvenile dentitions. The mandibular central incisors of SK 271 are slightly mis-aligned. The maxillary lateral left incisor from the same skeleton had been chipped ante-mortem.

Adult dentitions

4.2.30 Five of the adults had dentitions: SKs 364, 426, 428, 531 and 707 (Table J1). Out of an expected total number of 160 teeth and sockets (five skeletons with 32 teeth each), there are 86 teeth, 116 tooth sockets/positions present (ie where sockets have remodelled following ante-mortem tooth loss). The shortfall in these numbers is accounted for by the fact that 10 teeth had been lost post-mortem and a further 25 teeth had been lost ante-mortem. Thirty-six teeth are unaccounted for because of missing jaws. In addition, a further three teeth were missing either as a result of agenesis or because the teeth had failed to erupt; the latter could not be determined without radiography.

4.2.31 Ante-mortem tooth loss was observed in SKs 426, 531 and 707 and involved eight, five and 12 teeth, respectively (25 teeth out of 116 tooth positions; 22%). In SK 426, the sockets relating to the lost teeth had healed, but SK 531 and SK 707 each had two and seven sockets, respectively, that had healed, and three and five teeth, respectively, that were still healing at the time of death. The healed status of the sockets suggests that the teeth had been lost at least 12 months prior to death, while the unhealed status of sockets suggests that the teeth had been lost less than approximately 12 months prior to death (Sculean *et al*. 2019, 75; Schropp *et al*. 2003, 321).

4.2.32 Dental caries, or cavities, were observed on the teeth of SK 426 (2/8 teeth), SK 531 (4/27 teeth) and SK 707 (2/26 teeth). Five of the skeletons have dental calculus, or

'plaque', the severity of which was scored with reference to Brothwell (1981, 155) and includes slight to medium deposits on the teeth of SK 364 (21/27 teeth), SK 426 (4/8 teeth) and SK 531 (26/27 teeth), and slight deposits on the teeth of SK 428 (3/16) and SK 707 (2/26).

4.2.33 Periodontal disease, which refers to chronic inflammation of the gums, ligament and alveolar bone, was identified in three skeletons but was not extensive and in each case involved three (SK 531) and one (SKs 426 and 707) tooth positions only. SK 707 has periapical cavities, identified as openings or holes in the bone, relating to six tooth positions (the maxillary right and left first premolars and the mandibular left lateral incisor and canine and right first and second premolars). Hypoplastic dental enamel defects are also present on three teeth of SK 531. The defects are in the form of grooves and represent arrested growth during childhood, in this case approximately between the ages of 10 and 11.9 years (Primeau *et al*. 2015, 386), because they are present on two maxillary and a right mandibular third molars.

4.2.34 Lastly, dental anomalies observed on the dentitions include impaction (SK 364) and shovel-shaped incisors (SK 426). In addition, two skeletons (SKs 428 and 531) have chipped teeth, resulting from trauma that had occurred prior to death.

Skeletal pathology

4.2.35 Pathology was observed on seven of the skeletons (SKs 271, 364, 426, 428, 531, 707 and 1105) and include lesions classified as possible brucellosis, non-specific bone inflammation, metabolic disease, joint disease and trauma.

Possible brucellosis

4.2.36 A sharp margined, destructive (lytic) lesion, measuring approximately 29mm by 15mm, is present on the superior end plate of the second lumbar vertebra of middle adult male SK 707 (Fig. 43). The lesion is located anterior to a Schmorl's node along the anterior of the body. The surface of the lesion comprises remodelled trabecular bone, is relatively smooth with limited spiculation of trabeculae and shows no bone regeneration. The body displays slight loss of height, and there is relatively pronounced osteophytosis on the superior and inferior margins, adjacent to the lesion. There are no changes in the rest of the spine apart from cervical spondylosis deformans, and one thoracic vertebra appears to be slightly flattened.

4.2.37 Lysis at the anterior vertebral body margin, as described here, may have been caused by traumatic anterior disc herniation resulting from excessive loading of the lumbar spine or systemic infection, more specifically brucella epiphysitis, a zoonotic disease (Mays 2007, 115). Brucellosis is a challenging disease to identify in archaeological human bone based on macroscopic changes alone, the pathological process resulting in changes that share similarities with several other diseases (ibid., 115; Ortner 2003). Traumatic anterior disc herniation is one of these and has been considered in relation to the present case. Other diseases include tuberculosis, fungal infections, actinomycosis, pyogenic osteomyelitis and intervertebral disc degeneration. These cannot be ruled out entirely but are considered less likely here. According to Mays (2007, 115), brucellosis should not be diagnosed unless there is further evidence to support the diagnosis. The present skeleton has other evidence for disc herniation in

the form of Schmorl's nodes, but the surfaces of these lesions appear to be different to the anterior lytic lesion. In addition, the skeleton also has non-specific bone inflammation (periostitis) on both tibias (see below), which may be seen in systemic infection, such as brucellosis. However, no other destructive, infective, lesions were observed, which might be expected (cf ibid., 114), so this diagnosis remains tentative. It can only really be confirmed by the application of biomolecular analysis for brucella bacterial DNA.

Non-specific bone inflammation

4.2.38 Periostitis was observed on the lower limb bones of four skeletons: young adult male SK 364, prime adult male SK 428 and middle adult males SK 531 and SK 707. This condition refers to inflammation of the periosteum, the fibrous sheath that covers bone in life. It is often treated in archaeology as a non-specific indicator of physiological stress because it may be related to systemic disease (for example, infection), or it may refer to mild or non-systemic conditions such as varicose veins or trauma (Roberts 2019, 288–97; Franklyn and Oakes 2015, 578–80; Weston 2008). In the present cases, the lesions are healed, having the appearance of smooth lamellar bone. They are present on the right and left tibiae of SKs 364, 531 and 707, the left tibia of SK 428, the right and left femurs of SK 364 and SK 428, and the right fibula of SK 531. The fact that the condition is present on multiple bones of SK 364 could suggest that systemic disease had been the cause in this individual (Wilham 2016, 35–9). The same individual also had increased ectocranial porosity, on the frontal, parietal and occipital bones, which resembled orange peel. This had probably been caused by minor scalp irritation or infection (Sarkic and Redžić 2017, 14).

4.2.39 Endocranial lesions were identified on neonate SK 1105 in the form of capillary lesions (type 3, after Lewis 2004) on the frontal and parietal bones. The aetiology of lesions such as this is unknown, but vitamin deficiency, tuberculosis and meningitis are among the possibilities (ibid., 83–8, 94). The same skeleton has some limited porosity on the scapulae, left tibia and sphenoid, but these changes may not be pathological, and instead related to growth (ibid.)

Metabolic disease

4.2.40 Evidence for metabolic disease was observed on middle adult male SK 531, young adult male SK 364 and juvenile SK 271. The conditions include cribra orbitalia, cribra femoralis and possible vitamin D deficiency.

4.2.41 Cribra orbitalia is present on the left orbit of SK 531 (types 2 and 3, after Stuart-Macadam 1991, 109). This condition is characterised by surface pitting on the orbital roof, accompanied by thinning of the compact bone (Ponec and Resnick 1984). It can range in appearance from small, capillary-like impressions on the bone, to scattered foramina, to outgrowth in the trabecular form from the outer table surface (Stuart-Macadam 1991).

4.2.42 There are no other cases of cribra orbitalia in the assemblage, but cribra femoralis, which also presents as increased porosity and thinning of the cortical bone but on the anterior femoral neck, was observed on both femurs of young adult male SK 364. The lesion is also similar to changes inferior to the humeral head and referred to as 'cribra

humeralis' (Djuric *et al*. 2008). Given their similar morphological appearance, it has been proposed that cribra orbitalia, cribra femoralis and cribra humeralis are likely to be associated and have similar aetiologies (eg Miquel-Feucht *et al.* 1999). However, the association and their aetiology are still a debated topic in palaeopathology and needs to be explored further (eg Djuric *et al.* 2008; Lewis 2017, 196). For many years orbital lesions were considered to have been caused by iron deficiency anaemia. However, Wapler *et al.* (2004) have shown that many cases of cribra orbitalia do not display a histological bone structure consistent with anaemia, while Walker *et al*. (2009) have proposed that megaloblastic anaemia, caused by vitamin B12 deficiency, amongst other factors, could be a more likely cause. Furthermore, the association between cribra femoralis with anaemia or other deficiencies is yet to be demonstrated clinically (Lewis 2017, 196). Regardless of the precise aetiology, the changes (in particular cribra orbitalia) are generally regarded as a suite of skeletal indicators (in addition to enamel hypoplasia and periostitis) of non-specific health stress in order to evaluate the overall burden of health stress in archaeological populations (eg Steckel *et al*. 2006).

4.2.43 Lastly, the tibiae and left fibula (the right fibula was not present) of juvenile SK 271 (1–5 years) are bowed. In addition, the costochondral areas of three left (3/10) and three right (3/11) ribs are flared and porous. These changes are seen in rickets, a disease that affects the mineralization of growing bone due to vitamin D deficiency. However, none of the changes are very marked, and the femurs are not bowed. Furthermore, the skeleton lacks any of the other changes seen in rickets, such as cranial vault porosity, a deformed mandibular ramus, dental enamel hypoplasia (DEH) and cranial bone thinning (Mays *et al*. 2006, 364; Watts and Valme 2018, 5). Radiography is needed to explore this further.

Spinal and extra-spinal joint disease

4.2.44 Depressions on the vertebral bodies from herniation of the nucleus pulposus of the intervertebral disc into the end plate (Schmorl's nodes) were observed in the spines of four skeletons: possible male adult SK 426 (one lumbar vertebra affected out of one observable lumbar vertebra), possible male prime adult SK 428 (two out of five observable lumbar vertebrae affected), middle adult male SK 531 (four out of 12 observable thoracic and all five lumbar vertebrae affected) and middle adult male SK 707 (seven out of 12 thoracic and all lumbar vertebrae affected). Schmorl's nodes are very common in modern and archaeological populations and have been linked to activity and trauma, especially in adolescence (Jurmain 1999).

4.2.45 Other spinal joint disease include marginal osteophytosis, osteoarthritis and spondylosis deformans. Osteophytosis was observed in SKs 428, 531 and 707. In SK 428 the changes are limited to two thoracic vertebrae only, but in SK 531 and SK 707 the changes are more extensive, involving one out of seven cervical, nine out of 12 thoracic and all the lumbar vertebrae in the former, and five out of twelve thoracic vertebrae in the latter. Osteoarthritis, diagnosed by the presence of eburnation and/or at least two of either osteophytosis, pitting or bony contour change (Rogers and Waldron 1995, 44), was observed on the articular facet joints of one of 12 thoracic vertebra from SK 707 and three of seven cervical, six of 12 thoracic and four of five

lumbar vertebrae from SK 531. SK 707 also has spondylosis deformans (degeneration of the intervertebral disc) on four of the seven cervical vertebrae.

4.2.46 Extra-spinal joint disease is also present and includes osteoarthritis, as seen on the left elbow of SK 428 and the left hip of SK 531. In SK 428 the disease was secondary to trauma involving the same joint. Minor joint porosity and osteophytosis (not occurring together) was also observed on the skeletons, but the changes are unremarkable so are not considered further here but have been noted in the archive.

Ante-mortem trauma

4.2.47 Ante-mortem trauma was observed in four skeletons: possible male adult SK 426, possible prime adult male SK 428, middle adult male SK 531 and middle adult SK 707. The trauma includes cranial and post-cranial fractures and a crush injury or traumatic limb amputation.

4.2.48 A healed, depressed skull fracture was identified on possible adult male SK 426. The fracture, a roughly circular depression that is >5mm and <10 mm deep and measures 35.4mm by 29.1mm, is located on the left parietal bone at the junction with the frontal bone, on the left coronal suture. Here, the trauma had damaged the outer table and had probably caused failure of the inner table as well (although radiography would be required to confirm this).

4.2.49 Healed multiple rib fractures are present in SKs 531 and 707 and involve the 10th and 11th ribs and one right and two left unidentified rib fragments, respectively. The pattern of the fractures could not be confirmed, except for one of the left ribs from SK 707, which appears to be transverse. Transverse rib fractures are usually the result of direct blows to the chest.

4.2.50 Other trauma includes a healed, left radial head fracture with secondary osteoarthritis (SK 428) and a partially healed fracture to the articular facet of the distal right tibial articular facet for the fibula (SK 707). In addition, slight discontinuity in the bone of the 11th thoracic vertebra of SK 707 might have marked the site of a fracture, or it might have been normal morphological variation (radiographic investigation would be required to explore this further).

4.2.51 Lastly, healed trauma is present on three hand phalanges of SK 531. Fractures are present on the proximal joint surfaces of the first left proximal and 4th right proximal phalanges, as well as on the head of the 5th left proximal phalanx. In addition, the distal joint of the left fifth proximal phalanx is missing, the bone in this area having remodelled with irregular, dense bone that is rough and porous, with no evidence of a pseudo joint. These changes may have resulted from finger amputation, or they may have been caused by a crush injury. The middle and distal phalanges are missing, but it is impossible to say whether this was due to the trauma (an amputation), or whether these bones had been lost post-mortem. Certainly, other hand phalanges were missing post-mortem.

Peri-mortem trauma

4.2.52 Possible blunt force trauma and associated fracturing are present on the left side of the mandible, second molar tooth and zygomatic bone of young adult male SK 364

(Fig. 44). On the mandible, the changes include a sharp and smooth margined, fully penetrating defect on the ramus bone in the region of the second molar. The defect is incomplete, with the inferior margin missing, the bone in this area having broken away post-mortem. The superior, anterior and posterior margins of the defect are rounded, indicating an overall sub-circular shape that is approximately 9mm by 6mm. Bevelling is present on the internal and external margins of the defect. In addition, part of the second molar crown had been lost, and a complete fracture is present on the facial skeleton, which extends through the left zygomatic bone and maxilla. Considering the shape, size and overall appearance of the mandibular defect, the breakage could be the result of a blunt force impact or a low velocity projectile around the time of death (peri-mortem), delivered by a weapon. The changes to the tooth and zygomatic bone may be indicative of post-mortem breakage following death and burial, or they may be peri-mortem radiating fractures associated with the blunt force trauma.

Disarticulated bones

Bones found with SK 707

4.2.53 Four disarticulated human bones (SKs 709, 710, 711 and 712) were found on top of SK 707, lying in no apparent order. The bones include the remains of a right innominate (SK 709), left femur (SK 710), right scapula (SK 711) and right ulna (SK 712) and are detailed in Table J3. These elements duplicate those that are associated with articulated SK 707, so clearly did not belong with the skeleton.

4.2.54 The bones are well preserved, meaning that they had suffered little or no surface erosion, consistent with McKinley's (2004, 16) grades 1 and 2. They are all incomplete and fragmentary, but the breaks are characteristic of those that occur post-mortem and after the organic matrix has decomposed. None of the bones display modifications (for example, faunal or anthropogenic) or are weathered.

4.2.55 Together, the bones represent a minimum of one person, based on the non-repetition of the elements and factoring in age and sex. The pubic symphysis and maximum diameter of the femoral head (42.1mm) suggests that the individual was possibly female. All the bones are consistent with those of an adult (all epiphyses had fused), and changes on the face of the pubic symphysis indicate an individual who was approximately 36–45 years of age. Porosity, enthesophyte and flattening were observed on the anterior aspect of the greater trochanter of the femur (SK 710) and probably relate to soft tissue trauma that had healed some time before death.

4.2.56 The apparent random positions of the bones in the grave and their lack of weathering or modification are not consistent with exposure to the elements and/or the deliberate selection of bones for secondary burial. They probably represent the remains of a primary burial that became disarticulated and incorporated into the burial of SK 707 as a result of later disturbance to both burials.

Bones 1535, 931 and 1575

4.2.57 The bones comprise a right femur (SK 1535) from an early cut (likely LIA/ER) of boundary 1708, a skull (SK 931) from the latest late Roman recut of trackway ditch

1692 and another femur (SK 1575) from ditch 1574. They represent a minimum of three individuals.

4.2.58 Femur SK 1535 comprises an intact shaft but is missing the proximal and distal joints. The morphology and size of the bone are consistent with an adult individual (>18 years). No sex indicators are present. The surface of the bone is relatively uneroded (consistent with grade 2, after McKinley 2006, 16) and possible gnaw marks (possible tooth scores and tooth punctures) were present around the broken margin at the proximal end. In addition, healed periostitis was present along the length of the shaft (medial and lateral aspects).

4.2.59 Skull SK 931 is uneroded (grade 1, after McKinley 2006, 16) and largely intact with most of the maxilla, including nine teeth and 16 tooth sockets, present. The mandible and areas of the parietal and temporal bones are missing. Sexually dimorphic features are consistent with a male individual. The skeleton is an adult, but it was not possible to estimate an age range. Caries are present on the maxillary right second molar, and slight deposits of calculus are present on eight teeth.

4.2.60 Chronic non-specific inflammation, in the form of smooth, remodelled new bone and increased porosity, was observed on the outer table of all bones of the cranium. In places the new bone is relatively thick, indicating a longstanding condition. The changes do not seem to involve the inner table or diploë, so are not thought to have been caused by porotic hyperostosis, a condition that is similar to cribra orbitalia (see above), in which there is expansion of the diploic space causing a hair-on-end appearance to the bone. The thickness of the new bone is reminiscent of tertiary syphilitic lesions, called caries sicca. However, the present case lacks the focal cavities caused by gummatous osteitis, so syphilis is not thought to be very likely. Furthermore, the changes are more in keeping with lesions that have the appearance of orange peel and have been observed in skeletons with scurvy or non-specific scalp infection (Sarkic and Redžić 2017, 14). Without the rest of the skeleton, it is not possible to say what caused these changes.

4.2.61 The present skull also displays three small, fully penetrating and partially penetrating lytic lesions that have sharp, punched out margins (Fig. 45). The combination of these lytic lesions with the previously described bone inflammation is seen in multiple myeloma, a type of cancer. However, the margins of the lytic lesions appear to be too regular, indicating perforation of the vault around the time of death. Thus, the lytic lesions could have been caused by something entirely separate to the bone inflammation. This argument is further supported by the fact that one of the lytic lesions is associated with a bevel on the internal surface of the skull, consistent with the detachment of bone around the time of death when the bone is penetrated by an object, such as a projectile. Small radiating fractures were also observed near the lytic lesions; these are not recent and refer either to fracturing around the time of death or at some point in antiquity.

4.2.62 Femur SK 1575 comprises part of the proximal shaft from the left side. It is relatively uneroded (grade 2, after McKinley 2006, 16). The overall size and morphology of the bone are consistent with an adult (>18 years), but no further information on the age or sex of the individual could be established. No pathology was observed.

Cremated human remains

4.2.63 The two burnt bone deposits (1142 and 1144) were recovered from pit 1141 and are dated to the middle–late Roman period (AD 120–410) based on pottery evidence. Deposit 1144 comprises the remains of a primary urned burial in pit 1141, whereas deposit 1142 was unurned and was from the primary fill of pit 1141.

4.2.64 The osteological findings for urned cremation deposit 1144 and unurned cremation deposit 1142 are summarised in Tables J4 and J5.

Bone weights

4.2.65 At 1.6g (1142) and 201.3g (1144), the weights of both deposits are well below the expected ranges for both modern (1000–2400g, with an average of 1650g (McKinley 2000, 269) and archaeologically recovered cremation deposits (600–900g, McKinley 2013, 154). The 2–0.5mm unsorted residues from 1142 weigh a total of 145.6g, but the cremated bone content is very low, at approximately 5% (by volume), so this would not have added a significant quantity to the total bone weight. Similarly, the 2–0.5mm unsorted residues from 1144 weigh a total of 82.1g, but the cremated bone content was low, at approximately 20% (by volume), so this would also not have added a significant quantity to the total bone weight.

4.2.66 The uppermost spit (spit one) from deposit 1144 comprises the largest weight (105.2g; 52.3% of the total bone weight), followed by spit two (63.7g; 31.6% of the total bone weight) and then spit three, the lowest spit (32.4g, 16.1% of the total bone weight).

Fragmentation

4.2.67 The largest proportion of bone from 1142 is from the 4–2mm (0.9g) sieve fraction. The remainder of the deposit (0.7g) is from the 10–4mm sieve fraction. The largest fragment in the deposit measures 13.1mm and is an unidentified fragment of long bone shaft.

4.2.68 All the spits from deposit 1144 had bone present in all sieve fractions, but the proportion of bone is greatest in the 10–4mm fraction of spit one (50.8g; 48.3% of the total spit weight) and the >10mm fraction of spits two (43.7g; 68.6% of the total spit weight) and three (21.5g; 66.4% of the total spit weight). Considering all spits together, the greatest proportion of bone is from the >10mm sieve fraction (113.3g; 56.3% of the total bone weight), followed by the 10–4mm sieve fraction (73.6g; 36.6% of the total bone weight). The 4–2mm sieve fraction comprises a total of 14.4g (7.2% of the total bone weight) of bone.

4.2.69 The largest fragment of bone from 1144 is part of a left auricular surface from the pelvis, from spit two. The fragment measures 46.5mm.

Skeletal representation

4.2.70 None of the bone from 1142 could be identified, although the morphology and density of the fragments are consistent with human bone. Identified bone fragments comprise 87.2 % (175.7g/201.3g) of the total bone weight of 1144 (Table J5). All regions of the skeleton were identified within this deposit, thus there is no evidence for deliberate selection/exclusion of body parts for interment. The axial skeleton (including ribs,

vertebrae and sacrum) and upper limb bones (including scapula, clavicle, humerus, radius, ulna and hand bones) generally comprise smaller proportions of the identified bone weights than the lower limbs and skull. This is almost certainly a reflection of the difficulty in identifying these elements in highly fragmented material, rather than an actual absence of these elements. Indeed, some fragments were identified. It is likely that these elements, particularly the long bones of the arm, are present within the large quantities of unidentified bone, of which a large proportion is made up of unidentified long bones. It may also be the case that vertebrae simply did not survive. These bones are predominantly made up of spongy, trabecular bone, which is more easily degraded within the burial environment.

4.2.71 Consideration of skeletal representation by spit indicates some differences in the distribution of elements within the urn, with the majority of the long bone fragments being present in the uppermost spit. Skull and axial fragments were only identified in the uppermost and middle spits.

Colour of cremated bone

4.2.72 The degree of oxidation of the organic component of bone is related to the temperature acting upon the bone in an oxidising atmosphere (McKinley 2004, 11). This degree is reflected macroscopically in the colour of the bone, hence the colour can be used as an indication of the efficiency of the cremation, in terms of such factors as the quantity of fuel used to build the pyre, the temperature attained in various parts of the pyre, and the length of time over which the cremation was undertaken. Colour can range from between brown/orange (unburnt), to black (charred: *c* 300°C), through to hues of blue and grey (incompletely oxidised, up to *c* 600°C) and white (fully oxidised; >600°C) (ibid., 11). The present contexts comprise high proportions of white fragments (1142, 90%; 1144, 70%), indicative of complete oxidation of the majority of bones. Non-white fragments are either light grey or blue-grey in colour (incompletely oxidised). In deposit 1144, the grey or blue-grey colours were observed on a variety of bones, including fragments of skull, femur, unidentified long bone shafts and unidentified articular facets. All the non-white bone from deposit 1142 is unidentified.

Demography

4.2.73 None of the cremation deposits appear to comprise more than one individual, as no repeated elements were observed. No sex or age information was observed in deposit 1142. The general size, surface texture of bone and thickness of cranial vault fragments in deposit 1144 are consistent with those of an adult, possibly a prime adult (26–35 years), based on a partially preserved auricular surface. The fact that the auricular surface is incomplete means that this estimate is tentative. No indicators of sex were observed in deposit 1144.

Pathology

4.2.74 No pathology was observed within the cremated bone assemblage.

Interpretation

4.2.75 The archaeological context of the cremation deposits (both from the same feature and fill) suggests that deposit 1142 had originally been contained within urn SF 53 with deposit 1144 but had spilled out, probably when the urn was truncated (see below). Both deposits are therefore considered to relate to one cremation burial.

Phase 3: Early–middle Anglo-Saxon

SK 247

4.2.76 SK 247 was an extended supine burial found isolated from all the other inhumation burials in the north-western part of the excavated area. The individual was lying with the head at the north-west end of the grave (246) and was accompanied by an Anglo-Saxon whittle tang iron knife (SF 2) and iron nail fragments (SF 3). Plough activity had truncated the grave, causing it to be very shallow and the upper half of the skeleton (roughly from the pelvis upwards) to be lost.

4.2.77 The skeleton is between 26% and 50% complete and comprises remains of the lower limbs and right and left innominate bones. The bones are moderately fragmented, and bone surfaces show some degree of erosion, consistent with grade 2 of McKinley's (2004, 16) system. Considering completeness, fragmentation and surface condition together, the preservation of the skeleton was judged to be fair overall.

4.2.78 Based on features of the pelvis (sciatic notch and the preauricular sulcus), the skeleton is possibly female. The individual was estimated to have been a prime adult (26–35 years), based on the appearance of the auricular surface (stage 4, after Buckberry and Chamberlain, 2002; and phase 3, after Lovejoy *et al*. 1985).

4.2.79 One non-metric trait is present, an exostosis on the trochanteric fossa of the right femur. The only metrical data that could be collected are measurements for calculating the platymeric index. This is 68.94 (platymeric), indicating a flattened (anterior to posterior) femur shaft.

4.2.80 Non-specific inflammation, in the form of healed (lamellar) periostitis, was observed on the femora and tibiae. On the femurs, the lesions are present on the antero-lateral aspects of the distal shafts, but post-mortem erosion prevented the full distribution of the lesions from being appreciated. On the tibias, the inflammation is present on the medial aspects of the right mid-shaft and the left distal shaft.

Unphased remains

SK 223

4.2.81 SK 223 was recovered from posthole 222. Only approximately 5% of the skeleton are present, including remains of skull, vertebrae and scapulae. The bones display a medium to high degree of fragmentation. Despite this, the surface condition of the bone present is limited to no erosion (grade 0–1, after McKinley 2004, 16).

4.2.82 Age was estimated based on epiphyseal fusion and post-cranial measurements, which indicate a neonate. The presence of both pars lateralis, as well as some vertebrae, indicate that the individual was less than 1 year of age. In addition, measurements of the scapulae narrow the age down to between 40 weeks in utero and 1 month after birth (Scheuer and Black 2000).

4.2.83 Endocranial lesions are present on the parietal bones. These lesions can appear as either diffuse or isolated layers of new bone on the original cortical surface and expanding around meningeal vessels, as hair-on-end extensions of the diploe, or as capillary impressions extending into the inner lamina of the cranium (Lewis 2004, 82). In the present case, hair-on-end and capillary lesions are present (consistent with types 3 and 4, after Lewis 2004). Endocranial lesions can be caused by a range of diseases (for example, chronic meningitis, anaemia, neoplasia, rickets, venous drainage disorders and tuberculosis) and trauma (ibid., 82). It was not possible to say what had caused the lesions in SK 223.

SK 525

4.2.84 This discrete, supine, articulated inhumation was orientated with the head in the north-east end of the grave (524). The skeleton is between 26% and 50% complete, with the lumbar spine, lower limbs, left arm and pelvis all present to some degree. Bone surfaces are uneroded, consistent with grade 1 of McKinley's (2004, 16) system, and fragmentation of bones was judged to be low. Considering completeness, surface condition and fragmentation together, the preservation of the skeleton was recorded as 'good'.

4.2.85 Morphological traits of the pelvis and post-cranial measurements indicate a male individual. Only one age indicator is present, the auricular surface, which suggests the individual was over 45 years.

4.2.86 Two non-metric traits are present, including a plaque (an imprint with a bony rim located on the femoral neck close to the head) and exostosis (a protrusion of bone at the site of muscle attachment in the proximal femur). These traits, which are not pathological, are seen relatively frequently in human remains. Plaque formation, in particular, has been linked to activities involving the lower limbs (for example, horseback riding or squatting), but the trait is so common that normal variation is the preferred interpretation (Radi *et al*. 2013, 262, 269).

4.2.87 By employing the maximum length of the right femur (479mm), the individual was estimated to have been 175.41cm ± 3.27cm tall. Measurements taken on the diaphysis of the same femur indicate that the platymeric index is 77.01, consistent with a flattened shaft front to back (platymeric).

4.2.88 Pathology and trauma were observed on the skeleton and include spinal and extra-spinal joint disease and fractures. Spinal joint disease include marginal osteophytes, which are present on the bodies of three of the five lumbar vertebrae. In addition, osteoarthritis is present on the articular facets of four of the lumbar vertebrae. Extra-spinal joint disease includes marginal osteophytosis in the left wrist and right knee and osteoarthritis in both hip joints. Lastly, the shafts of two unsided ribs have one healed fracture each.

Discussion

Phase 1: Early–middle Iron Age

4.2.89 The neonate inhumation (SK 1498), found in roundhouse ditch 1681, represents to a recognised Iron Age funerary practice in which individuals were incorporated into

'domestic' contexts (O'Brien 2014). This example might have been an obstetric casualty or a victim of infanticide.

Phase 2: Late Iron Age and Roman

4.2.90 A total of 11 late Iron Age/Romano-British inhumation burials included three definite and two possible male adults, one certain and one possible female adults, one unsexed adult, two neonates and a young child. These include disarticulated bones (SKs 709, 710, 711 and 712), possibly from a female of 36–45 years, found with an earlier primary burial (SK 707). Radiocarbon dating of SK 707 and SK 712 bone samples has produced middle and late Roman dates, respectively (Table 1), indicating unusually disturbed burials. In addition, there are three disarticulated bones (SK 1535, an unsexed adult; SK 931, a male adult; and SK 1575, an unsexed adult) found in three ditches, and one formal cremation burial of middle–late Roman date. One crouched 26–35-year-old female inhumation (SK 1570) has been radiocarbon dated to the late Iron Age/early Roman period.

4.2.91 The assemblage is reflective of late Iron Age and Roman funerary traditions, which are generally characterised by individual or small dispersed numbers of burials within, or aligned with, settlement or outer field ditches, or within pits and wells, and in and around buildings (Smith 2018, 231). This type of practice—integrating the dead into the community rather than separating them from the living by burial in a cemetery—has been observed throughout the region and Britain more widely (Philpott 1991; King 2014; Smith 2018, 231). Examples from Oxfordshire include Gravelly Guy (Lambrick and Allen 2004), Thame (Ellis *et al*. in prep), Gill Mill (Booth and Simmonds 2018) and Great Western Park, Didcot (Hayden *et al*. forthcoming), where the same variety of burial rites—inhumation burials, cremations burials and contexts containing disarticulated human bones—have also been found.

Inhumation burial

4.2.92 The Roman inhumations were observed to occupy unconventional positions, including, most notably, lying face down ('prone') and with the legs bent ('flexed'), in contrast with the supine extended burial posture, which is more typical for the period. Such burials are relatively common and have been described as 'deviant' because, in addition to their unconventional postures, they tend to be buried in liminal places or located outside cemeteries, with few grave goods and little evidence for respectful treatment (Taylor 2008, 101), as was the case at Sutton Courtenay Lane. Various reasons for non-normative burial rites have been suggested, including the prevention of witchcraft/ghosts, punishment after death, execution, or rites afforded to individuals who were 'outsiders' (ibid., 111).

4.2.93 The three disarticulated bones (SKs 1535, 931 and 1575) may represent a continuation of Iron Age funerary practice, involving excarnation/exposure, followed by deliberate dismemberment and processing of the body to remove parts of bones for cultural modification, curation and incorporation into structured deposits. The elements, which may be encountered in the archaeological record as isolated bones, partially complete inhumations or joints, typically comprise long bones and skulls from ditches (Carr and Knüsel 1997; O'Brien 2014). They may represent 'token' deposits and may

have served to highlight concepts of liminality, identity, continuity, and renewal (Brück 1995). Furthermore, they may represent a ritual that was reserved for special or unusual individuals (O'Brien 2014, 40), or they possibly represent tokens of remembrance, brought back to the settlement from sites of excarnation, located some distance away (Lambrick 2009). The present bones are among numerous examples that have been recovered from Roman pits and ditches throughout central southern England; including in Oxfordshire, for example, at Great Western Parkway, Didcot (Hayden *et al*. forthcoming), where the remains of two skulls, a mandible and a femur shaft were found in ditches.

4.2.94 Femur SK 1535 has possible gnaw marks, which, if confirmed, suggests that it had been exposed when fleshed, supporting the interpretation that this bone had been selectively removed for secondary burial in the ditch. Perhaps the femur was from a corpse that had been left exposed in the ditch or was among body parts that were gathered up from an excarnation site and subsequently interred within the ditch (Carr and Knüsel 1997, 171). No modifications (for example, scavenging marks, cut marks or peri-mortem breakage) resulting from excarnation or dismemberment were observed on the other two disarticulated bones (SK 931 and SK 1575). Furthermore, they show no changes consistent with bone that had been curated/circulated. However, other methods of dismemberment and processing, which may not have resulted in visible modifications, may have been employed, such as defleshing by boiling and short-term burial in the ground (ibid. 1997). It is also possible that the two bones are residual and relate to heavily disturbed primary inhumations, the remainder of which have been lost or were not excavated.

4.2.95 A range of pathological conditions was observed in the assemblage, such as relatively minor congenital and developmental defects, dental disease (calculus, caries, periodontal disease and ante-mortem tooth loss) and joint disease, including osteoarthritis. Although the small size of the assemblage precludes meaningful comparison of frequencies with other contemporary assemblages, the range and types of pathology observed are broadly in keeping with other assemblages from the locality and from Iron Age and Roman rural assemblages more generally (Roberts and Cox 2003; Rohnbogner 2018).

4.2.96 Signs of cribra orbitalia and non-specific bone inflammation are present, pointing to episodes of health stress. In addition, one individual, a juvenile, had anomalies that might have been caused by rickets, a disease caused by vitamin D deficiency. Vitamin D deficiency can result from malnourishment and/or a lack of exposure to sunlight. However, it should be stressed that the changes on the present skeleton require further investigation to confirm this tentative diagnosis. While the cause of the lesions cannot presently be confirmed, they certainly suggest abnormal bone turnover, consistent with a sickly child.

4.2.97 One individual, SK 707, may have had brucellosis, an infectious zoonotic disease, caused by *Brucella* bacteria, which can be contracted by ingesting unpasteurised milk and fresh cheese or through prolonged contact with infected animals. A systemic disease of worldwide distribution, brucellosis continues to be endemic in some developing countries today (Mehmet and Bilgehan 2003, 173; Christopher *et al*. 2010, 55; Avila-Granados *et al*. 2019, 8). The infection may be symptomatic or asymptomatic,

and it may involve any system in the body, the reticuloendothelial (eg liver, spleen) and nervous systems (eg meningitis, encephalitis and neuritis, pneumonias and thyroiditis), and bones and joints in particular (Hall 1991; Doganay and Aygen 2003; D'Anastasio *et al.* 2010, 150). The present possible case involves a middle adult (35–45 years), which is in keeping with the clinical observation that the disease tends to affect young men (20–40 years) who work with animals, in particular rural workers, abattoir workers, veterinarians, laboratory workers and hunters (Pereira *et al*. 2020). Brucellosis is rarely reported in the archaeological literature, but two possible Roman cases have been identified from another rural context at West Thurrock, Essex (Rohnbogner 2018, 336). If confirmed, cases of brucellosis may relate to levels of dairy consumption in southern England (ibid., 340). Osteological evidence points to a high prevalence of bovine tuberculosis in this region, also an infectious disease contracted through prolonged contact with infected animals (ibid.). However, there are no confirmed cases of tuberculosis in the present assemblage.

4.2.98 It is difficult to draw firm conclusions about the evidence for health and disease in the assemblage when some conditions (namely, possible rickets and possible brucellosis) are unconfirmed. That said, if treated as 'non-specific' markers, they certainly point to a group of individuals who were relatively burdened by chronic, poor health. However, this may not necessarily have included all the individuals, going by the statures that could be estimated for five of the Roman skeletons, all being males or possible males. Stature is widely regarded as a useful proxy for health and nutrition in the past (Meinzer *et al*. 2019, 231), with taller individuals associated with better overall health and nutrition during their growing years. At 180cm, 171cm and 170cm, three of the Sutton Courtenay Lane males were found to be taller than the average male height reported for the period (169cms; Roberts and Cox 2003, 163). Two were slightly below the average, both at 166cm.

4.2.99 Evidence for health and disease, then, presents a mixed picture. What is perhaps clearer is the evidence for trauma. The skeletons are characterised by frequent healed and unhealed fractures, highlighting individuals who had lived precarious lives. In most cases, the fractures lack features that would allow their cause to be determined, but examples of accidental trauma and inter-personal violence were observed. One rib fracture had probably resulted from a blow to the chest and a healed cranial fracture from a blow to the head by a weapon, dealt from above (although accidental trauma cannot be ruled out entirely). An elbow fracture had resulted in an abnormally enlarged radial head and secondary joint disease. Clinically, this type of fracture is common and typically occurs in association with indirect forces applied during falls onto an outstretched hand, when the forearm is pronated and the elbow partially flexed (Galloway 1999, 135).

4.2.100 Two skeletons and one disarticulated skull bone, all with trauma, are particularly interesting, because their injuries had been sustained around the time of death and were probably weapon injuries. Perhaps the most dramatic of these were observed on adult female SK 1570, dated to the late Iron Age/early Roman period, also with healed and healing trauma. The wounds had been dealt by a blade, possibly a sword, resulting in a combination of stabbing and cutting injuries, some of them defensive and some incapacitating. A blow to the left side of the jaw was observed on young adult male SK 364 dated to the Roman period. Although some weapons can leave

distinctive marks on bone, the wounding pattern here lacks any obvious characteristics. It clearly had not been dealt by a blade, because it was not long and sharp but was more focused, being more in keeping with a javelin or projectile, such as a sling stone. Lastly, probable projectiles had fully penetrated Roman skull SK 931 through to the inner table. These wounds would have caused severe brain injury leading to haemorrhage and, ultimately, death. The incompleteness of the bone precludes any conclusions about whether the skull had been deliberately removed by decapitation around the time of death (or whether it had become separated from the rest of the skeleton naturally when the corpse had decayed). Some radiating fractures were observed on parts of the bone and could refer to this activity, or they may refer to the projectile injury.

4.2.101 These cases are comparable with contemporary examples from the region and elsewhere in Britain. For example, blunt force fractures and sharp force wounds to the cranium, mandible, right forearm, and hand were observed on a late Iron Age/Roman middle adult male skeleton (1304) from Gill Mill, Ducklington, Oxfordshire and attributed to inter-personal violence (Webb *et al.* 2018). The skeleton had been buried in a pit in a crouched position, this non-normative burial rite perhaps associated with their violent death (ibid.)

4.2.102 Further afield, in Dorset, late Iron Age male and female skeletons from Maiden Castle have been identified with sharp and blunt peri-mortem projectile injuries, primarily involving the skull (the face in particular) (Redfern 2009, 417; Miles 2019). These injuries are considered to have been delivered by highly skilled combatants, possibly the Roman army or other late Iron Age communities, using a variety of weapons such as spears, pointed and round sling stones, larger pebbles and, possibly, arrows (ibid.). The skeletons were originally thought to represent a one-off event, but it is now thought be more likely that they indicate multiple episodes of conflict, the individuals having been buried over a period spanning two centuries between 100 BC and AD 100 (Smith 2017, 148). Frequent healed violence-related trauma was also observed on the skeletons, suggesting several episodes of violence during the late Iron Age and supports this interpretation (ibid., 150). It is conceivable that similar interpretations of highly skilled combatants and a variety of weapons could explain the context of the Sutton Courtenay Lane skeletons as well. Like Maiden Castle, evidence of healed trauma is also frequent. In addition to dating evidence, this also points to multiple episodes of conflict rather than a one-off event.

4.2.103 Various circumstances have been proposed to explain why certain individuals, like those from Sutton Courtenay Lane, were selected for burial in non-cemetery contexts, rather than formal cemeteries. For example, they may indicate individuals who had been selected from within their communities and buried in specific locations to emphasise ownership of territory, or with reference to cosmology and the agricultural cycle (see Smith 2018, 231). In the Thames Valley, non-cemetery Iron Age burials were found to comprise more females, more young adults, individuals with a higher prevalence of dental enamel hypoplasia (representing growth arrest due to health stress) and more individuals of shorter stature, compared with formal Iron Age cemetery burials, so perhaps the former were social or socio-economic outcasts (Lambrick 2009, 321–22).

4.2.104 Other work has emphasised a link between trauma and burial context. For example, King (2014), on the relationship between violence and mortuary ritual in Iron Age burials in East Yorkshire and Hampshire, has found greater evidence for peri-mortem violence-related trauma on skeletons from non-cemetery burial contexts (pits in particular) compared with cemetery contexts. Males were found to be more frequently involved than females, and the majority of injuries had been delivered by blades. For example, in Hampshire, 12 individuals from non-cemetery contexts at Danebury Hillfort had sword injuries, and skeletons with sharp force injuries, found in pits, have been identified at Suddern Farm (ibid., 192–4). Thus, violence seems to have been an important aspect in the mortuary ritual of non-cemetery burials. Similarly, the Maiden Castle skeletons may not necessarily have been inhabitants of the hillfort, or even died there, the monument perhaps having been used specifically for the burial of individuals from the wider area who had died violently (Smith 2017, 150). Considering these points, the combination of an apparent high level of trauma, the predominance of males and lack of individuals aged over 45 years, is perhaps no coincidence at Sutton Courtenay Lane.

Burnt bone

4.2.105 The combined burnt bone deposits represent a minimum of one unsexed adult, possibly aged between 26 and 35 years. The overall weight of the bone is low (202.9g, both deposits combined), well below the expected range (600–900g) for archaeologically recovered adult cremation burials (McKinley 2013, 154). The urn containing 1144 had been truncated by modern activity so that the neck and rim were missing, but it is impossible to estimate how much bone may have been lost as a result. However, low bone weights from urns are not uncommon, even among undisturbed urns, reflecting the deliberate selection of parts of individuals for burial only. For example, adult bone weights from the eastern cemetery of London are reported to range from between 1731.7g and 511.4 g for undisturbed lidded urns and from 1657.5g to 57.3g for undisturbed urns without a lid (McKinley 2000, 269–70). Therefore, it is possible that the entire cremated remains from Sutton Courtenay Lane were never deposited within the urn for burial.

4.2.106 In keeping with a formal cremation burial, however, a substantial proportion of the bone comprises large fragments, with the >10mm sieve fraction accounting for over 80% of the assemblage, indicating that care was taken to collect the bones from the pyre following the cremation process. Furthermore, very little extraneous material was observed, also indicating that the bone had been carefully selected for burial, with the fuel ash/pyre debris deliberately excluded.

4.2.107 A pattern in the distribution of identified bones within the urn was noted, but whether this suggests that the bones had been placed inside it in a particular order is difficult to say, as the entire contents cannot be accounted for due to the truncation. However, the observed patterns may suggest that perhaps the skull and axial skeleton had not been placed in the urn first.

4.2.108 The bone is predominantly white (fully oxidized), indicating that the corpse had been placed on the pyre in such a way as to maintain a consistent high temperature and oxygen supply (McKinley 2013, 158), enabling a temperature in excess of 600°C

(McKinley 2004, 11). A high proportion of fully oxidised bone is a common observation in archaeological cremation burials (McKinley 2006, 84). The small proportions of non-white bone mainly included the skeletal elements/surfaces less exposed to the heat from the pyre (thicker long bones, joint surfaces etc). This distribution of white and non-white bone is relatively typical for this period, and more generally, and has been observed elsewhere, for example at Gill Mill (Webb *et al*. 2018).

Phase 3: Early–middle Anglo-Saxon

4.2.109 SK 247 represented an adult, possibly a female, who was found with a whittle tang knife. The burial conforms to a recognised early–middle Anglo-Saxon funerary practice that has been encountered elsewhere in Oxfordshire and more widely. For example, the burial is in keeping with extended, supine, early–middle Anglo-Saxon inhumation burials from Didcot Power Station and Wally Corner, Berinsfield, where males, females and juveniles with knives have also been excavated (Boyle *et al*. 1995). Furnished inhumations such as these are found in all areas of southern and eastern England (Williams 2011), but they apparently occur more frequently in cemeteries (for example, those summarised by Thomas 2019, 17) than as isolated burials. A supine, extended burial posture appears to have been the norm for the period, while grave orientations are diverse (Williams 2011).

4.2.110 Simple iron knives are the most common type of object found in early–middle Anglo-Saxon graves (Geake 1997, 25; Härke 2004). Typically associated with burials in clothing, having been worn on the waist, attached to a belt (Knox 2016), they are reportedly more common among male than female burials of this period (Williams 2011). A study observed a correlation between blade length, sex and age, noting that blades longer than 130mm were only found in male adult Anglo-Saxon burials (Härke 1989). The maximum blade lengths found in juvenile and female Anglo-Saxon burials were 106mm and 128 mm, respectively (ibid.). The knife (SF 2) from burial SK 247 is incomplete but retains most of its blade, measuring a minimum of 106.9mm in length, and so may provide further tentative evidence that the burial was of a female individual.

4.2.111 Unfortunately, SK 247 had been truncated by modern activity, so is incomplete, precluding some osteological observations (for example, estimation of stature) and limiting others (for example, only limited features are available for estimating sex and age). The presence of healed bone inflammation, which seems to be present on several of the leg bones, could refer to a systemic condition, such as infection.

Unphased skeletons

4.2.112 These comprise two inhumations, including a neonate from a posthole and a 45+ year old male. The neonate has lesions on the endocranial surface of the skull, which could have been caused by a number of different diseases or trauma (see above). The male has two healed rib fractures and evidence of osteaoarthritis on joints in the spine, wrist, knee and hips. Osteoarthritis is common among individuals over the age of around 45 years, both in the past and today (Rogers and Waldron 1995).

Conclusions

4.2.113 The burial assemblage from Sutton Courtenay Lane reflects a variety of funerary practices that span the Iron Age to Anglo-Saxon periods and are in keeping with other examples seen elsewhere within the region and more widely. Although small in number, the late Iron Age and Roman burials constitute a particularly interesting group. The skeletons are characterised by pathology, most notably, healed and unhealed trauma, including interpersonal violence. Therefore, they are an important addition to a growing number of non-cemetery contexts in Britain that have highlighted a link between health, especially trauma, and mortuary rites.

4.3 Charred plant remains *by Sharon Cook*

Introduction

4.3.1 Twenty-nine bulk samples representing a range of feature types and phases across the excavated area were processed primarily for the retrieval of charred plant remains, as well as small bones and artefacts. Sample volumes ranged from 10–40L, although apart from samples collected from discrete parts of corndryer 1712, most were 40L.

4.3.2 Following assessment (OA 2020), 16 flots were selected for further analysis, from features dating from the early Iron Age to the late Roman period, based on the quantity and quality of the charred remains and to provide some temporal and spatial coverage (Appendix K, Table K1).

Methods

4.3.3 The bulk samples were processed in their entirety using a modified Siraf-type water flotation machine to 250µm (flot) and 500µm mesh (residue). The residue fractions were sorted by eye and all bone and artefacts removed, while the flot material was sorted using a low power (x10) binocular microscope to extract charred cereal grains and chaff, smaller seeds and other quantifiable remains.

4.3.4 Identifications were carried out using standard morphological criteria for the cereals (Jacomet 2006) and with reference to the *Digital Seed Atlas of the Netherlands* (Cappers and Bekker 2013; Cappers *et al*. 2012) for identification of wild plant remains, as well as comparison with modern reference material. Classification and nomenclature of plant material follows Stace (2010). Confirmation and assistance with problematic identifications was provided by Denise Druce.

4.3.5 Quantification of remains is as follows: cereal grains and the seeds of wild plants were only quantified for items of which more than half was observed, meaning that all cereal and seed counts may be used to reach a minimum number of individuals (MNI). Seeds of vetches (*Vicia/Lathyrus*) are the exception in that their easily recognisable structures have enabled fragments to be quantified, although these are always recorded as such. For nutshell fragments, the count is for all observed fragments, which means the figures are not suitable for use in calculating MNI. Chaff has been divided into quantifiable remains, ie glume bases and spikelet forks, and non-quantifiable remains, ie fragments. Awns are calculated by abundance only, categorised as rare, occasional, common, and abundant.

Assemblages

4.3.6 The condition of the charred material is variable, with a moderate amount of clinkering and fragmentation evident in the charred assemblages from features across the site, which has hindered identification. Most flots include relatively small quantities of charcoal, which is typically <4mm and often <2mm in greatest dimension. Occasional vivianite staining, for example in samples from enclosure ditch 1677, hints at a damp environment, but there is little evidence in the form of waterlogged plant material to indicate the presence of sustained waterlogging on the site.

4.3.7 Grain and associated waste, such as chaff fragments, are relatively uncommon in all periods, with most samples including fewer than 30 cereal grains, although glume base fragments are present in moderate quantities in a small number of samples (largely from ditch fills for the earlier periods). The presence of a late Roman corndryer indicates that some crop processing took place in that period, but the feature seems to have been cleaned out, and charred remains were surprisingly sparse. Where present, glume bases are in variable condition, and all that were suitable for further identification appear to be from spelt wheat (*Triticum spelta*). Although many grains are indeterminate, their general appearance is mostly consistent with wheat and it is likely many of these are spelt. A single damaged grain from sample 65 has a humpbacked profile possibly indicating the presence of emmer wheat (*Triticum dicoccum*).

4.3.8 Barley (*Hordeum vulgare*) grains are present in small quantities through all periods, as are oats (*Avena* sp.). Oats are in greater quantities than barley, but the lack of diagnostic oat florets means that it is not possible to confirm if any are of the cultivated type (*A. sativa*).

4.3.9 Charred seeds from wild plants fall into two main categories: those that are commonly found as part of arable assemblages, such as cleavers (*Galium aparine*), vetches (*Vicia/Lathyrus*), docks (*Rumex* sp.) and mayweeds (*Tripleurospermum* sp.), and plants that are associated with open grassland, such as the fescues and ryegrasses (*Festuca/Lolium*), sheep's sorrel (*Rumex acetosella*) and yellow rattle (*Rhinanthus minor*), which are present in much smaller quantities. Many of these plants can be found in a relatively broad range of habitats and are often associated with disturbed ground, marginal and waste places. Most of the seeds are small, and many would easily pass through a 1mm sieve.

Early and middle Iron Age

4.3.10 The samples that have been dated to the Iron Age generally include few charred plant remains, including cereal grain, chaff and associated wild plant seeds. The charred remains in early Iron Age samples from features located in the western part of the site are mostly dominated by glume wheat; where identifiable, the glume bases are spelt. There is evidence for sprouting in the form of coleoptile scarring on two of the grains from sample 73 from roundhouse ditch 405, but the remaining grains are badly damaged, so further interpretation is not possible.

4.3.11 Two of the early Iron Age samples (samples 1 and 72) include barley grains consistent with hulled rather than naked barley. Oat is also present within samples 1 and 71,

although the lack of diagnostic floret bases means that it is unclear if these are from a wild or cultivated species.

4.3.12 Wild plant seeds are common in sample 1. Where identifiable, they are mainly from species that are associated with arable areas and disturbed ground. The majority of the indeterminate seeds are <1mm in size. Although the other samples include fewer seeds, they are mostly of the same species, except for a small number of seeds from plants typically found in damp places. Pit 249 (sample 69), which has been dated broadly to the Iron Age, has a small assemblage that is consistent with the material present in both the more closely dated early and middle Iron Age samples.

4.3.13 Occasional hazelnut shell (*Corylus avellana*) fragments and a single charred wild strawberry (*Fragaria vesca*) seed may indicate consumption of wild resources, although in both cases the remains are infrequent.

4.3.14 A similar pattern of cereal and wild plant remains is evident in the middle Iron Age samples, with spelt wheat, hulled barley and oats present within all the samples recorded from this period. The richest Iron Age assemblage, particularly in terms of glume base fragments, comes from enclosure ditch 1691 (sample 66).

Middle and late Roman

4.3.15 While samples dated to the late Iron Age and early Roman periods proved poor in charred remains, sample 42 from middle Roman ditch 1709 at the southern edge of the site included a markedly greater quantity of wheat grains in comparison with those from the Iron Age, together with an increase in sprouted grains, evidenced by both grains with coleoptile scarring and detached, but fragmentary, coleoptiles.

4.3.16 The seeds of uncultivated plants in sample 42 are very similar to those found in the Iron Age, perhaps an indication that there were no major alterations in arable cultivation or in the location of cultivated fields. Despite slight vivianite staining and a single uncharred dock seed (*Rumex* sp.) that may indicate the feature held water at least seasonally, there is no good evidence of permanent waterlogging at the base of ditch 1709.

4.3.17 The late Roman samples comprise four collected from the corndryer structure (1712) and two from ditch fills, one from the southern edge of the western area (ditch 142) and one from the centre of the eastern area (ditch 812). The samples from the two ditch fills produced relatively small quantities of cereal remains and other seeds. A single wheat grain from sample 65 (ditch 812) has some of the characteristics of emmer but is unfortunately too damaged to confirm this identification.

4.3.18 There is no evidence for sprouting on the few grains from the late Roman ditch fills, but those from the corndryer include at least a few sprouted grains, with sample 57 from layer 1176 located at the base of the flue containing more identifiable grains with evidence of sprouting (coleoptile scars, collapsed grains, attached coleoptiles) than without, although many grains from this context were in poor condition. Fewer grains are present in sample 51, also from this layer, but this sample includes a greater quantity of chaff fragments indicating that the deposit is heterogeneous. Rare sprouted oat and barley grains are likely to represent contaminants within the wheat

assemblage. It is likely that the cereal chaff represents fuel, and a component of the fuel may have been spoiled, and sprouted, grain.

4.3.19 An additional sample from a ditch located at the far eastern edge of the site (sample 76 from boundary ditch 1698) also includes a number of sprouted grains. Dated only broadly as Roman, it is not clear whether the assemblage is contemporary with the use of the late Roman corndryer or if it is more closely related to ditch 1709 (sample 42) from the middle Roman phase.

4.3.20 The wild flora from the Roman samples is similar to that from the preceding periods, with the exception of a few single examples of seeds such as stinking chamomile (*Anthemis cotula*) found in late Roman samples 51 and 74, yellow rattle (*Rhinanthus minor*) in samples 74 and 76, and a small number of badly damaged seeds of the dead-nettle family (Lamiaceae). Stinking chamomile and yellow rattle are both indicator species, with the former usually assumed to indicate clay-rich soils and the latter undisturbed grassland and hay meadows (Smith 2013, 40). Consequently, this evidence may tentatively point to cultivation of the clay-rich soils to the north and the presence of meadows, perhaps harvested for hay. A single coriander seed (*Coriandrum sativum*) in Roman sample 76 is significant and is discussed further below.

Discussion

Cereals and arable weeds

4.3.21 Archaeobotanical assemblages dating to the Iron Age and Roman periods on British rural sites are typically charred and are usually dominated by the by-products of grain dehusking and cleaning, which were deliberately burnt as either fuel or waste (van der Veen 2019, 809). This generally results in assemblages dominated by chaff and weed seeds, with relatively little grain.

4.3.22 The analysed assemblages from the current site are typical of the periods, with occasional cereal grains and larger quantities of cereal chaff present within most sampled features. Most of the identifiable cereal chaff is from spelt wheat, and the general shape and size of most grains is appropriate for this identification. Spelt wheat is commonly found in samples from the late Iron Age and Roman periods across the majority of Britain, spelt having largely replaced emmer during the early to middle Iron Age because of its ability to produce higher yields on soil of poorer fertility (van der Veen 1992, 145–6; Lodwick 2017, 17–18). Spelt requires less labour in the form of tillage and manuring and is suitable for less intensive farming (van der Veen and O'Connor 1998, 131–3).

4.3.23 There is no firm evidence of the presence of emmer wheat from Sutton Courtenay Lane, but a single damaged grain from sample 65 may be emmer. Emmer wheat has a distinctive 'humpbacked' appearance as opposed to the flatter more oval shape of spelt, and while a large number of grains were too damaged to identify fully, no other cereal grains in identifiable condition fulfilled any of the criteria to identify as emmer.

4.3.24 Spelt had become the dominant wheat taxon across the whole Solent-Thames area by the early Iron Age and was already present in middle Bronze Age contexts at Yarnton (Lambrick 2014b, 127). While emmer grains were found in a late Bronze Age and an early Iron Age context at nearby Castle Hill, Wittenhams, Oxfordshire, the majority of

identifiable grain was identified as spelt, and it was concluded that this was the main wheat crop (Smith *et al*. 2010, 94, 194, 200). The Iron Age assemblages from Great Western Park, Didcot (Boardman forthcoming), were likewise dominated by spelt and glume wheats that could only be identified as spelt/emmer, as was the assemblage from Dunmore Road, Abingdon (Cook forthcoming a) and sites excavated in Grove (OA 2021a) and Wantage (Cook forthcoming b). Similarly, spelt is dominant in samples collected during two archaeological evaluations around Sutton Courtenay (CA 2015, 38–9; 2016, 18–19). A similar picture is evident across the county, with emmer largely present as single grains within assemblages dominated by spelt, probably representing the remains of a relict crop.

4.3.25 Rare barley grains are present in features of all periods but only in meaningful quantities in the fill of eastern boundary ditch 1698 that has been dated to the Roman period. This sample (76) also contains the largest quantity of oat and oat/brome, but it is unclear whether this reflects a true change in the cultivation of this cereal or is merely an accident of disposal or preservation. The distinction between wild and domestic varieties of oat relies on the recovery of the floret base, none of which are present within the assemblage. It is, therefore, not clear if oats from this site were deliberately cultivated. Several badly damaged large grass seeds within some of the samples may possibly be damaged oat grains.

4.3.26 The local geology at Sutton Courtenay Lane is Gault formation mudstone overlain by superficial deposits of Summertown-Radley sands and gravels (BGS 2020). Typically, the soils are free-draining, and this may be reflected in the lack of plants of damp ground in the analysed samples. Minor vivianite staining in samples from some of the deeper ditches suggests that the area was at least occasionally waterlogged, but the lack of other indicators of anaerobic preservation, such as waterlogged seeds, implies that this was of relatively short duration, possibly seasonal.

4.3.27 Vetches and medicks (*Medicago* sp.), which are present in all the analysed samples, are usually associated with poorer quality soils. Most of the other weed seeds are from plants found as weeds of arable crops and disturbed ground, such as field gromwell (*Lithospermum arvense*), cleavers (*Galium aparine*) (which has been associated with the autumn sowing of spelt wheat; van der Veen 1992, 104), mayweeds (*Tripleurospermum* sp.) and docks (*Rumex* sp.). Small numbers of stinking chamomile (*Anthemis cotula*) seeds are only found in the Roman samples. Stinking chamomile has previously been considered a Roman introduction; however, it appears to have been present within the Thames Valley from at least the middle Iron Age (Lodwick 2018, 809). Its presence here within the Roman samples only may therefore indicate expansion into the clay-rich soils to the north, although the quantities present are small.

Crop processing and disposal of waste

4.3.28 It is now generally accepted that in the Iron Age glumed wheats were stored in the spikelet and processed as and when needed, often resulting in a generalised but reasonably low-level distribution of crop-related charred material across areas of occupation, accompanied by seeds from wild plants growing alongside and within the crop (Stevens 2003, 62–3; van der Veen 2019, 809). This pattern of storage and later

processing has also been assumed for the Roman period (Stevens 2003, 71; Allen and Lodwick 2017, 149), but the expansion of farming in many areas and the introduction of possible large-scale or communal processing (shown by the development of corndryers) mean that volumes of chaff are often much greater in Roman features.

4.3.29 At Sutton Courtenay Lane, grain is generally sparse and widely distributed, while cereal chaff abundance varies across the site, although the quantities are generally low even within the corndryer itself. The greatest concentration of glume bases and fragments (excluding those samples from the corndryer) from both the Iron Age and Roman periods came from the enclosure ditches, but this may reflect a gradual accumulation of fine material rather than deliberate dumping episodes since most of the wild plant seeds in these deposits are small (<2mm with a substantial proportion <1mm). The deposits may therefore have derived from the burning of waste after sieving, augmented with occasional larger seeds removed by hand.

4.3.30 An increase both in the quantity of charred chaff and cereal grains and in the quantity of germinated grains, which is typically seen on some rural sites from central-southern and eastern England, has been interpreted in archaeobotanical literature as evidence of an increase in the scale of cereal production relating to trade or taxation in the Roman period (van der Veen 2019, 809). Unfortunately, however, archaeobotanical evidence for the late Iron Age and early Roman periods on this site is lacking, meaning that it is difficult to ascertain when changes in practices took place.

4.3.31 From the middle Roman period, only a single ditch fill (sample 42) included sufficient charred remains to merit analysis, perhaps indicating that any crop processing activity was taking place elsewhere, which makes it difficult to form any conclusions regarding changes in cultivation and/or storage. Although a significant proportion of grains are sprouted, the coleoptiles are fragmentary and consequently unmeasurable, so it is not possible to determine whether there is any uniformity in length that, if present, may have suggested that the grains were deliberately allowed to sprout, perhaps for the production of malt.

4.3.32 While the quantity of grain in the late Roman samples is not significantly greater than those from earlier periods, there is an increase both in the abundance of chaff, particularly glume bases, and in evidence for sprouted grain in the form of coleoptile fragments and scarred grain. This may indicate an increase in the storage of grain on site and, potentially, suggest malting activity, but it is important to note that the quantities are not large especially when compared with other Roman sites in Oxfordshire, such as Grove Airfield (OA 2021a) and Crab Hill (Cook forthcoming b), both of which produced sufficient well-preserved coleoptiles to indicate the possibility of deliberate sprouting of grain for malt production.

4.3.33 The corndryer (1712), which was the source of most of this material, appears either to have been used only for a short time and/or to have been cleaned out, since charred remains are sparse. It may be relevant in this regard that there does not appear to be any evidence of the dumping of waste material from the corndryer in any of the nearby pits or other features. Although the proportion of sprouted vs unsprouted grains from the corndryer is extremely high, the total quantity of grain is small and so to firmly assign this as evidence of malting cannot be justified.

4.3.34 Small quantities of charred grass seeds are present in most samples. They may have derived from occasional grasses that were accidentally harvested and were growing around the periphery of the crops. Rare seeds from grassland plants are insufficient to prove the existence of open grassland, as these are often present in small quantities within Iron Age and Roman samples.

4.3.35 Apart from the cereal grains, there are few plants on this site that could be assumed to have been cultivated or imported as food stuffs. Although many of the uncultivated plants present are edible or have potentially medicinal uses in modern foraging and herbal manuals, these are all types that are commonly found within charred assemblages and are generally categorised as weeds of crop and waste places.

4.3.36 Much more significant, however, is a single half of a coriander (*Coriandrum sativum*) seed in sample 76 from boundary ditch 1698. While coriander today is common enough to be considered an archaeophyte (Stace 2015, 30), it is believed to have been introduced in the Roman period from its place of origin in the Near East (van der Veen *et al.* 2008, 12), although investigations at Silchester have now shown that it was being imported by the early 1st century AD together with olives and dill (Lodwick 2014, 543, 545).

4.3.37 It is likely that coriander was cultivated locally after its introduction, as it is one of the most identified of the new foods found on Roman sites (van der Veen *et al.* 2008, 15), although its frequency peaked in the middle Roman period (ibid., 21). The single example here is contained within a deposit with an unusually high (for this site) proportion of barley grains, although it is unclear if this has any greater significance.

4.3.38 Coriander seeds have been found on a small number of other sites in Oxfordshire, including Barton Court Farm (Miles 1984, 33) and Farmoor (Lambrick and Robinson 1979, 120–1). Since they are found in very small quantities, it is unclear whether the plants were being cultivated on site or purchased at market.

Conclusion

4.3.39 The charred plant assemblage from Sutton Courtenay Lane shows a consistently low level of cereal cultivation for all periods of activity, with a small increase in evidence for cereal processing during the late Roman period based on samples from the corndryer, the presence of which may to some extent distort the overall pattern. At the same time as an apparent increase in charred crop material, there is evidence of sprouted grains. Sprouting may have occurred accidentally during storage and the quantity found is insufficient to infer malting. Wheat is the most common cereal type present, with almost all identifiable grains and glume bases being consistent with spelt, which was the predominant wheat grown at this time across much of southern England. A low, possibly 'background' level of barley and oats is present, but they are in small quantities and it is unclear whether oats were cultivated or wild. The presence of a small quantity of hazelnut shell fragments in both Iron Age and Roman samples, together with a single wild strawberry seed in sample early Iron Age 72, may indicate the utilisation of wild resources, although the low frequency of such plant remains within the assemblage would seem to indicate that this was not a major component in the local diet.

4.3.40 Minor changes in flora during the Roman period may indicate some developments in farming practices, with the possibility of the expansion of cultivation onto heavier soils. There is tentative evidence of grassland or pasture in the Iron Age and Roman periods, but this is based on very small numbers of seeds. A single coriander seed hints at wider spheres of contact in the Roman period, but it is unclear if this represents local cultivation or the utilisation of a herb purchased elsewhere.

4.4 Waterlogged plant remains *by Sharon Cook*

Introduction

4.4.1 Only two features contained preserved waterlogged plant material, which only occur when features extend below the water table permanently saturating the deposits. Both of the features were pits: 1108 (sample 50) dated to the late Roman phase of occupation, and 1118 (sample 49) dated to the early–middle Anglo-Saxon period.

4.4.2 Both pits contained only a single sampled waterlogged layer, and so it is not possible to analyse either deposit as a sequence in order to assess changes in vegetation over time. However, waterlogged deposits can highlight information regarding local vegetation, and it was felt that the analysis of these samples could provide some data on local conditions.

Methods

4.4.3 The samples were processed by hand flotation using the 'wash-over' technique. Both flot and residue from each sample were collected onto 250µm meshes and stored wet to facilitate preservation.

4.4.4 Due to the size of the flot of sample 50, 50% of the volume was sorted; 100% of the flot of sample 49 was sorted. All identifiable items were extracted and quantified; the results are shown in Appendix K, Table K2. Identifications were made with reference to Cappers *et al*. (2012), Cappers and Bekker (2013) and OA's reference collection. Nomenclature follows Stace (2010).

Results and discussion

4.4.5 Pit 1108 is dated to the late Roman phase and may have been contemporary with late Roman corndryer 1712. A small number of charred and uncharred glume bases and fragments were present within the flot, together with a small quantity of charcoal. The small size and quantity of this material indicates that this was likely to have been accidentally incorporated within the fill rather than as part of a deliberate dumping episode. Unfortunately, the preservation of these is insufficient to ascertain the species; however, it would seem likely that these were spelt wheat (*Triticum spelta*) as are most of the charred crop assemblage (see above).

4.4.6 The uncharred seeds fall broadly into two categories: weeds of cultivated, waste or open ground, such as common fumitory (*Fumaria officinalis*), goosefoots (*Chenopodium album*), common nettle (*Urtica dioica*), black nightshade (*Solanum nigrum*) and stinking chamomile (*Anthemis cotula*), and plants with a broad range of tolerances, such as buttercups (*Ranunculus acris/repens/bulbosus*), docks (*Rumex* sp.),

common chickweed (*Stellaria media*), elder (*Sambucus nigra*), thistles (*Cirsium/Carduus*) and grasses (Poaceae).

4.4.7 A very small number of seeds from plants with a preference for damp conditions are present, such as crowfoot (*Ranunculus* sub gen *Batrachium*), sedges (*Carex* sp.) and spike rushes (*Eleocharis* sp.); however, these are represented in such small numbers when compared with other species that it would seem unlikely that the area in the vicinity of the pit was particularly wet and may just represent occasional plants growing in the base of the pit itself. However, the flot also contained a good number of ostracods and the *epiphera* of water fleas (*Daphnia*), which would seem to imply that the feature was open for some time.

4.4.8 The large number of elder seeds present are likely to suggest that a tree was situated in proximity to the feature, as they are too large to have travelled far from their place of origin, although their robust nature will also have facilitated preservation.

4.4.9 Common nettle has been associated with the presence of elevated levels of phosphate in the soil, possibly associated with human and animal waste (Smith 2013, 47). This may indicate the presence of livestock; however, they are also commonly found in waste areas, and this together with the presence of brambles (*Rubus* sub gen *fruticosus*), docks and thistles may reflect a period of disuse before the final infilling of the feature.

4.4.10 In contrast, pit 1118 was much later in date and contemporary with two other inter-cutting pits, all dating to the early–middle Anglo-Saxon period. Once again, a small number of charred chaff and cereal fragments are present, together with a small quantity of charcoal. Given the small quantity of charred remains, and indeed features of this date, it is unclear to what extent crop-processing activities were taking place on site or withing the surrounding landscape at the time.

4.4.11 There are differences in the uncharred seeds present within this feature, with the waterlogged assemblage dominated by common nettle and winter-cress (*Barbarea vulgaris*), as well as a variety of dead nettle species (Lamiaceae) and thistles (*Cirsium*/*Carduus*). These are likely to represent the plants that were growing directly adjacent to the feature. All are plants that are common in waste areas, although both common nettle and winter-cress prefer disturbed ground and like common nettle, creeping thistle (*Cirsium arvense*) prefers richer, more fertile ground.

4.4.12 The majority of those species observed within pit 1108 that are associated with arable crops are not present within this assemblage, while those with a preference or at least tolerance for waste places have increased in number. The change in the taxa represented indicates an area of waste ground rich in nettles, thistles and other plants of deserted places growing in the looser soils caused by the silting of the earlier Roman features. The area of the pit did not appear to have been particularly wet, although as with pit 1108, the feature itself appears to have held water for some time, as evidenced by the presence of ostracods.

4.5 Marine shell *by Rebecca Nicholson*

4.5.1 A total of 16 shell fragments have been visually scanned and identified, with notes made on their general condition following Winder (2011). With the exception of an

indeterminate clam-shell fragment from late Roman ditch 1704 (fill 856) and fragments of fossil shell, one from middle Iron Age ditch 1683 and four from late Roman posthole 998 (structure 1101), the entire collection comprises valves of European flat oyster (*Ostrea edulis*), typically in fair or poor condition, with no context containing more than one or two shells. All the oyster shells derived from late Roman contexts, except for two fragments from middle Roman ditch 1696 (fill 1474).

4.5.2 There is some evidence of epibiont infestation comprising a small number of valves exhibiting the distinctive tunnels caused by the polychaete worm *Polydora ciliate* Johnstone and a single example of probable tunnelling by *Polydora hoplura* Claparède on a large valve from middle Roman ditch 1696 (fill 1474). This worm causes internal mud blisters to form in the shells but has no effect on the meat. Several valves have evidence of predatory gastropod boreholes, and the shell from 1696 has small holes possibly caused by a sponge (eg *Cliona celata* Grant).

5 DISCUSSION

5.1 Early prehistoric activity

5.1.1 No features encountered on site pre-date the Iron Age, though a small assemblage of worked flint and a few pottery sherds of Neolithic and Bronze Age date were recovered from a number of later features distributed across the site as residual finds. This material at the very least provides evidence of a limited and perhaps transitory presence in the landscape during the earlier prehistoric period. However, the relatively high proportion of flint tools may suggest a domestic occupation site with an associated processing area was located nearby, though excavation bias may have influenced the recovery of such artefacts.

5.1.2 Evidence of earlier prehistoric activity immediately surrounding the site is limited to a few finds recorded in the HER. However, recent excavations at nearby Great Western Park, Didcot (Hayden *et al*. forthcoming) have uncovered Mesolithic flint scatters, Neolithic pits and a middle Bronze Age field system, providing evidence of activity within the wider landscape during the earlier prehistoric period.

5.2 Iron Age settlement and agriculture

Establishment and development

5.2.1 Settlement appears to have been first established during the earliest Iron Age (Phase 1.1, *c* 800–600 BC). Archaeological remains of this date are limited to a single probable roundhouse ditch (837) in the south-east of the site, though it is possible that the pottery from this feature was residual, with a small quantity of earliest Iron Age pottery also found residual in later Roman pit 1214 located further to the north. That remains of earliest Iron Age date were found in the east of the site may suggest that this phase of activity was focused there and perhaps extended eastwards beyond the site boundary. It is also possible that a proportion of the broadly Iron Age, undated and unexcavated features were related to this phase of activity.

5.2.2 Evidence of more intensive settlement activity dates to the early Iron Age (Phase 1.2, *c* 600–350 BC). There is a clear focus of settlement in the western half of the site, as demonstrated by the concentration of roundhouse ditches, pits and postholes of early Iron Age date. The early Iron Age pottery assemblage indicates that occupation activity dated to the later part of the period (*c* 400–350 BC), suggesting that there was a hiatus in activity on site during the 6th and 5th centuries BC or that settlement during the intervening period was concentrated elsewhere. This is comparable to settlement and pottery evidence from Great Western Park, Didcot (Davies *et al.* in prep).

5.2.3 Occupation continued from the end of the early Iron Age through much of the middle Iron Age (Phase 1.3, *c* 350–50 BC). The layout of the settlement, however, appears to have changed during this phase, with the establishment of several large, ditched enclosures that are characteristic of the period (Lambrick 2009, 109). These enclosures were distributed more widely than the earlier extent of the settlement, perhaps signifying an expansion of activity during this phase. Multiple recuts seen within the ditches also demonstrate the maintenance of existing enclosures. How many of these enclosures were in use at the same time remains unclear, though the two probable

inter-cutting enclosures in the western excavated area (1690 and 1705) suggest that activity was not limited to a single phase of land use during the middle Iron Age and that some modification to the positioning of the enclosures occurred.

5.2.4 Similar quantities of diagnostic early and middle Iron Age pottery have been identified, though a greater proportion of the prehistoric pottery assemblage could only be dated more broadly to the earlier Iron Age. As a result, the phasing of some features could not be further refined. In addition, a proportion of the exposed features were not excavated, though they were characteristic of Iron Age roundhouse and smaller enclosure ditches and therefore add to the pattern of settlement layout. Nevertheless, the components and development of the Iron Age open settlement site revealed by the excavation are characteristic of the wider region (Booth 2011b, 3; Lambrick 2009; 2014b), with nearby comparable sites including Ashville Trading Estate (Parrington 1978) and Dunmore Road (OA forthcoming), both in Abingdon, and Crab Hill, Wantage (Allen *et al.* forthcoming).

Roundhouse structures and deposition

5.2.5 The inter-cutting nature of many of the early and middle Iron Age roundhouse ditches indicates a sequential and continuous pattern of occupation between the end of the early Iron Age and the middle Iron Age. It is unclear, however, how many features were in contemporary use at any one time. Given the quantity and distribution of Iron Age settlement remains across the western half of the site, it may be that the settlement had several areas of habitation in use at once. Recutting of some roundhouse ditches also indicates that some buildings were inhabited over several generations. Similar evidence has been uncovered at, for example, Appleford (Hinchcliffe and Thomas 1980) and Crab Hill, Wantage (Allen *et al*. forthcoming).

5.2.6 Owing to truncation and recutting, the full extent of the roundhouse structures is not always evident from the archaeological remains. These remains suggest that at least one roundhouse (1676) had a west-facing entranceway (though its eastern side did not survive), while others may have had east- and south-east-facing entrances that were more typical of Iron Age structures (eg Webley 2007; Lambrick 2009, 137–43). Recutting sequences in several roundhouse ditches, with a possible shift in the orientation of roundhouse 1678/1679, may indicate a change in use or attitude towards these structures (Lambrick 2009, 143). Some roundhouse ditches may represent the remains of ancillary structures, such as animal pens or use for craft activity, associated with larger, principal roundhouses (eg Chapman 2004; Lambrick 2009, 109, 150–3).

5.2.7 The presence of internal pits and postholes within the areas defined by several roundhouse ditches, particularly 1678/1679, provides some evidence of related structural components and associated activity. In addition, postholes 1686 may have been used to partition a roundhouse in the north-east of the site, defining different areas of activity. These remains, however, shed little light on the superstructures of the buildings.

5.2.8 The highly fragmentary condition and often residual nature of the early Iron Age pottery, in contrast to material of middle Iron Age date, may indicate differences in depositional practices. Although not archaeologically visible on the site, above-ground

middens may have been used temporarily for domestic refuse during the early Iron Age before being deposited within the fills of roundhouse and enclosure ditches. This is comparable to the pottery assemblage recovered during investigations at Crab Hill, Wantage (Allen *et al*. forthcoming).

5.2.9 The types and relative abundance of finds from the Iron Age features provide clear evidence of domestic and agricultural activity. No clear patterns of finds deposition within the roundhouse ditches themselves has been identified to reflect specific areas of activities or patterns of house use/abandonment (see Webley 2007). Equally, no *in situ* remains of ovens/hearths were identified, though fragments of fired clay were found to have come from domestic ovens or hearths. In particular, pit 82 contained burnt deposits and material demonstrating that the probable well/waterhole had been used for the deposition of material from an oven/hearth following its disuse. Located in the proximity of several roundhouse ditches in the west of the site, pit 82 contained domestic material, including early Iron Age pottery, animal bones and a spindle whorl. Small quantities of early Iron Age pottery, animal bones and a fragment of whetstone found within several postholes within the northern area of roundhouse structure 1678/1679 may indicate that some finds had been deliberately deposited in this part of the house. In addition, pit 448, which was adjacent to posthole group 1686, contained a complete middle Iron Age jar (SF 11), as well as a piece of worked flint and a heat-cracked cobble stone. These finds appear to have been deliberately placed within the base of the pit, possibly to mark the abandonment of the pit or potentially the roundhouse itself. Similar instances of deposition within pits and postholes located within or close to roundhouses have been recorded at Crab Hill, Wantage (Allen *et al*. forthcoming), Gravelly Guy, Stanton Harcourt (Lambrick and Allen 2004), and Dunston Park, Thatcham, Berkshire (Fitzpatrick *et al.* 1995). The context of such deposits is seldom clear, and the distribution of finds is considered to reflect several different circumstances of deposition, including the direct discard and accidental loss/destruction of objects close to where they were used, the storage of objects when not in use, and the deliberate deposition of symbolic/votive offerings, perhaps related to foundation and disuse/abandonment rituals (Lambrick 2009, 148–9). The interment of a neonate (1498) within roundhouse ditch 1681 may be seen as a 'special deposit' within a settlement context (ibid., 283–7). Neonate and infant burials, as well as those of adult individuals, are common findings within Iron Age settlements, and their burial in a settlement setting may have held some symbolic meaning or indicated social status (ibid., 321–3).

Other structures

5.2.10 Several small four- and possible six-post structures (451, 1464, 1687, 1688) have been encountered on site. These square and rectangular structures are characteristic of late prehistoric settlements and are often interpreted as storage facilities, such as raised granaries, though they may have also performed a variety of other functional and symbolic roles (Robinson and Lambrick 2009, 271–2; Lambrick 2014b, 136). Those identified on site were concentrated towards the centre of the excavation area, to the east of the majority of roundhouse ditches, and contained small quantities of early Iron Age pottery, animal bones and fired clay. There was no clear association of these structures having been related to any specific function, though it is likely that they

were related to farming activities given the quantities of both charred plant remains and animal bones found more widely on site. Their position in a seemingly less-intensive area of settlement activity may also suggest a more utilitarian, agricultural function. Comparable early Iron Age structures have been recorded nearby at Dunmore Road, Abingdon (OA forthcoming), and Crab Hill, Wantage (Allen *et al.* forthcoming), and in the wider region (Lambrick 2009; 2014b), while a middle Iron Age example that had been rebuilt was found at Ashville Trading Estate, Abingdon (Parrington 1978).

Economy

5.2.11 Like other sites in the Thames Valley (Lambrick 2009), the roundhouse and enclosure ditches, post-built structures, pits and postholes, together with the deposits of artefacts and environmental remains provide some insights into the socio-economic aspects of the Iron Age settlement. The excavation results exhibit a typical range of domestic and agricultural material culture, including pottery from predominately local sources, animal bones, charred plant remains, and bone weaving combs. These remains indicate a mixed arable and pastoral economy at Sutton Courtenay Lane during the Iron Age, as was the general basis for late prehistoric agriculture (Robinson and Lambrick 2009, 265). The establishment of large ditched enclosures in the middle Iron Age, similar to those found at Mount Farm, Berinsfield, may reflect developments in farming, such as shifts in the balance between arable and pastoral farming, to control livestock grazing patterns and herd structure (Lambrick 2010, 72).

5.2.12 The range of species of domestic animals and cereal crops identified are characteristic of those seen at late prehistoric settlements elsewhere within the region (eg Appleford: Hinchliffe and Thomas 1980; Mount Farm, Berinsfield: Lambrick 2010; Great Western Park, Didcot: Hayden *et al*. forthcoming; Crab Hill, Wantage: Allen *at al.* forthcoming). Together they demonstrate a complex agricultural economy within the Upper Thames Valley during the Iron Age (Robinson and Lambrick 2009).

5.2.13 It is generally considered that most domestic, farming and manufacturing crafts, such as spinning and weaving, could have been carried out within domestic houses or in the immediate vicinity (Lambrick 2009, 153). Often no correlation between roundhouse remains and artefactual evidence can be identified within the archaeological record to reflect specific uses of Iron Age buildings (ibid.). While the assemblages of pottery, animal bones, fired clay and charred plant remains, for example, provide evidence of Iron Age domestic and agricultural activity, limited evidence of craft activities has been revealed by the excavation. The triangular brick fragments are argued to here and elsewhere to have been associated with domestic ovens or hearths rather than being used as loomweights, though this should not be ruled out (see *Fired clay*; cf Cunliffe and Poole 1991, 380; Lambrick 2014b, 144). Nevertheless, the recovery of bone weaving combs during the preceding evaluation of the site demonstrates that textile manufacture was taking place.

5.3 Roman settlement and agriculture

Continuity and change

5.3.1 In contrast to their Iron Age predecessors, Roman rural settlements in the region tended to have more extensive ditched enclosure systems, often in the form of rectilinear fields or paddocks adjoining ditched trackways that linked settlements (Lambrick 2009, 50). The settlement at Sutton Courtenay Lane appears to have followed this general pattern. Superimposed on the Iron Age settlement was a ditch system of Roman date, defining a trackway and a number of associated enclosures/fields. Aerial photographs suggest an extensive complex of trackways and rectangular enclosures/fields as cropmarks to the north and north-east, suggesting that the features on site continued beyond the excavated area.

5.3.2 The extent to which the occupation of the middle Iron Age settlement continued into the late Iron Age/early Roman period (Phase 2.1) is unclear. It is uncertain when the middle Iron Age pottery types found on site ceased to have been produced and used, though it is possible that they could have continued up to, and perhaps into, the 1st century AD (see *Prehistoric pottery*). An inhumation burial radiocarbon dated to 151 cal BC–cal AD 63 (Table 1) demonstrates more clearly that some level of activity occurred here during this phase. This burial provides a rare example of late Iron Age/early Roman inhumation practice, evidence of which is otherwise lacking within the Upper Thames Valley (Booth *et al.* 2007, 209). It is possible that the ditch in which this burial may have been interred represents the earliest phase of the trackway/boundary layout of the Roman agricultural settlement site, rather than being related to the earlier Iron Age settlement. In addition, the small assemblage of late Iron Age/early Roman pottery recovered, although generally as residual finds, dates to the latter half of the 1st century AD.

5.3.3 There are no clear boundaries between what is considered late Iron Age and early Roman in the region, with numerous new settlement types emerging, together with the abandonment or transformation of others, between the 1st century BC and late 1st century AD (Booth *et al.* 2007, 42; Fulford 2014b, 157; Allen and Smith 2016). Continuity of settlement from the late Iron Age into the early Roman period is clearly seen within the Upper and Middle Thames Valleys (Booth *et al.* 2007, 42; Allen and Smith 2016, 21–2), with Roman settlement with later Iron Age origins recorded at a number of sites nearby, such as Bridge Farm, Sutton Courtenay (OA 2017), Appleford Sidings (Booth and Simmonds 2009) and Great Western Park, Didcot (Hayden *et al*. forthcoming).

5.3.4 The most obvious change in the layout of settlement at Sutton Courtenay Lane between the earlier Iron Age and Roman periods is the nature of land division. The Iron Age settlement contained unenclosed roundhouses and enclosures perhaps used for livestock management, but an elaborate system of trackway and adjoining boundaries/enclosures was laid out middle Roman phase (Phase 2.3, *c* mid-2nd century AD), though elements may have been established slightly earlier in the later 1st/early 2nd century AD. The Roman trackway (defined by ditches 1692 and 1693) and main boundaries (ditches 1699, 1710) appear to have been in use largely throughout the middle and late Roman phases, though the insertion of ditch 1698 in the east of the site suggests that the trackway may have fallen out of use at some point. The limited and broad dating evidence from ditch 1698 and lack of clear stratigraphic relationships with other dated features prevents more refined phasing of this boundary ditch. The large numbers of recuts seen within the trackway and

boundary ditches, and the associated pottery assemblages, demonstrate the maintenance and longevity of these land entities during the Roman period.

5.3.5 The general layout of the site was maintained through to the end of the Roman period. However, the arrangement of the enclosures/fields to the south and west of the trackway was not static, with minor ditches having been inserted to reorganise the landscape during the middle Roman (Phase 2.3, *c* mid-2nd to early 3rd century AD) and late Roman (Phase 2.4, *c* mid-3rd to 4th century AD) periods. The area directly south of the trackway was divided into a series of smaller sub-rectangular fields/enclosures in the middle Roman period. The landscape continued to develop into the late Roman period, which involved the establishment of fewer larger fields/enclosures south of the trackway and the addition of smaller areas to the west where corndryer 1712 and post-built structure 1101 were in use during this phase. A ditch to the south of boundary ditch 1710/1699 and to the north of trackway/boundary ditch 1692 also suggest that late Roman activity continued beyond the limit of excavation.

5.3.6 The pattern of morphological development at the site is typical for lowland Roman Britain and is comparable to other nearby occupation sites, including at Crab Hill (Allen *et al*. forthcoming), Great Western Park, Didcot (Davies *et al*. in prep; Hayden *et al*. forthcoming), and Grove Airfield (OA 2021a), as well as the wider region (Booth *et al*. 2007, 52–3, 75–9; Booth 2011b, 6–7; Fulford 2014b, 176).

Use and economy

5.3.7 The layout of the settlement and agricultural site at Sutton Courtenay Lane is characteristic of Roman rural sites in the Upper Thames Valley and elsewhere, with similar trackways and adjoining enclosures/fields encountered locally at Milton Park (CAT 2000), Bridge Farm, Sutton Courtenay (OA 2017), Appleford (Hinchcliffe and Thomas 1980) and Appleford Sidings (Booth and Simmonds 2009). Such trackways may have been used for the movement of livestock, though the purpose of the associated enclosures/fields is often unclear. Nevertheless, it is probable that different areas of the site served various functions relating to settlement occupation, crop cultivation and pastoral activities. In contrast to the preceding open Iron Age settlement, the establishment of the Roman trackway and other boundaries may have been related to a need to more closely define the land in order to maximise the potential arable and pastoral output (Booth 2011b, 7). The trackway is also likely to have been connected to similar trackways within the landscape, such as those indicated by adjacent cropmarks and at nearby sites such as Milton Park (CAT 2000) and Appleford (Hinchcliffe and Thomas 1980; Booth and Simmonds 2009), allowing for the increased mobility of the communities that occupied the surrounding landscape (Booth 2011b, 7).

5.3.8 In the east of the site, the width of the trackway defined by ditches 1692 and 1693 (minimum of *c* 9m) and the apparent lack of entrances are similar to the trackway at Appleford, where it was suggested that its primary function was for controlling the movement of livestock, with direct access into the adjoining enclosures from the trackway potentially enabled by the absence of entrances (Hinchcliffe and Thomas 1980, 68–9). In the west of the site, the trackway may have funnelled out into open

and/or enclosed areas that were redefined throughout the Roman period. At Appleford, a confluence of several trackways into a communal area may have reflected a focus of habitation or perhaps the moving and stocking of cattle and sheep (ibid., 69).

5.3.9 There were few internal features assigned to the Roman boundary/enclosure system, which may demonstrate the largely agricultural nature of the activity within the defined areas, or may be a result of 19th- and 20th-century ploughing and development removing any shallower Roman features. Nevertheless, a small number of discrete pits, including several probable wells/waterholes, a series of small inter-cutting enclosures (812, 1434, 1706) and a corndryer (1712), are indicative of associated activity.

5.3.10 Evidence of Roman structures at the site is limited, though this is not unusual for such sites. One large rectangular post-built structure (1101) was revealed in the western excavation area and contained late Roman and residual Iron Age pottery. Its location in proximity to the corndryer (1712) and other enclosure/boundary ditches, also of late Roman date, suggests there was a focus of activity in this part of the site and an increase in crop processing during the late Roman period. Very low quantities of Roman CBM were recovered during the excavation, predominately from trackway/boundary ditch fills. It is probable that any masonry or masonry-footed Roman buildings that may have been in use at the time were located some distance beyond the site boundary. A similar apparent absence of building evidence was encountered at Crab Hill (Allen *et al.* forthcoming) and Appleford (Hinchcliffe and Thomas 1980). In contrast, several post-built rectangular buildings of Roman date have been identified at Grove Airfield (OA 2021a) and Mill Street in Wantage (Holbrook and Thomas 1996). Later truncation may have resulted in the general absence of structural remains at Crab Hill (Allen *et al*. forthcoming), which may have also been the case at Sutton Courtenay Lane. Despite the paucity of Roman building evidence at Appleford, it was suggested that the scale of the Roman trackway and enclosure system, as well as the quantity of Roman pottery recovered, signified that a relatively large community lived there (Hinchcliffe and Thomas 1980, 110). In conjunction with the cropmark evidence to the north, north-east and west of the Sutton Courtenay Lane site, the excavation results suggest the site formed part of a wider occupied area. This evidence adds to other Roman occupation sites known more locally, including several along Sutton Courtenay Lane/Harwell Road (CAT 2000; FA 2008a; 2008b; CA 2016) and Milton Park (Scheduled Monument No. 1004853; CAT 2000). Indeed, taking into consideration the trackway systems and enclosure complexes seen at Berinsfield (Lambrick 2010), Appleford (Hinchcliffe and Thomas 1980), Didcot (Davies *et al.* in prep; Hayden *et al.* forthcoming), Wantage (Allen et al. forthcoming) and Grove (OA 2021a), the evidence indicates an extensive Roman rural settlement landscape.

5.3.11 Despite the limited structural evidence and discrete features within the areas defined by the Roman boundary/enclosure system, associated activity is demonstrated by the material culture that was deposited within the Roman features found on site. The quantity and range of finds provide evidence of both domestic and agricultural activities. The material includes large assemblages of pottery and animal bones, as well as fired clay discs/baking plates, nails, hobnails, brooches, personal adornments, coins, querns stones and marine shells. The pottery assemblage is suggestive of a low-

status rural settlement characteristic of the region, although the presence of fine table wares and imported wares, albeit in small quantities, is suggestive of good connections to regional markets and industries. The increase in quantities of middle and late Roman pottery may also suggest an intensification of activity on site from the middle of the 2nd century AD, though depositional practices and the cleaning out of earlier Roman ditches may have influenced these results. The identification of a charred coriander seed and oyster shells also hint at wider spheres of contact during the Roman period. Similarly varied assemblages of material culture have been recovered from comparable sites in the surrounding landscape, including Grove Airfield (OA 2021a) and Great Western Park, Didcot (albeit on a much larger scale; Davies *et al*. in prep; Hayden *et al*. forthcoming), and the wider region (Booth *et al.* 2007).

5.3.12 While the layout of the settlement and agricultural site changed significantly between the earlier Iron Age and Roman periods, there appears to have been a basic continuity of economic patterns. The charred plant and animal bone assemblages provide evidence of a mixed arable and pastoral economy throughout the Roman period, with patterns of crop cultivation and animal husbandry generally similar to those evidenced during the Iron Age. Some identified differences in the ageing patterns of sheep/goat in particular within the Iron Age and Roman assemblages, however, indicates that there were changes in the size and perhaps structure of sheep flocks, which appear to have dominated over cattle. Slight changes in the varieties of plant remains recovered from Roman features may also suggest some developments in arable agriculture occurred. Furthermore, some degree of intensification of crop processing during the late Roman period is demonstrated by the addition of a corndryer and a slight increase in the quantity of charred crop material, though the quantities of cereal grain and chaff recovered from the site are generally low and were distributed across the site. Evidence of more pronounced intensification of arable cultivation and crop processing during the late Roman period has been found nearby at Grove Airfield (OA 2021a) and Crab Hill, Wantage (Allen *et al.* forthcoming).

Burials

5.3.13 The presence of a number of inhumation and cremation burials on site provides evidence of Roman burial practices within a non-cemetery, rural settlement setting. An inhumation burial (707) was radiocarbon dated to the middle Roman period, while two deposits of cremated remains, one of which was located within a truncated pottery vessel dating to AD 120–410, were found within pit 1141. Disarticulated remains deposited within late Roman ditches may have been associated with the abandonment of the site (see below).

5.3.14 Cremation burial was the predominant practice during the early Roman period and continued into the middle Roman period, but by the late 3rd century it had largely been replaced by inhumation burial, though later cremation and earlier inhumation burials have been documented (Booth *et al*. 2007, 224–9; Pearce 2008, 30, 35–6; Smith 2018). Human remains from the site also suggest that there may have been some continuation of Iron Age funerary practices involving excarnation/exposure and subsequent deposition of disarticulated elements. It is possible that formal interment

of individuals, including cremated remains, on rural sites during the Roman period may have been quite selective (Smith 2018, 209).

5.3.15 While there is generally a greater body of evidence for human burial dating to the late Roman period in contrast to the early–middle Roman period, non-cemetery Roman burials in rural contexts are limited within the region (Pearce 2008, 40; Booth 2009, 12; Booth *et al*. 2007, 224–7), with a possible late Roman cemetery located at Appleford (Hinchcliffe and Thomas 1980) and a cemetery of approximately 30 burials in two adjacent groups associated with the settlement at Bridge Farm, Sutton Courtenay (OA 2017). However, together with similar remains from sites such as Grove Airfield (OA 2021a), Monks Farm, Grove (Brady *et al*. 2017), and Great Western Park, Didcot (Hayden *et al.* forthcoming), the human remains found at Sutton Courtenay Lane add to a growing corpus of evidence of burials within a rural settlement context.

Abandonment

5.3.16 Roman occupation at Sutton Courtenay Lane appears to have ceased in the late 4th century AD, as can be seen at other rural Roman sites across the Upper Thames Valley, such as at Appleford (Hinchcliffe and Thomas 1980), Crab Hill, Wantage (Allen *et al*. forthcoming), Great Western Park, Didcot (Hayden *et al.* forthcoming) and Grove Airfield (OA 2021a). The pottery evidence from the uppermost ditch fills of the later recuts of the main boundary and trackway ditches indicates that the ditches were maintained in the late Roman period and that deposition was still occurring into the latter half of the 4th century. Although not unusual on Roman rural sites, the coin hoard found within a ditch also has an emphasis on Reece's Period 21 (AD 388–402), the last significant period of coin use in Roman Britain. Similar coins of 4th-century date have been found at occupation sites at Great Western Park, Didcot (Hayden *et al*. forthcoming), and Crab Hill, Wantage (Allen *et al.* forthcoming), reflecting a focus of very late Roman activity within the wider landscape. Such coins may suggest close economic ties between these sites and the nearby town of Dorchester-on-Thames, which is notable for its aspects of late Roman activity, including a high number of very late Roman coins (Henig and Booth 2000, 189; Booth *et al*. 2007, 74; Hayden *et al*. forthcoming).

5.3.17 The presence of several inhumation burials and disarticulated remains within the latest fills of late Roman ditches across the site demonstrates that these features went completely out of use during or after the final infilling of the ditches. Signs of trauma resulting from weapon injuries on some of these remains and the unconventional position of others, both articulated and disarticulated remains, suggests varied burial rituals occurred on site, including the potential continuation of Iron Age-style funerary practices. It is possible that some of these burials and deposits of human remains were interred to mark the abandonment of the site. An inhumation cemetery of possible late Roman date partially overlaid the trackway at Appleford (Hinchcliffe and Thomas 1980), perhaps suggesting a change in the focus of activity at the site following the abandonment of the settlement.

5.4 Anglo-Saxon and later activity

5.4.1 The lengthy occupation of the Sutton Courtenay Lane site is suggestive of a stable population and economy during the Iron Age and Roman period (cf Ashville Trading Estate, Abingdon: Parrington 1978; Appleford: Hinchcliffe and Thomas 1980; Crab Hill, Wantage: Allen *et al*. forthcoming). However, the apparent abandonment of the site at the end of the Roman period may indicate a significant change or disruption in the pattern of settlement and agriculture at this time.

5.4.2 The excavation results have not identified any relationship between the latest Roman features and any potential earliest Anglo-Saxon occupation of the site. Nevertheless, the excavation results demonstrate some level of activity on site during the early–middle Anglo-Saxon period (Phase 3). Several inter-cutting pits (including a possible SFB) contained small quantities of probable 6th- to 7th-century pottery and charcoal radiocarbon dated to cal AD 647–772, while an isolated inhumation burial (247) was radiocarbon dated to cal AD 483–641. Anglo-Saxon loomweights were also intrusive in the uppermost fills of Iron Age and Roman ditches. It is possible that further remains of this date have since been truncated and completely removed, or were simply not identified to this period, though the small quantity of Anglo-Saxon remains suggests that any activity on site is likely to have been on a small scale.

5.4.3 Documentary records indicate the presence of a manor at Sutton Courtenay since at least the late 7th/early 8th century, when the vill of Sutton was given to Abingdon Abbey by King Ine of Wessex (AD 688–728), while the Domesday survey indicates the increased size of the village in 1086 (Page and Ditchfield 1924; Open Domesday nd). Although limited archaeological remains indicative of Anglo-Saxon settlement have been uncovered at the site, evidence of activity of similar date has been recorded within the surrounding landscape. Excavations in advance of the expansion of Didcot Power Station in 1991 uncovered 17 Anglo-Saxon inhumation burials dated to the 7th century and two SFBs potentially dated to the 5th century (Boyle *et al*. 1995). Anglo-Saxon features were also identified within the central part of the scheduled area within Milton Park (Scheduled Monument No. 1004853; JMHS 2008), with further Anglo-Saxon features identified by archaeological evaluation in the southern (unscheduled) part of Milton Park (CAT 2000). In addition, an SFB dated to the early–middle Anglo-Saxon period was uncovered at Peewit Farm in Sutton Courtenay, *c* 1.9km to the north-west of the site (TVAS 2018). Evidence for Anglo-Saxon occupation has been found at the site of the Roman settlement at Bridge Farm, Sutton Courtenay (OA 2017). Extensive evidence of a high-status Anglo-Saxon settlement has also been recorded on the Drayton/Sutton Courtenay parish boundary, including the remains of two large timber halls, a 'punishment' burial, SFBs, and other gullies and pits (OA 2003; Brennan and Hamerow 2015). Together these investigations demonstrate a series of Anglo-Saxon settlement occupation sites across the wider landscape surrounding Sutton Courtenay.

5.4.4 Evidence of later medieval and early post-medieval activity is limited to a small assemblage of metal finds, some of which were intrusive in earlier features, and a possible buried soil overlying Iron Age and Roman features. The agricultural nature of the landscape of which the site formed a part was recorded on historic mapping dating to the 18th and early 19th centuries. Subsequent 19th- and 20th-century OS maps

show the developing use of the landscape, from agricultural fields to gravel extraction and water management, the construction of the Central Ordnance Depot and railway sidings.

6 PUBLICATION AND ARCHIVING

6.1 Publication

6.1.1 The results of the excavation are described comprehensively in this excavation report, which will be submitted to Oxford County Council HER and disseminated online, being made available for download as a PDF through OA's online library (https://library.oxfordarchaeology.com/6021/).

6.1.2 A synthetic article will also be prepared for publication in the Oxfordshire county archaeological journal, *Oxoniensia*. This will include the salient elements of the project, including the more important data, and a full interpretation of the site, presenting its significance within its wider regional context. The results of the 2018 watching brief will also be incorporated into this article. The journal article will be fully cross-referenced with the online excavation report.

6.2 Archiving, retention and disposal

6.2.1 On completion of the reporting stage of the project, the finds and documentation archive will be prepared for deposition in accordance with the methodology set out in the WSI (CgMs 2017) and current professional standards (Brown 2011; CIfA 2014b; OCC 2020).

6.2.2 Subject to the agreement of the legal landowner, the site archive will be deposited with Oxfordshire County Museum Service under accession number OXCMS:2018.83.

6.2.3 All the pottery has the potential for future research purposes and should all be retained. All the metal objects and the coins should be retained, but the glass can be discarded. The decorated worked-bone object should be retained for possible identification in the future, as should the bone weaving combs. The industrial waste can be discarded.

6.2.4 The fired clay has intrinsic interest and potential for wider research, in particular the origins and production of the oven plates and the potential of specialised production associated with Roman tile or pottery production. The assemblage should therefore be retained as part of the archive, except for non-diagnostic material that may be discarded as indicated in the archive record. The CBM has limited intrinsic interest but could have potential for any wider research and analysis considering the relationship between villas and lower-status settlements and therefore should be retained. The post-Roman tile may be discarded.

6.2.5 The worked flints should be retained, while any unworked flint fragments may be discarded. The burnt and unworked stone can be discarded, except for the burnt cobble from context 449, which may have been included in a placed deposit. The worked-stone objects should be retained, as they have the potential for further analysis, either petrographic or use-wear.

6.2.6 The human skeletal remains are generally well preserved with very good potential for further analysis, and it is recommended that the remains are retained for future research. The assemblage is currently held at OA under Ministry of Justice burial licence 19-0162. This licence is valid until 04 July 2024. It should be deferred by application to the Ministry of Justice, stating retention in the local receiving museum.

6.2.7 The animal bone assemblage is one of the largest in the region, is well preserved, and should be retained. The marine shells are of limited value for further work but can be retained alongside the animal bones for completeness of the zooarchaeological remains.

6.2.8 The assessed CPR and WPR flots should be retained until the end of the project when a more-informed decision can be made about retention in the archive. Samples that have not been recommended for further work may have potential for radiocarbon dating should that be required. Any extracted and identified material should be retained in the archive, together with any unsorted flots that have been assessed as containing interpretable material. CPR flots scored D for potential of both CPR and charcoal could be discarded at the end of the project. Waterlogged material is difficult to store long-term and retention in the archive is not recommended.

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APPENDIX A PREHISTORIC POTTERY DATA TABLES

Fabric	No. sherds		Weight (g)		No. vessels	
Flint (Fl1)	1	*9.1%*	3	*2.2%*	1	*16.7%*
Grog (Gr1)	1	*9.1%*	3	*2.2%*	1	*16.7%*
Quartz sand	4	*36.4%*	58	*42.0%*	3	*50.0%*
Qs1	2	*18.2%*	27	*19.6%*	1	*16.7%*
Qs2	2	*18.2%*	31	*22.5%*	2	*33.3%*
Shell (Sh2)	5	*45.5%*	74	*53.6%*	1	*16.7%*
Total	*11*		*138*		*6*	

Table A1: Earliest Iron Age pottery proportions

Fabric	No. sherds		Weight (g)		No. vessels	
Flint	2	*0.3%*	27	*0.3%*	2	*0.5%*
FlQg2	1	*0.1%*	4	*0.0%*	1	*0.2%*
FlQs2	1	*0.1%*	23	*0.2%*	1	*0.2%*
Glauconitic sand	107	*13.4%*	1207	*12.6%*	55	*13.5%*
Qg1	38	*4.8%*	383	*4.0%*	20	*4.9%*
Qg2	42	*5.3%*	359	*3.7%*	15	*3.7%*
QgMd2	1	*0.1%*	29	*0.3%*	1	*0.2%*
QgSh2	21	*2.6%*	227	*2.4%*	16	*3.9%*
QgSh3	5	*0.6%*	209	*2.2%*	3	*0.7%*
Iron oxides	13	*1.6%*	179	*1.9%*	8	*2.0%*
Io2	1	*0.1%*	20	*0.2%*	1	*0.2%*
IoQs2	1	*0.1%*	30	*0.3%*	1	*0.2%*
IoSh2	11	*1.4%*	129	*1.3%*	6	*1.5%*
Mudstone	2	*0.3%*	30	*0.3%*	1	*0.2%*
Md3	2	*0.3%*	30	*0.3%*	1	*0.2%*
Quartz sand	359	*45.1%*	3707	*38.6%*	191	*46.9%*
Qs1	78	*9.8%*	848	*8.8%*	43	*10.6%*
Qs2	169	*21.2%*	1718	*17.9%*	85	*20.9%*
QsFl1	1	*0.1%*	15	*0.2%*	1	*0.2%*
QsIo2	14	*1.8%*	115	*1.2%*	6	*1.5%*
QsMd2	1	*0.1%*	7	*0.1%*	1	*0.2%*
QsSh1	6	*0.8%*	35	*0.4%*	5	*1.2%*
QsSh2	86	*10.8%*	950	*9.9%*	48	*11.8%*
QsSh3	4	*0.5%*	19	*0.2%*	2	*0.5%*
Shell	313	*39.3%*	4459	*46.4%*	150	*36.9%*
Sh1	13	*1.6%*	113	*1.2%*	12	*2.9%*
Sh2	86	*10.8%*	1191	*12.4%*	58	*14.3%*
Sh3	72	*9.0%*	1216	*12.7%*	21	*5.2%*
ShIo2	24	*3.0%*	238	*2.5%*	18	*4.4%*
ShIo3	32	*4.0%*	687	*7.1%*	7	*1.7%*
ShMd2	1	*0.1%*	28	*0.3%*	1	*0.2%*
ShQg2	13	*1.6%*	82	*0.9%*	7	*1.7%*

Fabric	No. sherds		Weight (g)		No. vessels	
ShQg3	11	*1.4%*	219	*2.3%*	4	*1.0%*
ShQs1	4	*0.5%*	30	*0.3%*	4	*1.0%*
ShQs2	31	*3.9%*	421	*4.4%*	13	*3.2%*
ShQs3	26	*3.3%*	234	*2.4%*	5	*1.2%*
Total	*796*		*9609*		*407*	

Table A2: Early Iron Age fabric proportions

Fabric	No. sherds		Weight (g)		No. vessels	
Flint	2	*0.3%*	31	*0.2%*	2	*1.1%*
Fl1	1	*0.1%*	7	*0.1%*	1	*0.5%*
Fl2	1	*0.1%*	24	*0.2%*	1	*0.5%*
Glauconitic sand	58	*8.0%*	634	*5.0%*	14	*7.4%*
Qg1	16	*2.2%*	114	*0.9%*	7	*3.7%*
Qg2	39	*5.4%*	445	*3.5%*	6	*3.2%*
QgMd3	3	*0.4%*	75	*0.6%*	1	*0.5%*
Iron oxides	3	*0.4%*	4	*0.0%*	1	*0.5%*
IoQs2	3	*0.4%*	4	*0.0%*	1	*0.5%*
Quartz sand	665	*91.3%*	12036	*94.7%*	172	*91.0%*
Qs1	68	*9.3%*	1464	*11.5%*	21	*11.1%*
Qs2	462	*63.5%*	7036	*55.4%*	113	*59.8%*
QsIo2	15	*2.1%*	223	*1.8%*	5	*2.6%*
QsMd2	93	*12.8%*	2467	*19.4%*	27	*14.3%*
QsMd3	27	*3.7%*	846	*6.7%*	6	*3.2%*
Total	*728*		*12705*		*189*	

Table A3: Middle Iron Age pottery fabric proportions

Fabric	No. sherds		Weight (g)		No. vessels	
Clay pellets	2	*0.2%*	27	*0.2%*	1	*0.2%*
Cp1	2	*0.2%*	27	*0.2%*	1	*0.2%*
Flint	16	*1.6%*	106	*0.9%*	11	*2.4%*
Fl1	3	*0.3%*	27	*0.2%*	3	*0.6%*
Fl2	12	*1.2%*	73	*0.7%*	7	*1.5%*
FlQs2	1	*0.1%*	6	*0.1%*	1	*0.2%*
Glauconitic sand	130	*12.7%*	1343	*12.0%*	69	*14.8%*
Qg1	64	*6.3%*	650	*5.8%*	28	*6.0%*
Qg2	64	*6.3%*	679	*6.1%*	39	*8.4%*
QgFl2	1	*0.1%*	10	*0.1%*	1	*0.2%*
QgMd2	1	*0.1%*	4	*0.0%*	1	*0.2%*
Iron oxides	8	*0.8%*	107	*1.0%*	8	*1.7%*
Io2	6	*0.6%*	64	*0.6%*	6	*1.3%*
IoQs2	2	*0.2%*	43	*0.4%*	2	*0.4%*
Mudstone	3	*0.3%*	44	*0.4%*	3	*0.6%*
Md2	2	*0.2%*	30	*0.3%*	2	*0.4%*
MdSh2	1	*0.1%*	14	*0.1%*	1	*0.2%*
Quartz sand	842	*82.5%*	9489	*84.7%*	371	*79.4%*

Fabric	No. sherds		Weight (g)		No. vessels	
Qs1	120	*11.8%*	823	*7.3%*	63	*13.5%*
Qs2	678	*66.4%*	7720	*68.9%*	287	*61.5%*
QsCp2	9	*0.9%*	294	*2.6%*	6	*1.3%*
QsIo2	35	*3.4%*	652	*5.8%*	15	*3.2%*
Quartzite	11	*1.1%*	20	*0.2%*	1	*0.2%*
Qt2	11	*1.1%*	20	*0.2%*	1	*0.2%*
Vegetal	9	*0.9%*	71	*0.6%*	3	*0.6%*
Ve1	1	*0.1%*	10	*0.1%*	1	*0.2%*
Ve2	7	*0.7%*	32	*0.3%*	1	*0.2%*
VeQs2	1	*0.1%*	29	*0.3%*	1	*0.2%*
Total	*1021*		*11207*		*467*	

Table A4: Iron Age pottery proportions

Fabric	No. sherds	%	Weight (g)	%	No. vessels	%
Shell (Sh2)	5	*45.5*	74	*53.6*	1	*16.7*
Quartz sand (Qs1, Qs2)	4	*36.4*	58	*42*	3	*50*
Flint (Fl1)	1	*9.1*	3	*2.2*	1	*16.7*
Grog (Gr1)	1	*9.1*	3	*2.2*	1	*16.7*
Total	*11*		*138*		*6*	

Table A5: Earliest Iron Age fabric proportions, simplified

Fabric	No. sherds	%	Weight (g)	%	No. vessels	%
Quartz sand Qs2, QsSh2, Qs1, QsIo2, QsSh1, QsSh3, QsFl1, QsMd2	359	*45.1*	3707	*38.6*	191	*46.9*
Shell Sh2, Sh3, ShIo3, ShQs2, ShQs3, ShIo2, Sh1, ShQg2, ShQg3, ShQs1, ShMd2	313	*39.3*	4459	*46.4*	150	*36.9*
Glauconitic sand Qg2, Qg1, QgSh2, QgSh3, QgMd1	107	*13.4*	1207	*12.6*	55	*13.5*
Iron Oxides IoSh2, IoQs2, Io2	13	*1.6*	179	*1.9*	8	*2*
Mudstone Md3	2	*0.3*	30	*0.3*	1	*0.2*
Flint FlQs2, FlQg1	2	*0.3*	27	*0.3*	2	*0.5*
Total	*796*		*9609*		*407*	

Table A6: Early Iron Age fabric proportions, simplified (individual fabrics are ordered by their frequency within each fabric group

Fabric	No. sherds	%	Weight (g)	%	No. vessels	%
Quartz sand Qs2, QsMd2, Qs1, QsMd3, QsIo2	665	*91.3*	12036	*94.7*	172	*91.0*
Glauconitic sand Qg2, Qg1, QgMd3	58	*8.0*	634	*5.0*	14	*7.4*
Iron Oxides IoQs2	3	*0.4*	4	*<0.1*	1	*0.5*
Flint Fl2, Fl1	2	*0.3*	31	*0.2*	2	*1.1*
Total	*728*		*12705*		*189*	

Table A7: Middle Iron Age fabric proportions, simplified (individual fabrics are ordered by their frequency within each fabric group)

Fabric	No. sherds	%	Weight (g)	%	No. vessels	%
Quartz sand Qs2, Qs1, QsIo2, QsCp2	842	*82.5*	9489	*84.7*	371	*79.4*
Glauconitic sand Qg2, Qg1, QgFl2, QgMd2	130	*12.7*	1343	*12.0*	69	*14.8*
Flint Fl2, Fl1, FlQs2	16	*1.6*	106	*0.9*	11	*2.4*
Quartzite Qt2	11	*1.1*	20	*0.2*	1	*0.2*
Vegetal Ve2, VeQs2, Ve1	9	*0.9*	71	*0.6*	3	*0.6*
Mudstone Md3	3	*0.3*	44	*0.4*	3	*0.6*
Iron Oxides Io2, IoQs2	8	*0.8*	107	*1.0*	8	*1.7*
Clay pellets Cp1	2	*0.2*	27	*0.2*	1	*0.2*
Total	*1021*		*11207*		*467*	

Table A8: Iron Age fabric proportions, simplified (individual fabrics are ordered by their frequency within each fabric group)

	Sh	ShQs	ShQg3	ShIo	Io2	QsIo2	Qg1	Qg2	QsMd2	Qs1	Qs2	Total	EVE
Earliest Iron Age													
Shouldered jar with out-turned neck Fig. 34 no. 3	•											1	0.06
Closed jar Fig. 34 no. 2											•	1	0.15
Early Iron Age													
Tripartite angular jar (eg Savory 1937, fig. 2.1–4)	○											(1?)	0.13
Shouldered jar with upright neck Fig. 34 nos 12 and 13	•○○	○	•				○			•○	○○○	3(8?)	0.43
Tripartite angular bowl with unknown neck Fig. 34 no. 4										•••		3	-
Bowl with long neck, unknown body eg Bradford 1940, fig. 1.9–11, 20							•	•			•○	3(1?)	0.04
Round-bodied bowl with upright neck Fig. 334 no. 6										○	○	(2?)	-
Expanded rim on straight or slightly rounded body Fig. 34 nos 5, 7–11	•••••	••		••••• •	○	○					•○	14(3?)	0.82
High shouldered jar Fig. 35 no. 14										•		1	0.10
Middle Iron Age													
Globular vessel with upright neck Fig. 35 no. 18						•			•	••○○	•••○○ ○○☆	7(7?)	0.67
Slack-sided vessel Fig. 35 no. 17				•		•		★	•○	•★★	••★★○ ○○○○	11(6?)	2.36
Globular vessel without neck Fig. 35 nos 15 and 16							••○○	•★	•	••○○○	••••• ••••• •••★★ ★★★○○ ○○○○○	25(12?)	2.51

Table A9: Prehistoric pottery forms (• = One vessel; ○ = Possible vessel; ★ = Carbonised residue; • = Red coated)

Feature	153	135/ 200	200/ 260	221	240	241	280	282	284
Ditch 1511	(1?)		1		1				
Pit 82				(1?)	2				
Ditch 906					2				
Roundhouse/ enclosure ditch 1677					1	1			
Roundhouse ditch 405			1		2			1	
Enclosure ditch 1691		1			(1?)		1	1	3(1?)
Enclosure ditch 1705	(2?)				(1?)		(1?)	1	1
Enclosure ditch 1683			1				1	1(1?)	4
Pit 170							(1?)	1	
Pit 392							(1?)	1	
Enclosure ditch 1690							(1?)		(1?)
Enclosure ditch 1713								(2?)	1
Roundhouse ditch 1288							(1?)	(1?)	3(1?)

Table A10: Associations of pottery forms (forms to the left of the double lines are EIA, those to the right MIA; features above the double lines are EIA, those below are MIA)

Surface treatment	EstIA		EIA		MIA		IA	
Red coated and burnished	-		7	*2%*	-		-	
Burnished	1	*17%*	42	*10%*	32	*17%*	61	*13%*
Lightly burnished	2	*33%*	45	*11%*	42	*10%*	100	*21%*

Table A11: Surface treatment on vessels

	EIA	MIA
% sherds residual	38%	31%
% weight residual	47%	20%
MSW	12.0g	17.5g
MSW in contemporary contexts	10.1g	20.2g
MSW in later contexts	15g	11.2g
Average number of sherds per vessel	2.0	3.9
% vessel freshly broken	2%	7%
% vessels moderately abraded	92%	89%
% vessels highly abraded	6%	4%
EVE	2.82	6.14

Table A12: Details of fragmentation and residuality

APPENDIX B ROMAN POTTERY DATA TABLE

Ware Code	Description	No. sherds	Weight (g)
E wares			
E30	Late Iron Age to early Roman sand-tempered ware	50	392
E40	Late Iron Age to early Roman shell-tempered ware	11	133
E50	Late Iron Age to early Roman limestone-tempered ware	6	43
E60	Late Iron Age to early Roman flint-tempered fabrics	7	98
E80	Late Iron Age to early Roman grog-tempered fabrics	67	817
E810	Late Iron Age to early Roman grog-and-sand-tempered fabrics	16	255
Samian ware			
S	Samian (undefined)	5	44
S20	South Gaulish samian ware	2	39
S30	Central Gaulish samian ware (incl LEZ SA 2)	39	321
S40	East Gaulish samian ware	13	183
Amphora			
A11	South-Spanish amphora (BAT AM)	3	158
Fine wares			
F	Fineware of unclear origin	1	4
F20	Glazed fabrics (unsourced)	1	5
F30	Mica-dusted fabrics	2	29
F43	Central-Gaulish (Rhenish)	1	1
F50	Colour-coated fabrics (British unspecified)	11	51
F51	Oxford colour-coated ware (OXF RS)	128	1746
F52	Nene Valley colour-coated ware (LNV CC)	1	3
F57	New Forest oxidised (NFO RS2)	1	6
F67	North-Wiltshire colour-coated ware	5	29
Mortaria			
M22	Oxfordshire white ware (OXF WH)	36	2184
M31	Oxfordshire white slip (OXF WS)	3	81
M41	Oxfordshire colour-coated mortaria	11	771
White wares			
W10	Standard white fabrics (general)	24	432
W12	Oxfordshire fine white ware (OXF WH)	27	208
W20	Sandy white fabrics	70	1393
W22/W23	Oxfordshire sandy white ware/ Oxfordshire burnt white ware	7	117
White-slipped wares (except mortaria)			
Q20	Sandy oxidised fabrics	6	38
Q21	Oxford (Young 1977) fabric WC (OXF WS).	3	15
Oxidised 'coarse' wares			
O10	Fine oxidised coarse ware fabrics (general)	163	1349
O20	Sandy oxidised coarse ware fabrics (general)	32	644
O80	Coarse tempered (usually grog) oxidised fabrics, equivalent to R90	21	563

Ware Code	Description	No. sherds	Weight (g)
O81	Pink grogged ware (PNK GT).	1	22
Reduced 'coarse' wares			
R10	Fine reduced 'coarse ware' fabrics (general)	267	1931
R20	Sandy reduced coarse ware fabrics (general)	343	4300
R30	Medium/fine sandy reduced coarse ware fabrics (general)	1639	30,906
R35	General fine abundantly sandy fabrics, probably North-Wiltshire	14	228
R40	Miscellaneous reduced fabrcs	10	45
R50	Dark surfaced fabrics (Young 1977 reduced fabric 5)	1	28
R90	Coarse tempered (usually grog-tempered) reduced fabrics, eg Young 1977, 202 fabric 1	370	11,036
R95	Savernake ware (SAV GT)	148	5628
Black-burnished wares			
B11	Dorset BB1 (DOR BB 1)	138	1797
Calcareous wares etc			
C10	Shell-tempered fabrics (general)	49	997
C11	Southern shell-tempered ware, probably Harrold (incl HAR SH)	1	18
C20	Limestone-tempered fabrics	2	30
Total		*3763*	*69,248*

Table B1: Late Iron Age and Roman pottery fabric codes and descriptions

APPENDIX C ANGLO-SAXON POTTERY DATA TABLE

Context	Spot date	Fabric	No. sherds	Weight (g)	EVEs	Comments
1122	*c* AD 450– 750?	F1	1	22		Primary fill, pit 1121
1123	*c* AD 450–750?	F1	4	49		Secondary fill, pit 1121
1124	*c* AD 450–650?	F1	23	280	0.11	Secondary fill, pit 1121. Includes two rim sherds and one sherd with incised line decoration
Total			*28*	*351*	*0.11*	

Table C1: Anglo-Saxon pottery distribution in pit 1121

APPENDIX D WORKED FLINT DATA TABLES

Type	Number
Flake	36
Blade	5
Bladelet	2
Blade index	16.27% (7/43)
Irregular waste	3
Core single platform blades	1
Core fragment	1
Scraper end	1
Arrowhead leaf-shaped	1
Awl	1
Heavy borer	1
Denticulate	1
Fabricator	2
Knife backed	1
Knife other	1
Retouched blade	1
Retouched flake	2
Total	*60*
Burnt unworked (representative total)	12/18g
No. burnt (%)	4/60 (6.67%)
No. broken (%)	25/60 (41.67%)
No. cores and core dressing (%)	2/60 (3.33%)
No. retouched (%)	13/60 (21.67%)

Table D1: Summary of the flint assemblage

Feature type	No.	%
Ditches	33	55.0
Pits	14	23.3
Postholes	4	6.7
Four-/six-post structure	6	10.0
Natural	3	5.0
Total	*60*	*[100]*

Table D2: Worked flints by feature type

Condition	Total	%	Cortication	Total	%
Fresh	18	32.1	None	0	0
Light	28	50.0	Light	48	85.7
Moderate	7	12.5	Moderate	8	14.3
Heavy	0	0	Heavy	0	0
Plough damaged	3	5.4			

Table D3: Summary of flint condition and cortication

APPENDIX E CERAMIC BUILDING MATERIAL DATA TABLES

Context	Date	Fabric	Class	Comment	No.	Wt (g)
74	RB	D	Flat tile		1	203
313	RB	G	Brick RB		1	301
842	Med?	OX IIIB?	Flat roof tile		1	4
920	RB	E	Brick RB	Indented border	1	778
943	RB	C	Tegula	Flange type D	1	33
943	RB	C	Box flue		1	120
947	RB	E	Brick RB		1	213
966	RB	E	Tegula	Flange type E	1	177
991	RB	C	Flat tile		1	58
991	Med?	OX IIIB?	Flat roof tile		3	28
1110	RB	C	Imbrex		1	187
1111	RB	D	Box flue	Cut circular vent 60mm dia.	1	28
1130	RB	C	Brick RB		1	332
1220	RB	E	Tegula	Signature mark	1	182
1557	RB	C/E	Box flue	Combed keying	1	113

Table E1: Summary of ceramic building material by context

APPENDIX F COINS DATA TABLES

Phase	SF No.	Context	Date	Reece Period	Denomination	Ruler	Obverse Inscription	Reverse Inscription	Mint	Ref
2 Roman	58	1579	? 260+		AE2	Uncertain	Illegible	Illegible		
2 Roman	5	365	4thC			?	Illegible	Illegible		
2 Roman	6	365	388-402	21		Arcadius?	[…]VS […]	?[SALVS REI] PVBLICAE		
2 Roman	7	365	4thC		AE3	?	Illegible	Illegible		
2 Roman	8	365	388-395	21	AE4	Arcadius	DN AR[…] AVG	[VICTO]R IA AV[GGG]	//(.)CO(…)	cf. LRBC II no. 566
2 Roman	9	365	388-402	21	AE4	Theodosian	[…]THEODO[…]	Illegible		
2.2-2.4 E-LR	20	918	275-285	14	Radiate	Barbarous	Nonsensical	N/a		
2.2-2.4 E-LR	46	918	332-333	17	AE3	Hse of Constantine	CONSTANTINOPOLIS	None	//TRP()	cf. RIC VII Trier 548, P
2.2-2.4 E-LR	25	947	323-324	16	AE2	Constantine II as Caesar	CONSTANTINVS IVN NOB C	CAESARVM NOSTRORVM	//STR crescent	RIC VII Trier 441s
2.2-2.4 E-LR	26	947	330-340	17	AE4	Hse of Constantine	[]MOL[…]N[]MA	None	//PL[.]	
2.2-2.4 E-LR	23	975	335-337	17	AE4	Constantine II as Caesar	CONSTANTI[..] IVN NC	GLORIA EXERCITVS	// . TRP .	RIC VII 591
2.2-2.4 E-LR	29	1245	347-348	17	AE3	Constantius II	CONSTANTI-VS PF AVG	VICTORIAE […]VG QNN	NA // PARL	RIC VIII 78p
2.2-2.4 E-LR	38	1600	388-395	21	AE4	?	[…]VS AVG	[VICTO]R IA AV[GGG]		
2.2-2.4 E-LR	21	1600	364-378	19	AE3	Hse of Valentinain?	Illegible	[SECVRITAS REIPVBLICAE]?		
2.3 MR	45	519	269-271	13	Radiate	Victorinus	[…]VICTORINVS […]	[VIRTV]S [AVG]		
2.3 MR	44	1309	330-335	17	AE4	Hse of Constantine	Illegible	[GLORIA EXERCITVS]		
2.3 MR	59	1348	287-293	14	Radiate (barbarous)	Carausius	[…]AIRAVSIVS […]	[…]	F | O // ML	RIC V, pt 2, p. 472, no. 101
2.4 LR	10	398	392-394	21	AE4	Eugenius	DN EVGENI[…]	[…]IA A[…]		
2.4 LR	22	1109	260-268	13	Radiate	Gallienus	GALLIENVS AVG	[…]CONS AVG		Cunetio no. 1344
2.4 LR	37	1112	267-268	13	Radiate	Postumus	[…]POS[…]	[P]AX [A]V[G]	P | -	RIC VII 318
Undated	42	1565	268-270	13	Radiate	Claudius II	[…]IVS P[…]	LIBER[…]	- | X // []	cf. Normanby no. 783
Undated	40	US	260-268	13	AE2	Gallienus	GALLIENVS A[..]	SOLI CONS AVG	// [.]I	RIC V Gallienus 285

Table F1: Catalogue of coinage by site phase (excluding hoard coinage)

Phase	SF No.	Context	Date	Reece Period	Denomination	Ruler	Obverse Inscription	Reverse Inscription	Mint	Ref
2.4 LR	15	143	337-340	17	AE3	Theodora	Illegible	[PIETAS RO]MANA		cf. RIC VIII Trier 91
2.4 LR	PMB19	143	350-364?	18?	AE4	?	Illegible	Illegible		
2.4 LR	PMB14	143	364-378??	19?	AE3	?	Illegible	Illegible		
2.4 LR	PMB1	143	364-375	19	AE3	Valentinian	DN VA]LENTINI [ANVS PF AVG	SECVRITAS REIPVBLICAE		
2.4 LR	PMB3	143	383-387	20	AE3	?	Illegible	VOT /] XV / MVLT / XX		
2.4 LR	17	143	388-402	21	AE4	Arcadius?	Illegible	?(SALVS REI PVBLICAE)		
2.4 LR	PMB2	143	388-402	21	AE4	Arcadius	DN] ARCADI[VS PF AVG	Illegible		
2.4 LR	PMB4	143	388-402	21	AE4	Arcadius?	[..]ARC?[…]	VICTORIA AVGGG	// TP	
2.4 LR	PMB5	143	388-402	21	AE4	Arcadius	DN ARCADI VS PF AVG	VICTOR IA AVGGG		
2.4 LR	PMB8	143	388-395?	21	AE4	Theodosian	DN THEOD [OSIVS PF AVG	Illegible		
2.4 LR	PMB9	143	388-402	21	AE4	?	Illegible	[VICT]OR[IA [AVGGG]		
2.4 LR	PMB10	143	388-402	21	AE4	?	Illegible	Illegible		
2.4 LR	PMB12	143	388-402	21	AE4	?	].S PF AVG	VICTORIA A]VGGG`		
2.4 LR	PMB15	143	388-402	21	AE4	?	]PF AVG	S[ALVS REI PVBLICA]E	//(R?) P	LRBC II p. 62, no. 797
2.4 LR	PMB18	143	388-402	21	AE4	Arcadius?	Illegible	victory??		
2.4 LR	PMB6	143	388-402?	21?	AE4	?	Illegible			
2.4 LR	PMB7	143	388-402?	21?	AE3	?	Illegible			
2.4 LR	PMB11	143	388-402?	21?	AE4	?	Illegible	Illegible		
2.4 LR	PMB16	143	388-402?	21?	AE3	?	head r	victory?		
2.4 LR	PMB13	143	388-402?	21?	AE4	?	Illegible	Illegible		
2.4 LR	PMB17	143	388-402?	21?	AE4	?	Illegible	Illegible		
2.4 LR	14	143	364-402	uncertain	AE3	?	Illegible	?		
2.4 LR	16	143	348-402	uncertain	AE4	?	Illegible	Illegible		
2.4 LR	1	144	348-402	uncertain	AE4		Illegible	Illegible		
2.4 LR	1	144	uncertain	uncertain	AE4	n/a	n/a	n/a	n/a	

Table F2: Catalogue of hoard coinage by period of issue

APPENDIX G METAL FINDS DATA TABLES

Phase	Context	SF No.	Object	Material	Count	Weight (g)	Date	Comments
1.2 EIA	391		Fragment	Not Fe	1	3.4		Not Fe, possibly ironstone/natural
1.3 MIA	895	18	Hobnail	Fe	1	0.8		Hobnail
1.3 MIA	1355	55	Bow brooch	Fe	1	13.9	25-100	Bow brooch, four coil spring internal chord. Probable Nauheim derivative bow brooch with rod bow
1.3 MIA	1355		Waste	Pb	1	5.3	Query	Irregular small lump of lead
2 Roman	1047		Rolled strip	Fe	1	25.1		Fe strip rolled, possibly a rolled over loop.
2.1 LIA/ER	1571		Hobnail?	Fe	1	2.3		Possible hobnail?
2.1 LIA/ER	1571		Hobnail?	Fe	1	2.1		Possible hobnail?
2.2 ERom	803	33	Dress pin	Ca	1	0.3	15/16th century?	Crimped spherical head. Late medieval or early post medieval. Intrusive
2.2 ERom	1114	28	Brooch	Ca	1	10.9	40-65	Colchester derivative 'dolphin' style brooch. Solid catch plate. Some damage
2.2–2.4 E–LRom	148	4	Ligula	Ca	1	3.1	Roman	Ligula/toilet spoon with cupped scoop forming the head, spiral grooved decoration beneath the head. Tapers to sharp point.
2.2–2.4 E–LRom	313		Fragment	Not Fe	1	1.1		Not Fe, possibly ironstone/natural
2.2–2.4 E–LRom	930	47	Armlet	Ca	1	10	200-400	Plain armlet or bracelet with sliding catch, white metal coated
2.2–2.4 E–LRom	930	48	Seal box lid	Ca	1	5.3	100-300	Seal box lid, elongated lozenge with blue and yellow enamel and three central pellets. White metal coated? Andrews type L2D7. Rare.
2.2–2.4 E–LRom	947	24	Bracelet	Ca	1	2.6	300-450	Fragment of strip bracelet, heavily silvered, decoration of sets of lines and ring and dot motifs. Crummy 1983 no. 1725, 1728.
2.2–2.4 E–LRom	949		Spike?	Fe	1	9.4		Tapered Fe bar, possible nail stem
2.2–2.4 E–LRom	975		Nails	Fe	1	6.7		Large flat head, incomplete stem
2.2–2.4 E–LRom	1130	49	Ligula	Ca	1	2.5	43-410	Toilet spoon or ligula with cupped scoop, no decoration. Stem tapers to a sharp point, now bent almost in half
2.2–2.4 E–LRom	1130		Bar	Fe	1	7.6		Bar or nail stem fragment
2.2–2.4 E–LRom	1130		Nails	Fe	1	6.3		Flat head, incomplete?
2.2–2.4 E–LRom	1247	30	Dress hook	Ca	1	2.8	1500-1600	PM dress hook, missing hook. Class E type 8. Intrusive
2.2–2.4 E–LRom	1247	31	Shank button	Ca	1	2.8	1800-1900	19th-century tin alloy/tombac button. Additional copper-alloy shank. No decoration or maker's mark. Intrusive.

Phase	Context	SF No.	Object	Material	Count	Weight (g)	Date	Comments
2.3 MRom	689		Hobnail	Fe	1	1.6		Hobnail
2.3 MRom	708	32	Nails	Fe	1	0.6		Small flat shanked tack or nail
2.3 MRom	708		Tack	Fe	1			Tack with domed head
2.3 MRom	800	34	Spud	Fe	1	269		Spud, socketed with worn broad blade. Weeding, cleaning, barking
2.3 MRom	928	57	Rolled strip or offcut	Pb	1	14.8		Rolled strip of lead
2.3 MRom	1348	41	Brooch	Ca	1	2.6	75-150	Developed T-shaped brooch with head loop and hinged pin
2.4 LRom	143		Wire	Fe	1	2.9		Possibly part of small figure of eight link
2.4 LRom	143		Hobnail	Fe	1	0.7		Worn hobnail, or small tack head
2.4 LRom	699		Fragments	Ca	0	5.6		Corroded cu alloy frags (n= 30)
2.4 LRom	858	36	Bracelet	Ca	1	1.1	300-450	Decorated strip, fragment from RB bracelet. Possibly silver (or heavily silvered)
2.4 LRom	1112		Bar	Fe	1	10.3		Curved bar fragment, possible (figure 8?) Link
2.4 LRom	1172		Bar	Fe	1	7.6		Bar or nail stem fragment
2.4 LRom	1172		Bar	Fe	1	2.6		Bar or nail stem fragment
2.4 LRom	1173		Waste	Pb	1	8.4		Small flattish irregular lump of lead, curved underside suggests it may have been from the base of a crucible?
2.4 LRom	1176		Nails	Fe	1	4		Flat head, complete, bent
2.4 LRom	1217	56	Spoon	Ca	1	3.4	Roman	Cu alloy rod with rectangular cross section tapering into circular section. Possible spoon handle fragment
2.4 LRom	1281		Slag	(Fe)	2	27.2		2 x pieces slag
2.4 LRom	1281		Nails	Fe	1	13.4		Nail, flat head, incomplete
2.4 LRom	1564	43	Nails	Fe	1	24.8		Nail with large flat head, incomplete stem
3 E–M Anglo-Saxon	248	2	Knife	Fe	1	16.2		Whittle knife, probably Anglo-Saxon, Eroded. Slightly curved back. No tang remaining.
3 E–M Anglo-Saxon	248	3	Nails	Fe	2	7		Nails and nail frags
3 E–M Anglo-Saxon	248		Fragments	Fe	0	1		2 x tiny frags
Undated	836		Nails	Fe	1	5.3		Tapered nail stem
Undated	1534	19	Pistol ball, c. 24 caliber	Pb	1	16.3	17th century	Small slightly eroded ball shot with teeth-like marks over surface
Undated	1673	39	Knife	Fe	1	27.7	undated	Whittle tang knife, tang centrally placed and incomplete. Single edge blade tip missing

Table G1: Catalogue of metalwork by phase

APPENDIX H INDUSTRIAL DEBRIS DATA TABLE

Context	Sample	Phase	Type	Comment	Weight (g)
127		2 Roman	UID	Geology - breccia?	148
134		2.2-2.4 E-LR	VCL		17.7
143	74	2.4 LR	NDFe		0.73
248		E-M AS	VFA	Black	0.15
250	69	1 IA	NDFe		2.7
354		1 IA	SC	?%, slightly magnetic	390
359		1.2 EIA	UID	NDFe?	8.5
401		1.3 MIA	UID	Stone covered in slag film	6.1
401		1.3 MIA	UID	Mauve ceramic, bloated – zinc/brass?	10.6
808		2 Roman	VFA		26.5
871		1.3 MIA	NDFe		57.4
964		2.3 MR	UID	Vitrified building debris?	88.8
1144	54	2 Roman	UID		0.39
1276		1.3 MIA	NDFe		14.4
1446		2 Roman	NDFe		32.8
1542		1.3 MIA	SS	1	0.11
Total					*804.88*

Table H1: Summary of the industrial debris

APPENDIX I ANIMAL BONE DATA TABLES

Phase	Butchered		Burnt		Gnawed		Total no.
	No.	%	No.	%	No.	%	
1: Iron Age	58	2.4	41	1.7	27	1.1	2370
2: Roman	62	2.3	50	1.8	17	0.6	2749
3: Anglo-Saxon	10	3.2	0	0.0	2	0.6	317

Table I1: Number and percentage of butchered, burnt and gnawed specimens by main phase

Taxon	1: Iron Age	1.1: Est IA	1.2: EIA	1.3: MIA	2: Roman	2.2: ER	2.3: MR	2.4: LR	3: Saxon	Total
Cattle	28	1	208	148	237	14	29	102	42	*809*
Sheep/goat	29	1	106	139	136	17	38	86	8	*560*
Sheep	1		1	4	3			1		*10*
Goat			2		1					*3*
Pig	5		29	26	30	2	6	11	4	*113*
Horse	5		18	44	52	4	3	23	17	*166*
Dog	2		4	3	8	1	12	3	7	*40*
cf dog				1				1		*2*
cf cat					2					*2*
Red deer			3		3					*6*
Cf hare				1						*1*
Rabbit					1					*1*
Frog				3	1					*4*
Chicken					1					*1*
Duck								2		*2*
Goose			1							*1*
Raven								1		*1*
Large mammal	41		174	192	233	10	34	137	89	*910*
Medium mammal	27		127	132	110	12	45	109	32	*594*
Small mammal	5	2	12	9	7		7	12		*54*
Unidentified	64	2	253	220	179	37	81	152	110	*1098*
Total	*207*	*6*	*938*	*922*	*1004*	*97*	*255*	*640*	*309*	*4378*

Table I2: Number of hand-collected specimens per taxa by phase

Taxon	1: IA	1.2: EIA	1.3: MIA	2: Roman	2.1: LIA/ER	2.4: LR	3: Saxon	Total
Cattle		11	2	1		1		*15*
Sheep/goat		25	8	7		9	1	*50*
Pig		2	1		1	1		*5*
Horse		1						*1*
Mouse		1	2	46		1		*50*
Vole		1				1		*2*
Bank vole		2	4	10		2		*18*
Water vole		1						*1*
Rodent sp.		13	6	407		12	2	*440*
Shrew			1	2				*3*
Frog	1	1	2	93		15		*112*
Passerine						2		*2*
Large mammal		28	2			2		*32*
Medium mammal	5	10	9	3		9	2	*38*
Small mammal				45		1		*46*
Unidentified	1	138	19	45		37	3	*243*
Total	*7*	*234*	*56*	*659*	*1*	*93*	*8*	*1058*

Table I3: Number of specimens from environmental samples per taxa by phase

Phase	Ring ditch/gully	Enclosure ditch	Pit	Posthole	Other	Total
1: IA	58	14	122	20		*214*
1.1: Est IA	6					*6*
1.2: EIA	407	35	653	75	2	*1172*
1.3: MIA	214	523	235		6	*978*
2: Roman	3	990	670			*1663*
2.1: LIA/ER					1	*1*
2.2: ER	1		89		7	*97*
2.3: MR		251	4			*255*
2.4: LR		332	300	79	22	*733*
3: Anglo-Saxon			317			*317*
Total	*689*	*2145*	*2390*	*174*	*38*	*5436*

Table I4: Distribution of animal bones by feature type in each phase

Element	MNI	MNE	%MNE
Mandible	6	10	100.0
Scapula	4	5	50.0
Humerus	5	7	70.0
Radius	4	6	60.0
Ulna	1	2	20.0
Metacarpal	4	5	50.0
Pelvis	4	6	60.0
Femur	3	3	30.0
Tibia	4	6	60.0
Astragalus	0	0	0.0
Calcaneus	1	1	10.0
Navicular-cuboid	0	0	0.0
Metatarsal	2	4	40.0
1st Phalanx	—	6	15.0
2nd Phalanx	—	2	5.0
3rd Phalanx	—	1	2.5

Table I5: Cattle body parts (Phases 1.1–2)

Element	MNI	MNE	%MNE
Mandible	7	11	100.0
Scapula	4	5	45.5
Humerus	3	5	45.5
Radius	3	5	45.5
Ulna	2	3	27.3
Metacarpal	2	2	18.2
Pelvis	4	6	54.5
Femur	5	8	72.7
Tibia	5	10	90.9
Astragalus	2	2	18.2
Calcaneus	0	0	0.0
Navicular-cuboid	1	1	9.1
Metatarsal	5	8	72.7
1st Phalanx	—	3	6.8
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I6: Cattle body parts (Phase 1.3)

Element	MNI	MNE	%MNE
Mandible	12	22	100.0
Scapula	8	10	45.5
Humerus	9	13	59.1
Radius	9	13	59.1
Ulna	4	6	27.3
Metacarpal	7	8	36.4
Pelvis	7	10	45.5
Femur	7	12	54.5
Tibia	10	18	81.8
Astragalus	2	3	13.6
Calcaneus	1	1	4.5
Navicular-cuboid	1	1	4.5
Metatarsal	7	12	54.5
1st Phalanx	—	10	11.4
2nd Phalanx	—	2	2.3
3rd Phalanx	—	1	1.1

Table I7: Cattle body parts (all Iron Age)

Element	MNI	MNE	%MNE
Mandible	1	1	25.0
Scapula	2	2	50.0
Humerus	3	3	75.0
Radius	1	1	25.0
Ulna	1	1	25.0
Metacarpal	2	2	50.0
Pelvis	2	2	50.0
Femur	0	0	0.0
Tibia	3	3	75.0
Astragalus	1	1	25.0
Calcaneus	3	4	100.0
Navicular-cuboid	0	0	0.0
Metatarsal	0	0	0.0
1st Phalanx	—	2	12.5
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I8: Cattle body parts (Phases 2.2–3)

Element	MNI	MNE	%MNE
Mandible	6	6	66.7
Scapula	3	4	44.4
Humerus	3	4	44.4
Radius	2	4	44.4
Ulna	0	0	0.0
Metacarpal	3	4	44.4
Pelvis	1	1	11.1
Femur	2	3	33.3
Tibia	5	9	100.0
Astragalus	0	0	0.0
Calcaneus	1	1	11.1
Navicular-cuboid	0	0	0.0
Metatarsal	4	4	44.4
1st Phalanx	—	4	11.1
2nd Phalanx	—	0	0.0
3rd Phalanx	—	1	2.8

Table I9: Cattle body parts (Phase 2.4)

Element	MNI	MNE	%MNE
Mandible	12	18	90.0
Scapula	9	15	75.0
Humerus	13	18	90.0
Radius	12	20	100.0
Ulna	2	3	15.0
Metacarpal	7	12	60.0
Pelvis	6	10	50.0
Femur	2	4	20.0
Tibia	11	20	100.0
Astragalus	1	1	5.0
Calcaneus	6	10	50.0
Navicular-cuboid	1	1	5.0
Metatarsal	9	10	50.0
1st Phalanx	—	7	8.8
2nd Phalanx	—	3	3.8
3rd Phalanx	—	1	1.3

Table I10: Cattle body parts (all Roman)

Element	MNI	MNE	%MNE
Mandible	4	8	66.7
Scapula	3	4	33.3
Humerus	4	6	50.0
Radius	7	10	83.3
Ulna	0	0	0.0
Metacarpal	4	5	41.7
Pelvis	2	3	25.0
Femur	3	3	25.0
Tibia	6	12	100.0
Astragalus	1	2	16.7
Calcaneus	1	2	16.7
Metatarsal	8	9	75.0
1st Phalanx	—	6	12.5
2nd Phalanx	—	3	6.3
3rd Phalanx	—	0	0.0

Table I11: Sheep/goat body parts (Phases 1.1–2)

Element	MNI	MNE	%MNE
Mandible	9	18	81.8
Scapula	3	4	18.2
Humerus	5	9	40.9
Radius	8	10	45.5
Ulna	1	2	9.1
Metacarpal	6	10	45.5
Pelvis	1	2	9.1
Femur	4	5	22.7
Tibia	12	22	100.0
Astragalus	1	1	4.5
Calcaneus	0	0	0.0
Metatarsal	5	7	31.8
1st Phalanx	—	4	4.5
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I12: Sheep/goat body parts (Phase 1.3)

Element	MNI	MNE	%MNE
Mandible	14	27	64.3
Scapula	6	10	23.8
Humerus	9	17	40.5
Radius	15	20	47.6
Ulna	1	2	4.8
Metacarpal	10	15	35.7
Pelvis	3	4	9.5
Femur	7	8	19.0
Tibia	22	42	100.0
Astragalus	2	3	7.1
Calcaneus	1	2	4.8
Metatarsal	12	17	40.5
1st Phalanx	—	10	6.0
2nd Phalanx	—	3	1.8
3rd Phalanx	—	0	0.0

Table I13: Sheep/goat body parts (all Iron Age)

Element	MNI	MNE	%MNE
Mandible	2	2	28.6
Scapula	1	1	14.3
Humerus	1	2	28.6
Radius	1	1	14.3
Ulna	2	2	28.6
Metacarpal	2	3	42.9
Pelvis	1	1	14.3
Femur	1	1	14.3
Tibia	5	7	100.0
Astragalus	0	0	0.0
Calcaneus	0	0	0.0
Metatarsal	3	3	42.9
1st Phalanx	—	1	3.6
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I14: Sheep/goat body parts (Phases 2.2–3)

Element	MNI	MNE	%MNE
Mandible	3	5	55.6
Scapula	2	2	22.2
Humerus	2	4	44.4
Radius	4	8	88.9
Ulna	2	4	44.4
Metacarpal	3	4	44.4
Pelvis	1	2	22.2
Femur	1	2	22.2
Tibia	7	9	100.0
Astragalus	0	0	0.0
Calcaneus	1	1	11.1
Metatarsal	4	7	77.8
1st Phalanx	—	1	2.8
2nd Phalanx	—	1	2.8
3rd Phalanx	—	0	0.0

Table I15: Sheep/goat body parts (Phase 2.4)

Element	MNI	MNE	%MNE
Mandible	17	24	66.7
Scapula	4	6	16.7
Humerus	8	13	36.1
Radius	11	22	61.1
Ulna	4	6	16.7
Metacarpal	6	11	30.6
Pelvis	5	6	16.7
Femur	2	5	13.9
Tibia	22	36	100.0
Astragalus	0	0	0.0
Calcaneus	1	1	2.8
Metatarsal	13	19	52.8
1st Phalanx	—	4	2.8
2nd Phalanx	—	1	0.7
3rd Phalanx	—	0	0.0

Table I16: Sheep/goat body parts (all Roman)

Element	MNI	MNE	%MNE
Mandible	4	5	100.0
Scapula	3	3	60.0
Humerus	0	0	0.0
Radius	1	1	20.0
Ulna	1	1	20.0
Metacarpal	1	1	20.0
Pelvis	1	1	20.0
Femur	1	1	20.0
Tibia	3	4	80.0
Astragalus	0	0	0.0
Calcaneus	0	0	0.0
Metatarsal	0	0	0.0
1st Phalanx	—	0	0.0
2nd Phalanx	—	0	0.0
3rd Phalanx	—	1	5.0

Table I17: Pig body parts (Phases 1.1–2)

Element	MNI	MNE	%MNE
Mandible	1	1	20.0
Scapula	4	5	100.0
Humerus	1	1	20.0
Radius	1	2	40.0
Ulna	2	3	60.0
Metacarpal	0	0	0.0
Pelvis	2	2	40.0
Femur	0	0	0.0
Tibia	2	3	60.0
Astragalus	0	0	0.0
Calcaneus	1	1	20.0
Metatarsal	1	1	20.0
1st Phalanx	—	1	5.0
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I18: Pig body parts (Phase 1.3)

Element	MNI	MNE	%MNE
Mandible	6	7	87.5
Scapula	7	8	100.0
Humerus	1	1	12.5
Radius	2	2	25.0
Ulna	4	5	62.5
Metacarpal	1	1	12.5
Pelvis	3	3	37.5
Femur	1	1	12.5
Tibia	4	7	87.5
Astragalus	0	0	0.0
Calcaneus	1	2	25.0
Metatarsal	2	2	25.0
1st Phalanx	—	1	3.1
2nd Phalanx	—	0	0.0
3rd Phalanx	—	1	3.1

Table I19: Pig body parts (all Iron Age)

Element	MNI	MNE	%MNE
Mandible	4	4	66.7
Scapula	2	3	50.0
Humerus	1	2	33.3
Radius	2	2	33.3
Ulna	2	2	33.3
Metacarpal	1	2	33.3
Pelvis	1	1	16.7
Femur	1	1	16.7
Tibia	6	6	100.0
Astragalus	0	0	0.0
Calcaneus	1	1	16.7
Metatarsal	1	1	16.7
1st Phalanx	—	0	0.0
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I20: Pig body parts (all Roman)

Element	MNI	MNE	%MNE
Mandible	0	0	0.0
Scapula	2	2	50.0
Humerus	2	4	100.0
Radius	1	1	25.0
Ulna	2	3	75.0
Metacarpal	0	0	0.0
Pelvis	0	0	0.0
Femur	0	0	0.0
Tibia	1	1	25.0
Astragalus	0	0	0.0
Calcaneus	0	0	0.0
Metatarsal	0	0	0.0
1st Phalanx	—	0	0.0
2nd Phalanx	—	1	6.3
3rd Phalanx	—	1	6.3

Table I21: Horse body parts (Phases 1.1–2)

Element	MNI	MNE	%MNE
Mandible	1	1	16.7
Scapula	2	3	50.0
Humerus	1	1	16.7
Radius	2	3	50.0
Ulna	2	2	33.3
Metacarpal	2	3	50.0
Pelvis	4	6	100.0
Femur	0	0	0.0
Tibia	1	1	16.7
Astragalus	1	2	33.3
Calcaneus	1	1	16.7
Metatarsal	1	2	33.3
1st Phalanx	—	0	0.0
2nd Phalanx	—	1	4.2
3rd Phalanx	—	0	0.0

Table I22: Horse body parts (Phase 1.3)

Element	MNI	MNE	%MNE
Mandible	1	1	16.7
Scapula	3	5	83.3
Humerus	3	6	100.0
Radius	3	4	66.7
Ulna	3	5	83.3
Metacarpal	2	4	66.7
Pelvis	4	6	100.0
Femur	0	0	0.0
Tibia	1	2	33.3
Astragalus	1	2	33.3
Calcaneus	1	1	16.7
Metatarsal	1	2	33.3
1st Phalanx	—	0	0.0
2nd Phalanx	—	2	8.3
3rd Phalanx	—	1	4.2

Table I23: Horse body parts (all Iron Age)

Element	MNI	MNE	%MNE
Mandible	0	0	0.0
Scapula	2	3	50.0
Humerus	2	2	33.3
Radius	1	1	16.7
Ulna	0	0	0.0
Metacarpal	2	4	66.7
Pelvis	2	3	50.0
Femur	1	1	16.7
Tibia	2	3	50.0
Astragalus	0	0	0.0
Calcaneus	0	0	0.0
Metatarsal	0	0	0.0
1st Phalanx	—	0	0.0
2nd Phalanx	—	0	0.0
3rd Phalanx	—	0	0.0

Table I24: Horse body parts (Phase 2.4)

Element	MNI	MNE	%MNE
Mandible	1	2	20.0
Scapula	3	4	40.0
Humerus	4	4	40.0
Radius	3	4	40.0
Ulna	0	0	0.0
Metacarpal	5	10	100.0
Pelvis	4	5	50.0
Femur	1	1	10.0
Tibia	3	4	40.0
Astragalus	1	2	20.0
Calcaneus	1	1	10.0
Metatarsal	0	0	0.0
1st Phalanx	—	2	5.0
2nd Phalanx	—	1	2.5
3rd Phalanx	—	0	0.0

Table I25: Horse body parts (all Roman)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	2	0	
	Pelvis	5	0	
	P Radius	5	0	
	Total	*12*	*0*	*100.0*
15–24 months	2nd Phalanx	3	0	
	D Humerus	4	0	
	1st Phalanx	5	0	
	Total	*12*	*0*	*100.0*
24–36 months	D Tibia	3	1	
	D Metapodial	2	2	
	Calcaneus	0	0	
	Total	*5*	*3*	*62.5*
36–48 months	P Femur	2	0	
	P Humerus	2	0	
	D Radius	3	1	
	P Ulna	0	1	
	D Femur	2	0	
	P Tibia	1	1	
	Total	*10*	*3*	*76.9*

Table I26: Cattle epiphyseal fusion data (Phases 1.1–2)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	2	0	
	Pelvis	4	1	
	P Radius	4	0	
	Total	*10*	*1*	*90.9*
15–24 months	2nd Phalanx	0	0	
	D Humerus	4	0	
	1st Phalanx	2	1	
	Total	*6*	*1*	*85.7*
24–36 months	D Tibia	7	1	
	D Metapodial	3	0	
	Calcaneus	0	0	
	Total	*10*	*1*	*90.9*
36–48 months	P Femur	4	1	
	P Humerus	0	0	
	D Radius	0	1	
	P Ulna	0	1	
	D Femur	1	2	
	P Tibia	3	0	
	Total	*8*	*5*	*61.5*

Table I27: Cattle epiphyseal fusion data (Phase 1.3)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	4	0	
	Pelvis	9	1	
	P Radius	10	1	
	Total	*23*	*2*	*92.0*
15–24 months	2nd Phalanx	3	0	
	D Humerus	8	0	
	1st Phalanx	8	1	
	Total	*19*	*1*	*95.0*
24–36 months	D Tibia	11	2	
	D Metapodial	5	2	
	Calcaneus	0	0	
	Total	*16*	*4*	*80.0*
36–48 months	P Femur	7	1	
	P Humerus	3	0	
	D Radius	4	2	
	P Ulna	0	2	
	D Femur	4	2	
	P Tibia	5	1	
	Total	*23*	*8*	*74.2*

Table I28: Cattle epiphyseal fusion data (all Iron Age)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	3	0	
	Pelvis	1	0	
	P Radius	0	0	
	Total	*4*	*0*	*100.0*
15–24 months	2nd Phalanx	0	0	
	D Humerus	1	1	
	1st Phalanx	2	0	
	Total	*3*	*1*	*75.0*
24–36 months	D Tibia	2	0	
	D Metapodial	0	0	
	Calcaneus	0	1	
	Total	*2*	*1*	*66.7*
36–48 months	P Femur	0	0	
	P Humerus	0	1	
	D Radius	0	0	
	P Ulna	0	0	
	D Femur	0	0	
	P Tibia	0	0	
	Total	*0*	*1*	*0.0*

Table I29: Cattle epiphyseal fusion data (Phases 2.2–3)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	1	0	
	Pelvis	0	2	
	P Radius	4	0	
	Total	*5*	*2*	*71.4*
15–24 months	2nd Phalanx	0	0	
	D Humerus	2	0	
	1st Phalanx	3	0	
	Total	*5*	*0*	*100.0*
24–36 months	D Tibia	6	1	
	D Metapodial	3	0	
	Calcaneus	0	0	
	Total	*9*	*1*	*90.0*
36–48 months	P Femur	0	1	
	P Humerus	0	0	
	D Radius	2	1	
	P Ulna	0	0	
	D Femur	1	1	
	P Tibia	0	2	
	Total	*3*	*5*	*37.5*

Table I30: Cattle epiphyseal fusion data (Phase 2.4)

Fusion stage	Element	Fused	Unfused	% fused
7–15 months	Scapula	8	0	
	Pelvis	6	2	
	P Radius	16	0	
	Total	*30*	*2*	*93.8*
15–24 months	2nd Phalanx	3	0	
	D Humerus	8	1	
	1st Phalanx	6	0	
	Total	*17*	*1*	*94.4*
24–36 months	D Tibia	14	1	
	D Metapodial	8	0	
	Calcaneus	1	1	
	Total	*23*	*2*	*92.0*
36–48 months	P Femur	1	1	
	P Humerus	1	1	
	D Radius	5	2	
	P Ulna	0	0	
	D Femur	1	1	
	P Tibia	1	2	
	Total	*9*	*7*	*56.3*

Table I31: Cattle epiphyseal fusion data (all Roman)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	2	0	
	P Radius	2	0	
	Scapula	1	1	
	Pelvis	2	0	
	2nd Phalanx	0	3	
	1st Phalanx	3	3	
	Total	*10*	*7*	*58.8*
15–36 months	D Tibia	3	1	
	D Metapodial	11	4	
	Calcaneus	0	1	
	Total	*14*	*6*	*70.0*
36–42 months	P Femur	0	0	
	P Humerus	0	1	
	D Radius	0	0	
	P Ulna	0	0	
	D Femur	1	0	
	P Tibia	0	1	
	Total	*1*	*2*	*33.3*

Table I32: Sheep/goat epiphyseal fusion data (Phases 1.1–2)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	4	0	
	P Radius	1	2	
	Scapula	2	1	
	Pelvis	1	1	
	2nd Phalanx	0	0	
	1st Phalanx	3	0	
	Total	*11*	*4*	*73.3*
15–36 months	D Tibia	3	0	
	D Metapodial	0	5	
	Calcaneus	0	0	
	Total	*3*	*5*	*37.5*
36–42 months	P Femur	1	1	
	P Humerus	0	0	
	D Radius	1	2	
	P Ulna	1	1	
	D Femur	0	0	
	P Tibia	0	0	
	Total	*3*	*4*	*42.9*

Table I33: Sheep/goat epiphyseal fusion data (Phase 1.3)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	6	1	
	P Radius	3	2	
	Scapula	3	3	
	Pelvis	3	1	
	2nd Phalanx	0	3	
	1st Phalanx	6	3	
	Total	*21*	*13*	*61.8*
15–36 months	D Tibia	6	2	
	D Metapodial	1	9	
	Calcaneus	0	1	
	Total	*7*	*12*	*36.8*
36–42 months	P Femur	1	1	
	P Humerus	0	1	
	D Radius	1	2	
	P Ulna	1	1	
	D Femur	0	1	
	P Tibia	0	1	
	Total	*3*	*7*	*30.0*

Table I34: Sheep/goat epiphyseal fusion data (all Iron Age)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	0	0	
	P Radius	0	0	
	Scapula	0	0	
	Pelvis	1	0	
	2nd Phalanx	0	0	
	1st Phalanx	0	1	
	Total	*1*	*1*	*50.0*
15–36 months	D Tibia	0	2	
	D Metapodial	0	1	
	Calcaneus	0	0	
	Total	*0*	*3*	*0.0*
36–42 months	P Femur	0	0	
	P Humerus	0	0	
	D Radius	0	0	
	P Ulna	1	1	
	D Femur	0	0	
	P Tibia	0	1	
	Total	*1*	*2*	*33.3*

Table I35: Sheep/goat epiphyseal fusion data (Phases 2.2–3)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	1	0	
	P Radius	2	0	
	Scapula	1	0	
	Pelvis	1	1	
	2nd Phalanx	1	0	
	1st Phalanx	1	0	
	Total	*7*	*1*	*87.5*
15–36 months	D Tibia	1	0	
	D Metapodial	1	1	
	Calcaneus	0	1	
	Total	*2*	*2*	*50.0*
36–42 months	P Femur	0	0	
	P Humerus	0	0	
	D Radius	0	0	
	P Ulna	0	0	
	D Femur	0	0	
	P Tibia	0	1	
	Total	*0*	*1*	*0.0*

Table I36: Sheep/goat epiphyseal fusion data (Phases 2.4)

Fusion stage	Element	Fused	Unfused	% fused
3–10 months	D Humerus	3	1	
	P Radius	3	0	
	Scapula	1	0	
	Pelvis	6	1	
	2nd Phalanx	1	0	
	1st Phalanx	2	2	
	Total	*16*	*4*	*80.0*
15–36 months	D Tibia	4	3	
	D Metapodial	6	2	
	Calcaneus	0	1	
	Total	*10*	*6*	*62.5*
36–42 months	P Femur	0	0	
	P Humerus	0	0	
	D Radius	1	0	
	P Ulna	1	1	
	D Femur	0	0	
	P Tibia	0	2	
	Total	*2*	*3*	*40.0*

Table I37: Sheep/goat epiphyseal fusion data (all Roman)

Fusion stage	Element	Fused	Unfused	% fused
	Scapula	4	1	
	Pelvis	1	2	
	2nd Phalanx	0	0	
	D Humerus	1	0	
9–12 months	P Radius	1	1	
	Total	*7*	*4*	*63.6*
	D Metapodial	3	1	
	1st Phalanx	1	0	
	D Tibia	2	1	
24–30 months	Calcaneus	0	2	
	Total	*6*	*4*	*60.0*
	P Tibia	0	0	
	P Femur	0	0	
	D Femur	0	0	
	P Humerus	0	0	
	D Radius	0	0	
36–42 months	P Ulna	0	0	
	Total	*0*	*0*	*0.0*

Table I38: Pig epiphyseal fusion data (all Iron Age)

Fusion stage	Element	Fused	Unfused	% fused
	Scapula	1	0	
	Pelvis	0	0	
	2nd Phalanx	0	0	
	D Humerus	0	0	
9–12 months	P Radius	1	0	
	Total	*2*	*0*	*100.0*
	D Metapodial	1	1	
	1st Phalanx	0	0	
	D Tibia	2	1	
24–30 months	Calcaneus	0	1	
	Total	*3*	*3*	*50.0*
	P Tibia	0	0	
	P Femur	0	0	
	D Femur	0	0	
	P Humerus	0	0	
	D Radius	0	0	
36–42 months	P Ulna	0	0	
	Total	*0*	*0*	*0.0*

Table I39: Pig epiphyseal fusion data (all Roman)

Fusion stage	Element	Fused	Unfused	% fused
	Scapula	4	0	
	Pelvis	7	0	
9–12 months	2nd Phalanx	2	0	
	Total	*13*	*0*	*100.0*
	D Humerus	5	0	
	P Radius	1	0	
	D Tibia	0	0	
	D Metapodial	2	0	
12–24 months	1st Phalanx	0	0	
	Total	*8*	*0*	*100.0*
	P Tibia	1	0	
	P Femur	0	0	
	D Femur	0	0	
	D Radius	1	0	
	P Ulna	0	1	
36–42 months	Calcaneus	0	0	
	Total	*2*	*1*	*66.7*

Table I40: Horse epiphyseal fusion data (all Iron Age)

Fusion stage	Element	Fused	Unfused	% fused
	Scapula	4	0	
	Pelvis	6	0	
9–12 months	2nd Phalanx	1	0	
	Total	*11*	*0*	*100.0*
	D Humerus	3	0	
	P Radius	1	0	
	D Tibia	3	0	
	D Metapodial	6	0	
12–24 months	1st Phalanx	2	0	
	Total	*15*	*0*	*100.0*
	P Tibia	1	1	
	P Femur	0	0	
	D Femur	0	0	
	D Radius	2	0	
	P Ulna	0	0	
36–42 months	Calcaneus	0	0	
	Total	*3*	*1*	*75.0*

Table I41: Horse epiphyseal fusion data (all Roman)

Stage	Estimated age	1: Iron Age	1.2: EIA	1.3: MIA	2: Roman	2.3: MR	2.4: LR	3: Saxon
A	Perinatal							
B	0–6 months			1	1			
C	5–18 months			1	1			1
D	16–28 months		2	2	1		1	
E	26–36 months		3					
F	34–43 months		2	1				
G	40 m–6.5 years		1		3			
H	5–10 years	2		2		2		1
J	8–16 years		2	2	1			1
K	14–20 years +						1	

Table I42: Cattle dental wear data (estimated ages following Jones and Sadler 2012)

Stage	Estimated age	1: Iron Age	1.2: EIA	1.3: MIA	2: Roman	2.3: MR	2.4: LR	3: Saxon
A	0–1 months				1			
B	1–3 months	1	1.5	1.5	1			
C	3–12 months		2.5	4.5	2			
D	10–24 months	1	1	2	1.5			
E	20–36 months		1	5	3.5		2	1
F	2.5–4.5 years			2	3	2	3	
G	4.5–e. 9 years		0.5					
H	e. 6–e. 11+ years		0.5	1	1			
J	e. 8–e.13+ years				3		1	

Table I43: Sheep/goat dental wear data (estimated ages following Jones 2006; decimal places denote specimens that were recorded across two age stages)

Stage	Estimated age	1: Iron Age	1.2: EIA	1.3: MIA	2: Roman	3: Saxon
A	0–1 month				1	
B	5–6 months		1			
C	11–14 months	1	1			
D	21–24 months	1	2		1	
E	24–36 months					
F	3–5 years			1		
G	6 years+					1

Table I44: Pig dental wear data (estimated ages following Legge 2013)

Context	Phase	Taxon	Element
838	1.1: EstIA	Cattle	Maxilla
714	1.2: EIA	Cattle	Tibia
1354	1.3: MIA	Cattle	Femur
1164	1.3: MIA	Cattle	Metatarsal
1394	1.3: MIA	Cattle	Metatarsal
449	1.3: MIA	Cattle	Ulna
645	1: IA	Cattle	Radius
81	1.2: EIA	Sheep/goat	Femur
87	1.2: EIA	Sheep/goat	Metatarsal
714	1.2: EIA	Sheep/goat	Metatarsal
81	1.2: EIA	Sheep/goat	Radius
27 <70>	1.2: EIA	Sheep/goat	Tibia
207	1.2: EIA	Sheep/goat	Tibia
714	1.2: EIA	Sheep/goat	Ulna
876	1.3: MIA	Sheep/goat	Metatarsal
1394	1.3: MIA	Sheep/goat	Metatarsal
1555	1.3: MIA	Sheep/goat	Radius
1164	1.3: MIA	Sheep/goat	Radius
129	1: IA	Sheep/goat	Humerus
263	2.2: ER	Sheep/goat	Metapodial
523	2.4: LR	Sheep/goat	Radius
1302	2.4: LR	Sheep/goat	Tibia
996	2: Roman	Sheep/goat	Femur
1182	2: Roman	Sheep/goat	Humerus
159	2: Roman	Sheep/goat	Radius
975 <67>	2: Roman	Sheep/goat	Scapula
1577	2: Roman	Goat	Mandible
1245	2: Roman	Pig	Mandible

Table I45: Summary of perinatal bones

Phase	Type	Cattle	Sheep/Goat	Pig	Horse	Dog	Red deer	Unid.	Total
1: IA	Cut	1	1		1			1	4
	Chop								
	Other	1							1
1.2: EIA	Cut	9	2	1		1		1	14
	Chop	4						2	6
	Other	1							1
1.3: MIA	Cut	11	4	3	4	1		3	26
	Chop	3	1	1	1			1	7
	Other				1				1
2: Roman	Cut	17	1		2	1		6	27
	Chop	6	1		1		1		9
	Other				2			1	3
2.2–3: E/MR	Cut	3	2		1			1	6
	Chop	2							2
	Other								
2.4: LR	Cut	5	4					1	11
	Chop	2						2	4
	Other	2							2
3: Anglo-Saxon	Cut	5		1					6
	Chop	2						2	4
	Other								

Table I46: Number of butchered fragments per taxon by phase

Element	Iron Age			Roman			Saxon		
	Cut	Chop	Other	Cut	Chop	Other	Cut	Chop	Other
Skull				6				1	
Mandible	6	1	1	2					
Vertebra	1			2			1	1	
Rib	3	1		2	1				
Scapula	1	2		4	4		2		
Humerus	1	1		2	2			1	
Radius				4	1	2	1		
Ulna									
Metacarpal	1		1						
Pelvis	3	2		3	1		1	1	
Femur	1	1							
Tibia	2			3	1				
Navicular-cuboid	1								
Metatarsal	1	1		2					
1st phalanx	2								
Long bone	1				1	1			
Unidentified		1			1				
Total	*24*	*10*	*2*	*30*	*12*	*3*	*5*	*4*	*0*

Table 47: Number of butchered cattle fragments by type in each period

Context	Phase	Taxon	Element	Type	Description
322	2: Roman	Cattle	Tibia	Other	Small area of bone degeneration on tubercle tuberosity
1183	2: Roman	Cattle	1st Phalanx	Arthropathy	Some exostosis lipping at distal end, dorsal side
442	1.2: EIA	Sheep/goat	Radius	Arthropathy	Ligament ossification on lateral side of proximal end
1162	1.3: MIA	Sheep/goat	Mandible	Dental	Alveolar degeneration around the 1st molar
1176	2.4: LR	Sheep/goat	Mandible	Dental	Alveolar degeneration around the p4 and m1—probable abscess
1176	2.4: LR	Sheep/goat	Mandible	Dental	Slight malocclusion on each of the molars
714	1.2: EIA	Horse	2nd Phalanx	Arthropathy	Osteophyte and some bone degeneration on dorsal surface
336	1.3: MIA	Horse	Lower molar	Dental	Unusual but extensive pitting on the buccal side of the posterior cusp, suggestive of a bacterial infection
1130	2: Roman	Large mammal	Rib	Trauma/ Inflammation	Periostitis

Table I48: Summary of palaeo-pathologies observed

Context	Phase	Taxon	Element	Sex
1466	1.3: MIA	Cattle	Pelvis	Male
1130	2: Roman	Cattle	Pelvis	Female
313	2: Roman	Cattle	Pelvis	Male
1124	3: Saxon	Cattle	Pelvis	Male
216	1.2: EIA	Pig	Lower canine	Female
1437	1.2: EIA	Pig	Lower canine	Male
941	2: Roman	Pig	Lower canine	Female
1245	2: Roman	Pig	Lower canine	Female
149	2: Roman	Pig	Lower canine	Female?
996	2: Roman	Pig	Maxilla	Male
301	2: Roman	Pig	Lower canine	Male
1234	2: Roman	Horse	Lower canine	Male

Table I49: Summary of non-metric sex data

Context	Phase	Taxon	Element	GL/mm	Withers' height/mm		
					Female	Male	Unsexed
1512	1.2: EIA	Cattle	Metacarpal	185.0			1110.0
336	1.3: MIA	Cattle	Metatarsal	190.0	1016.5	1054.5	
1353	1.3: MIA	Cattle	Metatarsal	188.0	1024.6	1043.4	
1555	1.3: MIA	Cattle	Metatarsal	181.0	986.5	1004.6	
1225	2.4: LR	Cattle	Metatarsal	219.0	1193.6	1215.5	
1215	2.4: LR	Cattle	Metatarsal	192.0	1046.4	1065.6	
1215	2.4: LR	Cattle	Radius	264.0			1135.2
151	2: Roman	Cattle	Metacarpal	168.0	1008.0		
825	2: Roman	Cattle	Metatarsal	199.0	1084.6	1104.5	
1130	2: Roman	Cattle	Metatarsal	205.0	1117.3	1137.8	

Table I50: Summary of cattle withers' height calculations (female and male heights are given where the metatarsals could not be accurately sexed)

Context	Phase	Taxon	Element	GL/mm	Withers'/mm
111	1.2: EIA	Sheep/goat	Metacarpal	120.6	589.7
336	1.3: MIA	Sheep/goat	Metacarpal	117.3	573.6
1351	2.4: LR	Sheep/goat	Metatarsal	132.8	602.9
566	2: Roman	Sheep/goat	Metatarsal	117.9	535.3
556	2: Roman	Sheep/goat	Metatarsal	124.3	564.3

Table I51: Summary of sheep/goat withers' height calculations

Context	Phase	Taxon	Element	GL/mm	Withers'/mm
714	1.2: EIA	Horse	Radius	311.0	1278.5
1394	1.3: MIA	Horse	Metacarpal	205.0	1250.9
341	1.3: MIA	Horse	Metacarpal	206.0	1257.0
1281	2.4: LR	Horse	Metacarpal	195.0	1189.9
1110	2.4: LR	Horse	Metacarpal	204.0	1244.8
991	2: Roman	Horse	Metacarpal	204.0	1244.8
1130	2: Roman	Horse	Metacarpal	215.0	1311.9

Table I52: Summary of horse withers' height calculations

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
1.2: EIA	Cattle	Humerus	343					72.2					27.2	65.9								
			574					66.6					28	60.2								
			1971				33.3	72.5					29.3	65.5								
			1972				33.8	80.4					30.7	73.3								
		Metacarpal	1443		48.4	30	25.6															
			1521	185	53.4	31.4	26.6					24.8										
			1871		55.2	35.1	30.1															
		Metatarsal	1442				26.6	50.5				28.3										
		Radius	69							63.9												
			572		77.3					72.8												
			844		73.1	66.6																
			1968				39.3			73												
		Horncore	923												41.1	29.1	119				91	
		Tibia	946				36.6	57	43.2													
			947				42.9	63.9	47.4													
			1872				37.4	58.8	44													
	Horse	Humerus	223				27.9	71.1					29.7	65								
			936				27.4	71.7					31.3	66.2								
			2257					74.9					33.2	65.1								
		Radius	605	311	76.8		34.6	70.9		69.7	57.2											
	Pig	Lm3	1869	28.9																		13.6
	Sheep/goat	Humerus	366				9.1	24.1					10.8	21.6								
		Metacarpal	948	120.6		15.6	12.8	22.7				12.6										
			1462		19.4	14	12.7															
		Metatarsal	61		17.6	16.8	10.6															
		Radius	281		28.4					26.8												
		Tibia	222				13.4	22.3	17.2													

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
			1391				10.7	19.2	15.2													
			2254					21.9														
1.3: MIA	Cattle	Astragalus	520	58.5															36	54.1		
			840	60.7															38.8	55.6		
		Humerus	44				28.3	67.1					25.9	62.2								
			750				30.6	72.3					28.9	64.8								
		Metacarpal	749		55.9	33.7	34.4															
			1574		51.6	33	27.6															
		Metatarsal	40		41.9	39.5	22.9															
			115	190	40.1	36.3	22.6	46.5				25.5										
			769	188	46	43.7	26.4	50				24.3										
			1573	181	42.8	41.3	24.8	54.7				27.1										
			1615		41.3	39.7	24.4															
		Radius	43				36.8			67.5												
			1602		74.2		36.1			67.8												
		Horncore	41												37.2	27	98				77	
			250												47.1	30.6	126				118	
			1916												46.8	31.3	130				115	
		Tibia	39					51.9	40													
			116					52.7	40.2													
			768					50.3	35.4													
			1066					56.6	41.9													
			1068				38	61.4	45.5													
			1547				32.4	53.7	38.6													
			2371					59	42.3													
	Horse	Humerus	1063										32.9	64.8								
		Metacarpal	32	206	44.4	31	29.4	44.4			43											

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
			744	205	43.4	27.8	28.2	42			39.3											
		Metatarsal	88		47.5	40.1	27															
			760		45.2	39.8																
	Pig	Tibia	204				17.9	28.3	25.1													
			1050				16.3	26.4	22.7													
	Sheep/goat	Humerus	93				10.9	23.3					10.8	21.1								
			1923				11.1	26.5					13.3	24.6								
			2353				10.8	23.3					10.6	21.6								
		Metacarpal	109	117.3	19.2	15.3	10.7	21.7				11.5										
			110		18.9	13.8	11.4															
			1616		18.6	13.7	9.8															
			2040		21.2	15.1	14.1															
		Tibia	389				12.3	22.4	17.1													
			775					24.1	19.4													
			848					24.9	19.4													
1: Iron Age	Cattle	Tibia	269				37.5	60.5	45.3													
	Horse	Humerus	2190										37.3	70.4								
	Sheep/goat	Metatarsal	329		16	16.2																
2.2: ER	Cattle	Humerus	2189				25.9	68.5					28.5	61								
		Metacarpal	2188		48.2	28.9	26.5															
2.3: MR	Cattle	Tibia	420				38.6	59.9	40.8													
			670					54.4	42.4													
	Dog	Tibia	826	151	30.6		8.8	20.5	15.6													
	Sheep/goat	Metacarpal	474		19.6	14.3	12.3															
			1262		18.5	13.8	11.2															
2.4: LR	Cattle	Humerus	2095										28	61.9								
			2132										27.3	64.9								

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
		Metacarpal	982					51.1				24.2										
			2133		51.3	33.2	28.8															
		Metatarsal	1809	219			29.2	58.2			31.8											
			2099	192			24.8	53.6				27.4										
		Radius	446		82.8					74.3												
			2100				32.4			57												
			2101	264	76.9		35.4			69.6												
		Horncore	263												64.6	42.7	175				145	
			2081												53.8	40.3	152					
		Tibia	375				40.8	65.6	45.8													
			641					53.3	40.5													
			953					62	44.9													
			2073				32	55.9	39.5													
	Horse	Humerus	976				34	81.7					38.4	74.9								
			977				28.1	68					32.5	66								
		Metacarpal	1007	204	43.6	29.6	27.8	41.2			40.8											
			1818	195	41.7	28.9	31	40.5			38.8											
			2103		43.8	28.7	33.5															
		Radius	1006				32.1	65.1			54.5											
	Pig	Radius	964		26.8																	
		Tibia	197								29.1	25.7										
	Sheep/goat	Humerus	2131					27.5					11.9	27								
		Metatarsal	708	132.8	18.8	17	11	21.4				12.2										
		Tibia	2058				12.2	23.2	18.3													
2: Roman	Cattle	Horncore	1242												61.2	43.1	163				138	
			1366												55.2	35.3	149				136	
			577a												41.4	33.6	121				140	

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
			577b												41.7	32.4	119				149	
			577c												40.9	29	119				93	
			577d												41.1	31.9	120				97	
			577e												39.9	32.4	119				110	
			274												40.5	30.1	114				106	
			787												34.2	27.4	104				79	
			1303												45.3	33.8	130				152	
		Humerus	780										29.3	60.7								
			1146										32.9	72.4								
			1221				29.7	69.5					28.5	63.3								
		Metacarpal	870	168	45.2	29.5	25.7	48				25.3										
			1126		58.9	36.6	35															
			1214		58.3	34.7	29.2															
			1327		49	30.2																
			1707					57.4				27.5										
		Metatarsal	504	199	40.3	39	23.1	42				26.6										
			872				21.1	46				24.7										
			1708	205	43.8	41.8	26.5	50.5				29.6										
			1709		46.8	45.4																
		Radius	781		73					66.6												
			869							61.1												
			1187		78.6		38.4			71.3												
			1226		69.5					63.2												
			1702		74.6					67.7												
			1835		66.2					61.3												
		Tibia	871				32.9	52.9	38.9													
			1134				32.4	53.3	43.8													

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
			1847				34	54.3	42.4													
			2377				40.6	71.3	56.7													
	Dog	Lm1	1331	21																		
			2237	23.5															9.1			
	Horse	Humerus	1213					80					39.4	75.5								
		Metacarpal	779					44.2			41											
			835		44.2		28.3	36.9														
			1211	204	47	31.1	30.7	44			42.6											
			1304		49.7	33.4	32.3															
			1686	215	50.4	32	30.5	44.2			45.8											
			2337		53.1	43.2	34.8															
		2nd phalanx	1829															48.6				
		3rd phalanx	1829															36.8				
		Radius	1367		74.1					68.5												
			1837					74.5			59.6											
		Tibia	1287				36	63.6	37.9													
			1354					68	44.6													
	Pig	Tibia	1197				18.2	26.9	26.2													
	Sheep/goat	Humerus	242					26.5					12	24.8								
			2290				10.6	25.8					12	23.4								
		Metacarpal	1484					21.5				11.3										
			1696					26.7				13.3										
		Metatarsal	243	124.3	17.5	16.4	9.1	19.2				11.2										
			347	117.9	17	17	8.5	18.8				11.1										
			1903				11.9	24.1				13.7										
		Radius	1846					26														
			1933		28.5		15.1			25.6												

Phase	Taxa	Element	Spec. no.	GL	Bp	DP	SD	Bd	Dd	BFp	BFd	Ddf	HTC	BT	BA	BB	BC	CH	GB	GLl	OC	WA
		Tibia	793					24	18.9													
			1324				13.4	24.2	18.4													
			1934				13.8	26.2	19.4													
3: Anglo-Saxon	Cattle	Humerus	1737				33.2	78					30.6	67.8								
		Metacarpal	1798		56.6	36	32.1															
		Horncore	993												39.4	31.2	117					
			1793												49.6	38.1	145					
			1795												39.2	30.9	116				124	
		Tibia	1787				27.8	48.3	37													
	Horse	Humerus	1796				33.7	79.7					37	71.8								
		Tibia	999					68.3	41.5													
	Pig	Lm3	1799	33																		14.5

Table I53: Summary of biometrical data (codes follow the standards of von den Driesch 1976; Maltby 2010; Sykes and Symmons 2007; Levine 1982)

APPENDIX J HUMAN REMAINS DATA TABLES

SK no.	Burial Context	Complete (%)	Surface condition	Fragmentation	Age	Sex	Stature (cm)	Dental pathology	Skeletal pathology
271	Lying on right hand side facing west, head at N end, buried in top of ditch 269	76–100%	Grade 1	Low	Young child (1–5 yrs)	N/A	-	Slight malalignment of the mandibular central incisors	Vitamin deficiency (possibly vitamin D deficiency, Rickets)
364	Supine extended, head at SW end, buried in top of ditch 364	76–100%	Grade 1	Low	Young adult (18–25 yrs)	M	166.49±3.27 (left femur)	Calculus, impacted M3	Peri-mortem trauma, periostitis, increased ectocranial porosity, cribra femoralis
426	Extended, on left hand side facing SE, head at NE end in ditch 424	26%-50%	Grade 1	Low	Adult unspecified (>18 yrs)	M??	165.99±4.45 (left humerus)	AMTL, caries, periodontitis, calculus, shovelled incisor	Ante-mortem trauma, Schmorl's nodes
428	Prone extended, head at NE end, lying along edge of ditch 1671	51%-75%	Grade 2	Low	Prime adult (26–35 yrs)	M??	179.67±3.27 (left femur)	Calculus, ante-mortem chips	Ante-mortem trauma, periostitis, Schmorl's nodes, marginal (spinal) osteophytes, extra-spinal OA secondary to to trauma
450	Supine, extended, heavily truncated, in ditch 424	0%-25%	Grade 1	High	Adult unspecified (>18 yrs)	?	-	-	-
531	Supine, extended, lying on left hand side, head at N end, buried in ditch 1671	76%-100%	Grade 1	Low	Middle adult (36-45 yrs)	M	170.53±3.27 (left femur)	AMTL, DEH, caries, periodontitis, ante-mortem chips, calculus	Ante-mortem trauma, periostitis, cribra orbitalia, Schmorl's nodes, marginal (spinal) osteophytes, spinal OA, extra-spinal joint disease

SK no.	Burial Context	Complete (%)	Surface condition	Fragmentation	Age	Sex	Stature (cm)	Dental pathology	Skeletal pathology
707	Lying on left hand side, legs flexed, head at NE end, buried in ditch 706	76%-100%	Grade 2	Medium	Middle adult (36-45 yrs)	M	170.09±4.05 (left humerus)	AMTL, periapical cavities, periodontitis, caries, calculus	Ante-mortem trauma, periostitis, Schmorl's nodes, pitting (spinal joint disease), marginal (spinal) osteophytes, extra-spinal joint disease, Brucellosis
709 (disartic.)	Buried in ditch 706 with skeleton 707	0%-25%	Grade 2	High	Middle adult (36–45 yrs)?	F??	-	-	-
710 (disartic.)	Buried in ditch 706 with skeleton 707	0%-25%	Grade 1	Low	Adult unspecified (>18 yrs)	F??	-	-	Possible trauma to greater trochanter?
711 (disartic.)	Buried in ditch 706 with skeleton 707	0%-25%	Grade 1	High	Adult unspecified (>18 yrs)	?	-	-	-
712 (disartic.)	Buried in ditch 706 with skeleton 707	0%-25%	Grade 2	Low	Adult unspecified (>18 yrs)	?	-	-	-
997	Disturbed discrete inhumation, buried in ditch 995	0%-25%	Grade 1	Medium	Neonate (birth–1 mth)	N/A	-	-	-
1105	Disturbed discrete inhumation, Head at SW end, buried in ditch 1104	51%-75%	Grade 1	Medium	Neonate (birth–1 mth)	N/A	-	-	Endocranial lesions
1570	Buried in ditch 269/896, lain crouched on left-hand side with head to NE	76%-100%	Grade 1	Low	Prime adult (26–35 yrs)	F	145.17cm ±3.57cm (right fibula)	Calculus, caries	Multiple (see text)

Table J1: Summary of LIA/Roman skeletons

	R/L/Central	No. observable	No. with trait	TPR%
Cranial trait				
Lambdoid ossicle	R	1	0	0
	L	1	1	100
Epipteric bone	R	1	1	100
	L	2	0	0
Maxillary torus	R	3	0	0
	L	5	1	20
Parietal foramen	R	1	1	100
	L	1	0	0
Supraorbital foramen (bridged notch)	R	2	1	50
	L	4	1	25
Accessory supraorbital/frontal foramen	R	2	0	0
	L	4	2	50
Mastoid foramen extrasutural	R	2	1	50
	L	4	2	50
Posterior condylar canal open	R	1	1	100
	L	3	0	0
Post-cranial trait				
Atlas – facet form double	R	3	3	100
	L	3	1	33
Atlas – lateral bridge	R	3	1	33
	L	3	1	33
Atlas – posterior bridge	R	3	0	0
	L	3	1	33
Scapula – supra-scapular foramen	R	3	0	0
	L	4	1	25
Scapula – acromial articular facet	R	3	1	33
	L	3	3	100
Humerus – septal aperture	R	4	0	0
	L	5	1	20
Femur – plaque	R	2	0	0
	L	4	1	25

	R/L/Central	No. observable	No. with trait	TPR%
Femur – exostosis in trochanteric fossa	R	2	0	0
	L	5	1	20
Talus – medial talar facet	R	4	1	25
	L	5	1	20
Calcaneus – double anterior facet	R	5	1	20
	L	4	1	25

Table J2: Prevalence of non-metric cranial and post-cranial traits (LIA/Roman skeletons)

Skeleton/ context no.	Location/ position details	Element	Surface condition	Sex	Age	Pathology	Modifications
709	Lying on top of the skull of SK 707	Conjoining fragments of right innominate (ilium, ischium and publis)	2	?? female	Possible Middle adult (36-45 years), based on pubic symphysis	None observed	None observed
710	Lying on the thorax and left arm of SK 707, facing away from the innominate (femoral head towards the pelvis of SK 707)	Left femur, fully intact, distal joint missing (broken off at distal shaft)	1	?? female (femoral head diameter)	Adult (>18 years)	Probable soft tissue trauma in the region of the greater trochanter	None observed
711	Lying in the area of the lumbar spine of SK 707	Conjoining fragments of right scapula (comprises: joint surface, coracoid process, spine, acromion and lateral border)	1	?	Adult (>18 years)	None observed	None observed
712	Lying between the femora of SK 707	Right intact ulna (proximal joint and proximal shaft)	2	?	Adult (>18 years)	None observed	None observed

Table J3: Summary of disarticulated bones with SK 707 (surface condition after McKinley 2004,16)

Deposit	Skeletal region	>10mm	10-4mm	4-2mm	Colour, MNI, age, sex, pathology
1142	Skull	-	-	-	90% white
	Axial	-	-	-	10% grey
	Upper limb	-	-	-	
	Lower limb	-	-	-	MNI = 1
	Unid. Long bone	-	-	-	
	Unid. joint surface	-	-	-	No pathology observed
	Unid. other	-	0.7 g	0.9 g	
	(Unid. Total)	-	*0.7 g*	*0.9 g*	
	Total	-	*0.7 g*	*0.9 g*	*1.6 g*
1144/1 <53>	Skull	4.2 g	1.2 g	-	MNI = 1
		(parietal bone x2)	(x 2)		
	Axial	6.1 g	0.2 g	-	No pathology observed
		(innominate – acetabulum)	(vertebra?)		
	Upper limb	-	0.8 g	-	
			(phalanges)		
	Lower limb	22 g	2.7 g	-	
		(femur, tibia)	(tibia)		
	Unid. Long bone	12.2 g	37.5 g	1.3 g	
	Unid. joint surface	3.6 g	2.6 g	-	
	Unid. other	-	5.8 g	5 g	
	(Unid. Total)	*15.8 g*	*45.9 g*	*6.3 g*	
	Total	*48.1*	*50.8 g*	*6.3 g*	*105.2 g*
1144/2 <54>	Skull	14.2 g	1.4 g	-	MNI = 1
		(parietal bone x6)	(x3)		(adult, prime adult, 26–35?)
	Axial	5.9 g	-	-	
		(left auricular surface)			No pathology observed
	Upper limb	-	-	-	
	Lower limb	7.2 g	-	-	
		(femur)			
	Unid. Long bone	1.8 g	5.5 g	0.3 g	
	Unid. joint surface	14.6 g	3.2 g	0.2 g	
	Unid. other	-	5.2 g	4.2 g	
	(Unid. Total)	*16.4 g*	*13.9 g*	*4.7 g*	
	Total	*43.7 g*	*15.3 g*	*4.7 g*	*63.7 g*
1144/3 <55>	Skull	-	-	-	MNI = 1
	Axial	-	-	-	
	Upper limb	-	-	-	No pathology observed

Deposit	Skeletal region	>10mm	10-4mm	4-2mm	Colour, MNI, age, sex, pathology
	Lower limb	12 g	-	-	
		(femur x5)			
	Unid. Long bone	9.5 g	3.6 g	1 g	
	Unid. joint surface	-	0.7 g	0.2 g	
	Unid. other	-	3.2 g	2.2 g	
	(Unid. Total)	*9.5 g*	*7.5 g*	*3.4 g*	
	Total	*21.5 g*	*7.5 g*	*3.4 g*	*32.4*
Total for 1144					*201.3 g*

Table J4: Summary of cremation deposits

Spit	Skull (g)	Axial (g)	Upper limb (g)	Lower limb (g)	Unidentified long bone (g)	Joint (g)	Unidentified other(g)
1	5.4	6.3	0.8	24.7	51	6.2	10.8
2	15.6	5.9	0	7.2	7.6	18.0	9.4
3	0	0	0	12	14.1	0.9	5.4
Total	*21*	*12.2*	*0.8*	*43.9*	*72.7*	*25.1*	*25.6*

Table J5: Cremation 1144 Skeletal representation by spit

APPENDIX K ENVIRONMENTAL SAMPLE DATA TABLES

Sample No.		1	71	72	73	11	66	75	69	42	51	52	57	58	74	65	76
Context No.		85	131	732	213	336	1542	1529	250	689	1176	1157	1176	1178	143	726	1284
Feature		82	130	731	211	334	1541	1528	249	686	1156	1156	1156	1156	142	723	1251
Group				1677	405	1683	1691	1707		1709	1712	1712	1712	1712		812	1698
Description		Secondary Fill of Pit	Secondary Fill of Pit	Primary Fill of Enclosure Ditch	Secondary Fill of Roundhouse Ditch	Secondary Fill of Enclosure Ditch	Secondary Fill of Enclosure Ditch	Fill of Roundhouse Ditch	Primary Fill of Pit	Upper Fill of Ditch	Fill of Corndryer	Fill of Corndryer	Fill of Corndryer	Fill of Corndryer	Primary Fill of Ditch	Secondary Fill of Enclosure Ditch	Primary Fill of Boundary Ditch
Date		Early Iron Age	Early Iron Age	Early Iron Age	Early Iron Age	Middle Iron Age	Middle Iron Age	Middle Iron Age	Iron Age	Middle Roman	Late Roman	Late Roman	Late Roman	Late Roman	Late Roman	Late Roman	Roman
Phase		1.2	1.2	1.2	1.2	1.3	1.3	1.3	1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2
Volume (L)		10	40	40	40	40	40	20	40	40	10	10	40	40	40	35	40
Flot Volume (ml)		25	150	125	150	100	30	20	50	100	30	20	50	20	50	50	35
Proportion of flot sorted			50%														
Charcoal																	
	>4mm	**	*	**	**	*	*	*	*	**					*	*	**
	4-2mm	***	***	***	***	**	***	***	***	***	*	**	**	**	**	***	***
Cereal grain																	
Triticum cf *spelta*	spelt wheat	2	2	5	4	1	6	7	3	42	24	9	19	4	2	3	11
Triticum cf *dicoccum*	emmer wheat															1#	

Sample No.		1	71	72	73	11	66	75	69	42	51	52	57	58	74	65	76
Triticum sp.	wheat (sprouted)				1					27	7	1	32	2			
cf *Triticum* sp.	probable wheat		2#	2#	2#	1#	1#	1#		13#	9#	2#	9#	1#	1#	2#	8#
cf *Triticum* sp.	probable wheat (sprouted)				1						3	1					
Hordeum vulgare	hulled barley	1		3		1	1							1		1	9
Hordeum vulgare	hulled barley (sprouted)											1					
cf *Hordeum* sp.	probable barley	1#		1#		1#		1#	1#						1#	1#	7#
Avena sp.	oat	2	3			2	3	1			1	1	2	1	1	4	7
Avena sp.	oat (sprouted)									1			2				
Avena/Bromus	oat/brome	2#	3#		2#	2#	2#	5#	2#			2#				3#	9#
Cerealia	indeterminate cereal	4#	8#	8#	7#	1#	15#	5#	4#	44#	17#	12#	59#	6#	3#	11#	31#
Cerealia	indeterminate cereal (sprouted)										1#		3#				1#
Chaff																	
Triticum spelta L.	spikelet fork	1			4		1						1		1		2
cf *Triticum spelta* L.	spikelet fork									3#	1#						1#
Triticum spelta L.	spelt glume base	3	12	38	21	8	51	17	16	176	127	42	63	14	9	14	70
Triticum dicoccum/spelta	emmer/spelt glume base	7	4	9		5			6		8						8
Triticum dicoccum/spelta	emmer/spelt glume base fragments	85	30	107	155	50	431	96	97	816	1346	585	378	45	15	132	179
Hordeum sp.	rachis internode	1		1			1#	1	1						1		1f
Triticum/Hordeum/Secale	rachis internode							1			1					1f	
cf Hordeum sp.	rachis fragment							5									
Triticum/Hordeum/Secale	rachis fragment	1		1	1		2	5								4	7
Avena sp.	oat awns	*					**		**	*		**	***			**	**

Sample No.		1	71	72	73	11	66	75	69	42	51	52	57	58	74	65	76
Cerealia	coleoptile						2	1 + 1f		32 + 39f	61 + 105f	7 + 24f	28 + 44f	4 + 10f			1 + 1f
Cerealia	scutellum										4	3		1			
Cerealia	detached embryos	2	1	9	2	3	2	3		3	15	5	2	2		2	4
Nuts/Fruit etc.																	
Corylus avellana	hazelnut shell	1f			3f	1f						1f		1f			2f
cf *Corylus avellana*	cf hazelnut shell								1f							1f	1f
Wild Species																	
cf *Papaver* sp.	cf poppy			1#													
Ranunculus acris/repens	buttercup	3															
Vicia/Lathyrus sp. 4-2mm	vetch/vetchling/tare, etc.	1 + 2f	1 + 2(1/2) + 3f	3 + 1(1/2)	1 + 1(1/2) + 4f		1(1/2) + 8f	3(1/2) + 1f	1 + 1f	2 + 5(1/2) + 3f	4 + 2(1/2) + 7f	1(1/2) + 1f	3f	2f			3 + 1(1/2) + 3f
Vicia/Lathyrus sp. <2 mm	vetch/vetchling/tare, etc.	3(1/2)	1(1/2) + 1f	2 + 4(1/2) + 2f	3 + 6(1/2) + 7f	1 + 1(1/2)	4 + 7(1/2) + 4f	3 + 1(1/2)	2(1/2) + 1f	9 + 13(1/2) + 11f	23 + 27(1/2) + 17f	4f	10 + 13(1/1) + 12f	2(1/2)	1 + 1(1/2) + 2f		3 + 6(1/2) + 4f
Medicago/Meliotis/Trifolium	medick/melilots/clover	8	1		2	1		1	1		7	1	25	4	1	4	
Medicago/Meliotis/Trifolium	cf medick/melilots/clover			3#	1#					4#							2#
Medicago/Trifolium/Lotus	medick/clover/trefoils	13					4	1	2		6	4	13			3	
Medicago/Trifolium/Lotus	cf medick/clover/trefoils		2#		1#	3#				1#					1#	3#	1#
Potentilla sp.	cinquefoils		1			2#			2#	1#							
Potentilla cf *anserina* L.	silverweed			1#													3#
Fragaria vesca L.	wild strawberry			1#													
Alchemilla/Aphanes	ladies mantle/parsley-pierts								1#								

Sample No.		1	71	72	73	11	66	75	69	42	51	52	57	58	74	65	76
cf *Urtica dioica* L.	common nettle	2#												1#			
Viola sp. L.	violet																1#
cf *Brassica* sp.	cf cabbages		1#													1#	1#
Cardamine pratensis L.	cuckooflower									1							
Persicaria sp.	knotweeds															1	
Fallopia sp.	knotweeds	1			2												
Rumex sp.	docks (3 sided)	6			5	2	5		1	1	7	1	11	2	1	2	7
Rumex acetosella L.	sheep's sorrel						1				3	1	2			1	
Caryophyllaceae	pink family	2											2			1	4
Stellaria media (L.) Vill.	common chickweed	1			1					1		1					3
Amaranthaceae	goosefoot family										1						
Chenopodium album L.	fat hen	4	1#		2	4	4		1	3		1	5			2	4
Montia fontana L.	blinks	1							1								
Sherardia arvensis L.	field madder																1
Galium aparine L.	cleavers	6		1	3	1						1	3	1		6	1
Lithospermum arvense L.	field gromwell	14		3	2		1				1	1	2				
Hyoscyamus niger L.	henbane					1											
Plantago lanceolata L.	ribwort plaintain	1															1
Lamiaceae	dead-nettle family												1			1	1
Clinopodium cf *acinos*	cf basil thyme											2					
Euphrasia cf *officinalis* L.	eyebright										1#		1#				
Asteraceae	daisy family anthemis/leucanthemum size				1	1								1			
Rhinanthus minor L.	yellow rattle														1		1
cf *Rhinanthus minor* L.	cf yellow rattle	1#															

Sample No.		1	71	72	73		11	66	75		69		42		51	52	57	58	74	65		76
Anthemis cotula L.	stinking chamomile														1				2			
Tripleurospermum sp.	mayweeds	2	1	1	2		3	4			4		1		2		3	1		2		3
cf *Valerianella dentata* Mill	cf narrow-fruited cornsalad																					1#
Coriandrum sativum L.	coriander																					1#
Juncus sp.	rushes			3	1								1		9		1					1
Eleocharis sp.	spike-rushes							1														
Carex sp.	sedges (3 sided)				1			1					1									
Carex/Fallopia	sedge/knotweed																5					
Poaceae	grass seeds (small)	11	1	3	5		3	8			3		2		2	2	1		1	1		5
Poaceae	grass seeds (medium)			3	4			4	3				9		5	6	1	2	1	2		2
Poaceae	grass seeds (large)	2#	1#		2#								1#		1#	1#		1#				3#
Festuca/Lolium	fescues/ryegrasses			3									4		2	13	4	1		5		3
Other																						
Indeterminate	seed/fruit	22#	6#	4#	5#		6#	7#	2#		5#		11#		2#	4#	5#	5#	4#	4#		27#
cf *Juncus* sp.	seed head								1#													
Poaceae	culm node								1													
Key: # Damaged f Fragment only (1/2) half only *1-4 **5-24 ***25-100 ****100+																						

Table K1: Charred plant remains

Sample No.		**50**		**49**
Context No.		**1160**		**1120**
Feature		**1108**		**1118**
Description		**Secondary fill of pit**		**Secondary fill of Pit**
Date/Phase		**Late Roman**		**Early-middle Anglo-Saxon**
Volume (L)		**1**		**1**
Flot Volume (ml)		**90**		**30**
Proportion of flot sorted		**50%**		**100%**
Cereal				
Cerealia	indeterminate cereal grain charred			2#
Chaff				
Triticum dicoccum/spelta	emmer/spelt glume base charred	1		
Triticum dicoccum/spelta	emmer/spelt glume base uncharred	3		
Triticum dicoccum/spelta	emmer/spelt glume base fragments charred	1		2
Hordeum sp.	rachis internode charred			1
Wild Species				
Fumaria officinalis L.	common fumitory	1		
Ranunculus acris/repens/bulbosus	buttercup	1		
Ranunculus sub gen *Batrachium*	crowfoot	2#		
Rubus fruticosus L.	bramble	17		
Urtica dioica L.	common nettle	268		878
Urtica urens L.	small nettle	2		
Barbarea vulgaris W.T. Aiton	winter-cress			364
Rumex spp.	docks (3 sided)	7		5
Rumex spp.	with perianth	3		
Caryophyllaceae	pink family	1#		
Stellaria media (L.) Vill.	common chickweed	23		31
Agrostemma githago L.	corncockle	1#		
Silene latifolia Poir.	white campion	2#		31

Sample No.		50		49
Atriplex sp.	orache			5
Chenopodium album L.	goosefoots	6		62
Anagallis arvensis L.	scarlet pimpernell			7
Solanum nigrum L.	black nightshade	6		
Lamiaceae	dead nettle family			3
Leonurus cardiaca L.	motherwort	3		12
Lamium purpureum/hybridum	dead-nettles	14		42
Clinopodium sp.	calamints			27
Asteraceae	daisy family	1		
Carduus/Cirsium	thistles	8#		13#
Carduus crispus L.	welted thistle			1
Cirsium arvense (L.) Scop.	creeping thistle			1
Leontondon saxatilis Lam. (*L. Taraxacoides* (Vill.) Merat nom. Illeg.)	lesser hawkbit	1		
Sonchus sp.	sowthistle	1#		
Sonchus cf *oleraceus* L.	smooth sowthistle	1		
Anthemis cotula L.	stinking chamomile	1		
Sambucus nigra L.	elder	78		
Apiaceae	carrot family	1#		
Anthricus/Chaerophyllum	chervil	3		
Aethusa cynapium L.	fool's parsley			4#
Eleocharis cf *palustris*	common spike-rush	1		1
Carex sp.	sedges (3 sided)	1		
Poaceae	grass seeds (large)	1		
Poaceae	grass seeds (small)	4		
Other				
Indeterminate	seed/fruit	5#		10#
Carex sp.	utricle	6#		
Key: # damaged				

Table K2: Waterlogged plant remains

APPENDIX L SITE SUMMARY DETAILS

Site name:	Sutton Courtenay Lane, Sutton Courtenay, Oxfordshire
Site code:	SUCDID19
Grid Reference	SU 50100 92400
Type:	Excavation
Date and duration:	June–August 2019
Area of Site	*c* 1.40ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Oxfordshire County Museums Service in due course under the following accession number: OXCMS:2018.83.
Summary of Results:	Preceding phases of trial-trench evaluation and monitoring in 2016 and 2018 established the presence of prehistoric and Roman remains indicating a multi-phase settlement site, upon which the excavated area, totalling *c* 1.4ha, was subsequently targeted. The recovery of a small quantity of residual worked flint provides evidence of limited earlier prehistoric activity. Evidence of later prehistoric settlement dating between the earliest Iron Age and middle Iron Age in the form of roundhouses, stock enclosures, four-post structures and domestic waste recovered from pits and ditches. Roman-period activity was predominately composed of land boundaries, a trackway and subsidiary fields/enclosures that underwent several phases of maintenance and modification throughout the period. The addition of a corndryer and a nearby rectangular post-built building in the late Roman period are suggestive of a developed arable-farming regime. Human remains within the latest phases of the Roman ditches may have been associated with the abandonment of the site. Subsequent activity is indicated by a small number of early–middle Anglo-Saxon pits and an inhumation burial, while later medieval agricultural activity is demonstrated by historic mapping and a small quantity of intrusive finds.

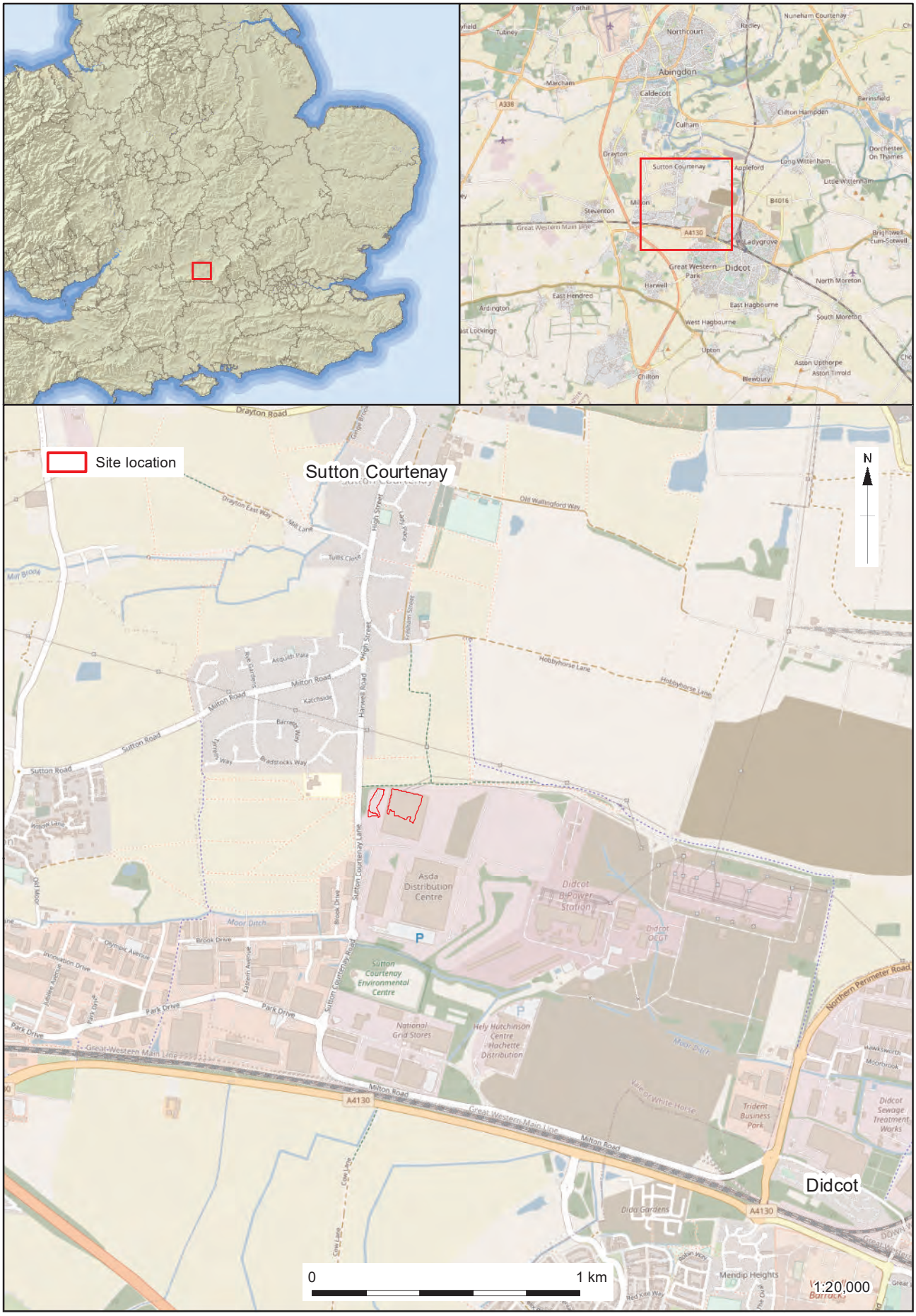


Figure 1: Site location

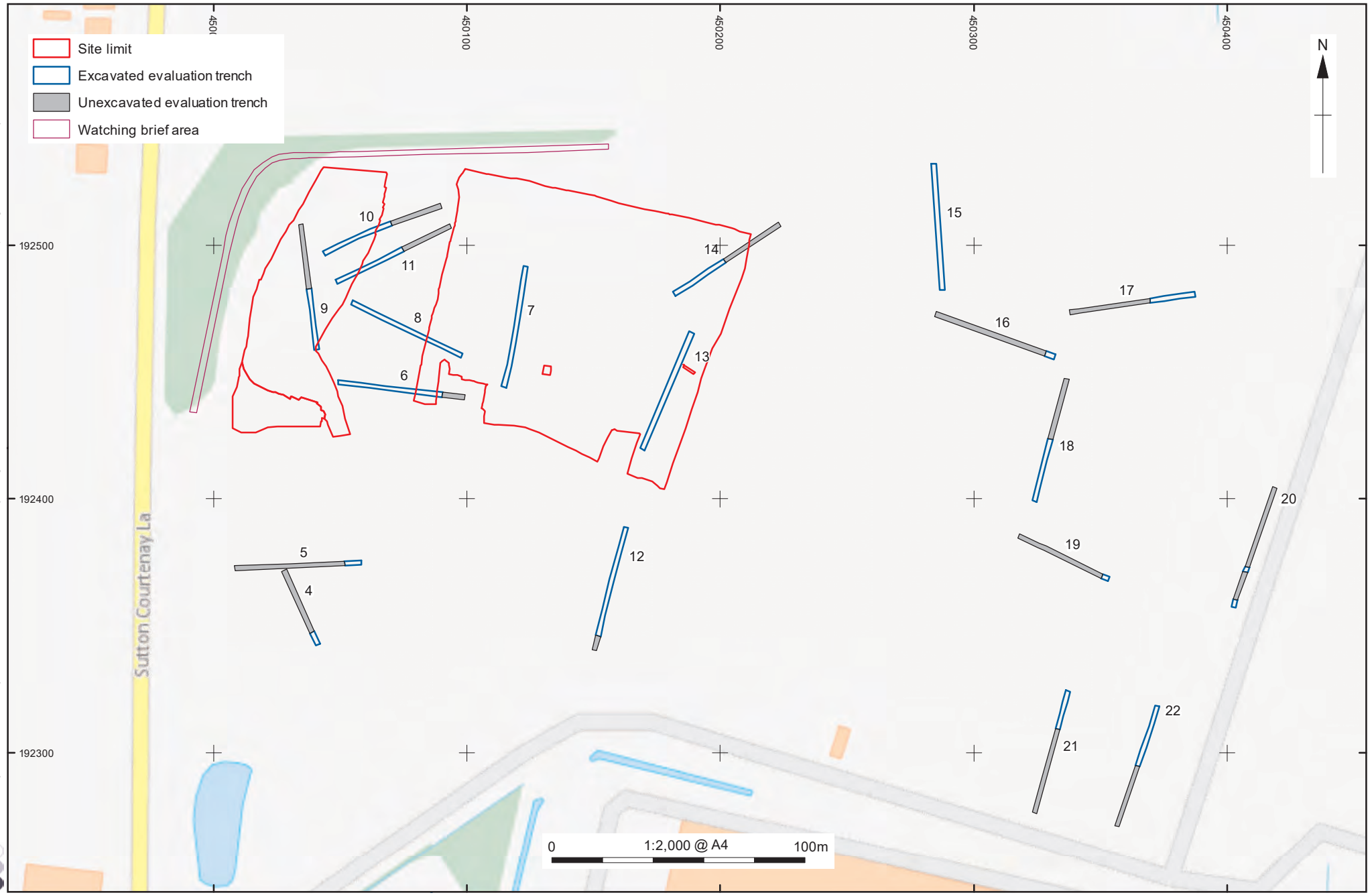


Figure 2: Excavation area location plan with previous evaluation trenches and watching brief areas

Figure 3: Excavation area plan; all features

Figure 4: Earliest and early Iron Age features

Figure 5: Iron Age features in the western excavated area

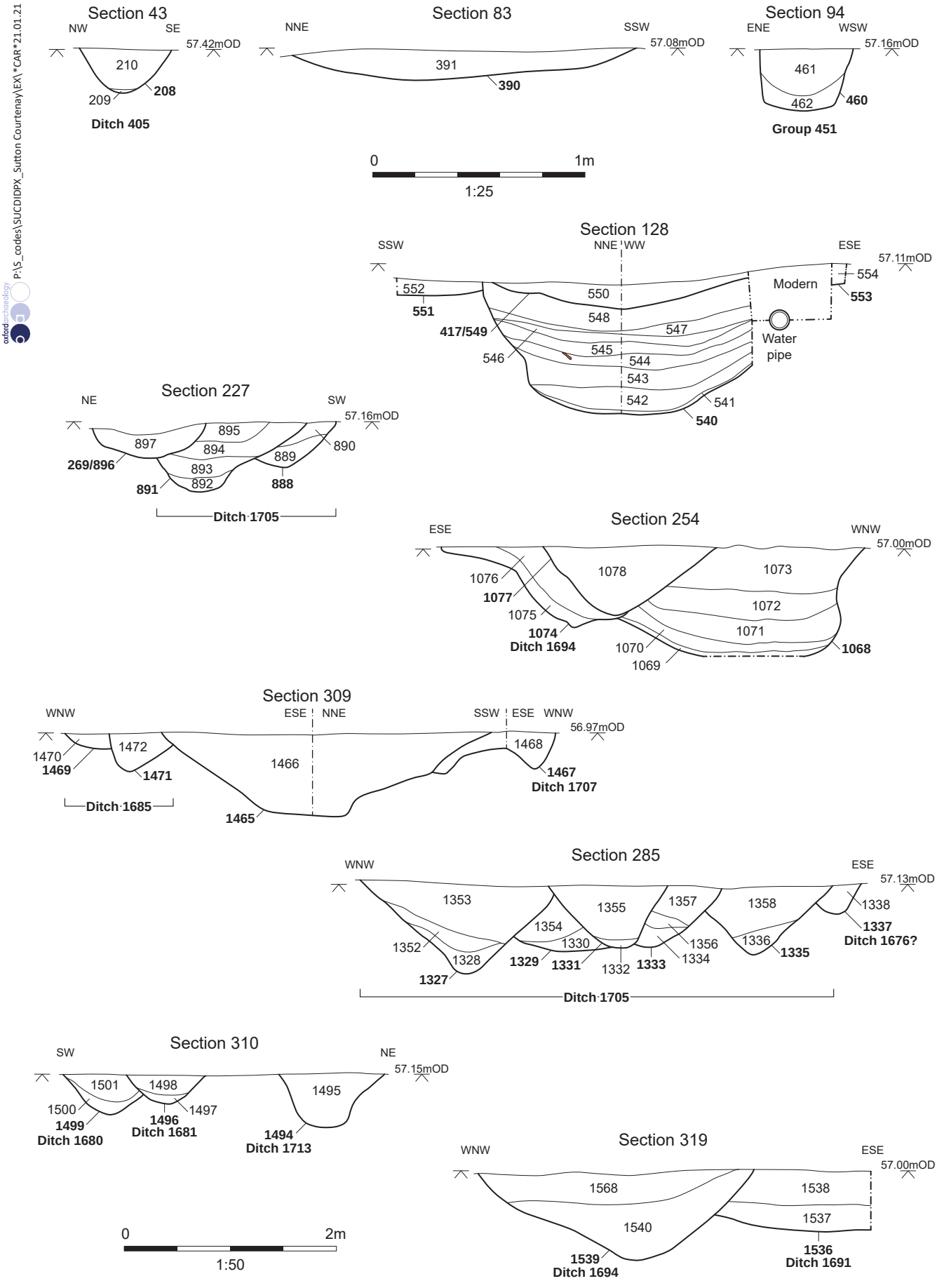


Figure 6: Sections of Iron Age features

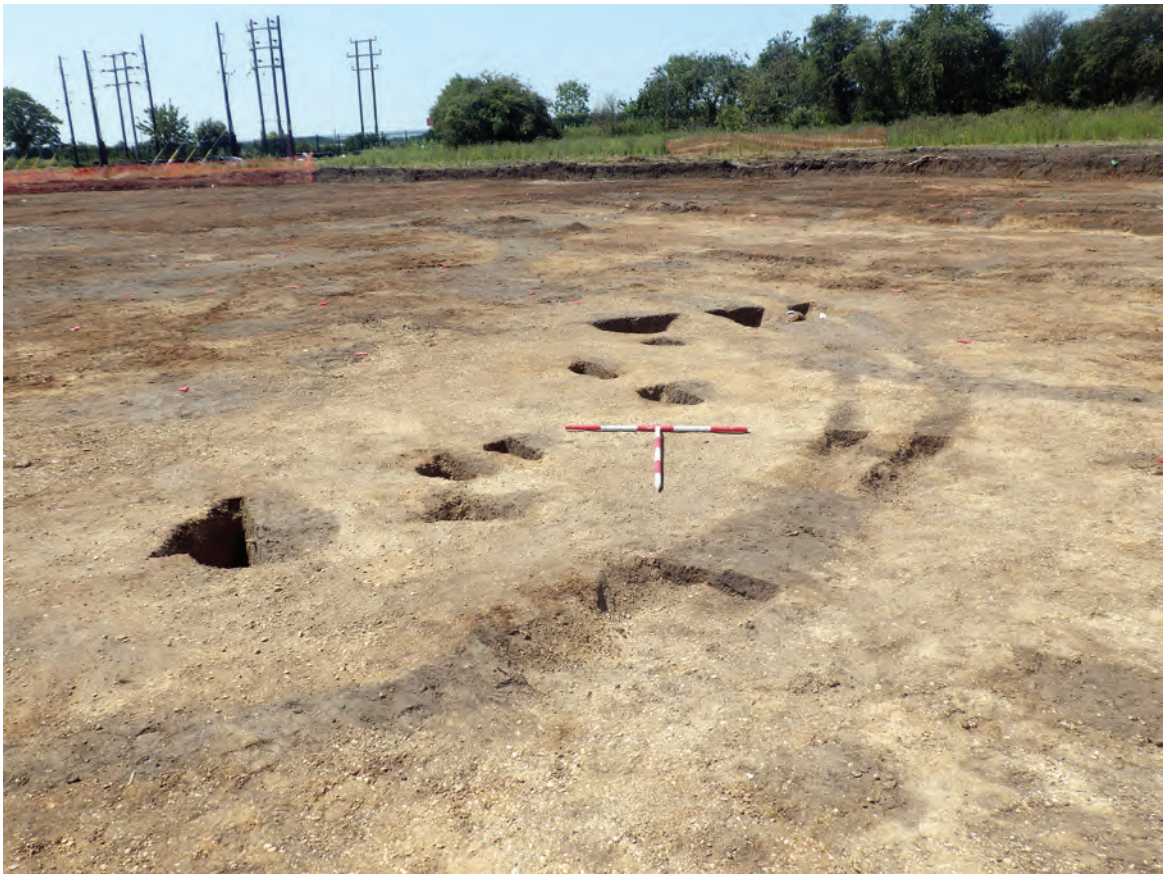


Figure 7: Pits and postholes within roundhouse ditches 1678 and 1679, looking south-west (1m scale)

Figure 8: Pit 31 and ring gullies 1679 and 1678, looking south-west (0.5m, 0.3m and 0.2m scales)

Figure 9: Enclosure ditches 1677 and 1690, looking north (1m scale)

Figure 10: Four-post structure 1464, looking north-north-west (1m scales)

Figure 11: Pit 82, looking east (2m scale)

Figure 12: Pit 79/121, looking north-west (1m scales)

Figure 13: Middle Iron Age and Iron Age features

Figure 14: Middle Iron Age jar (SF 11) in pit 448 (0.2m scale)

Figure 15: Late Iron Age/early Roman features

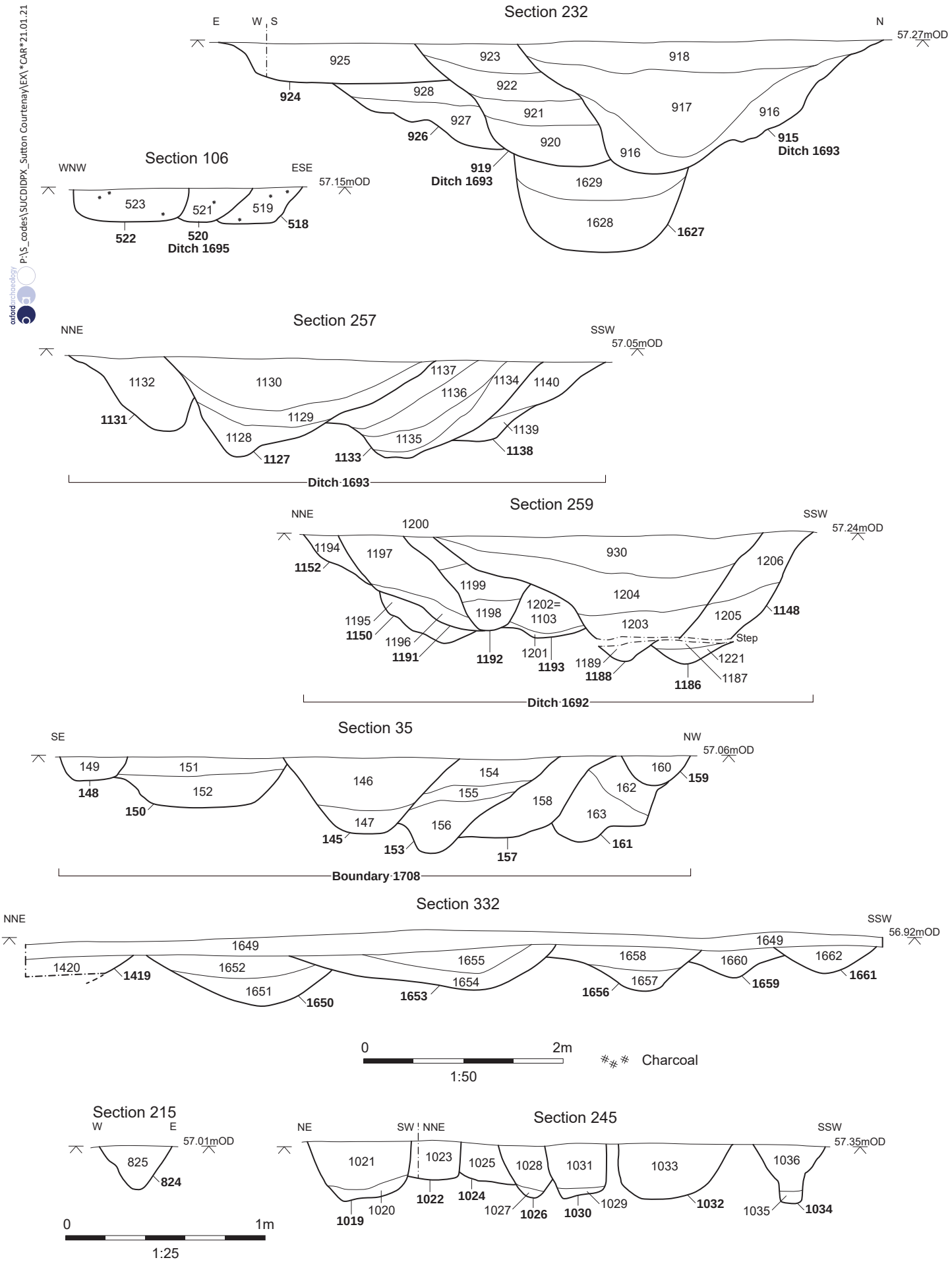


Figure 16: Sections of Roman features

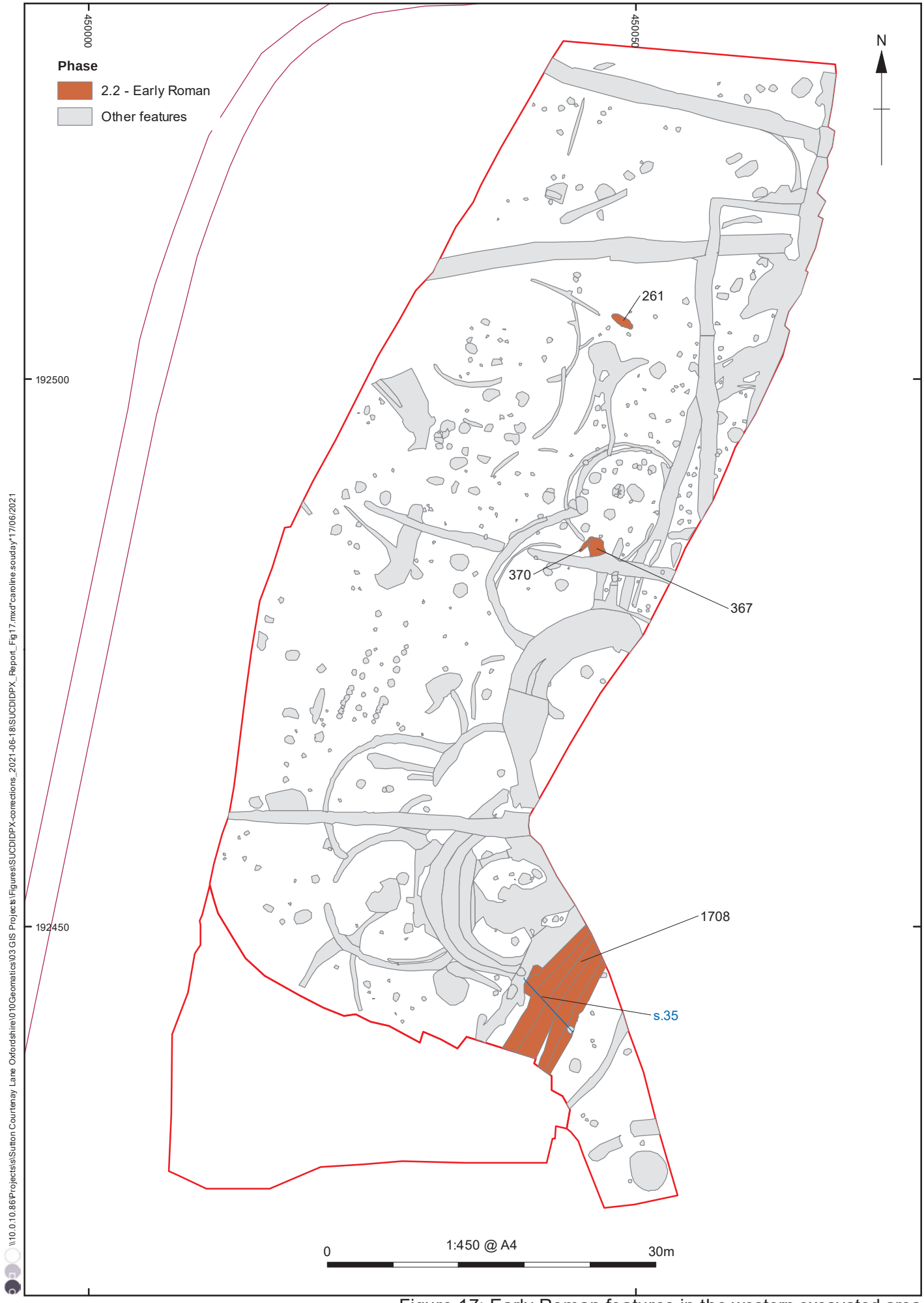


Figure 17: Early Roman features in the western excavated area

Figure 18: Early Roman features in the eastern excavated area

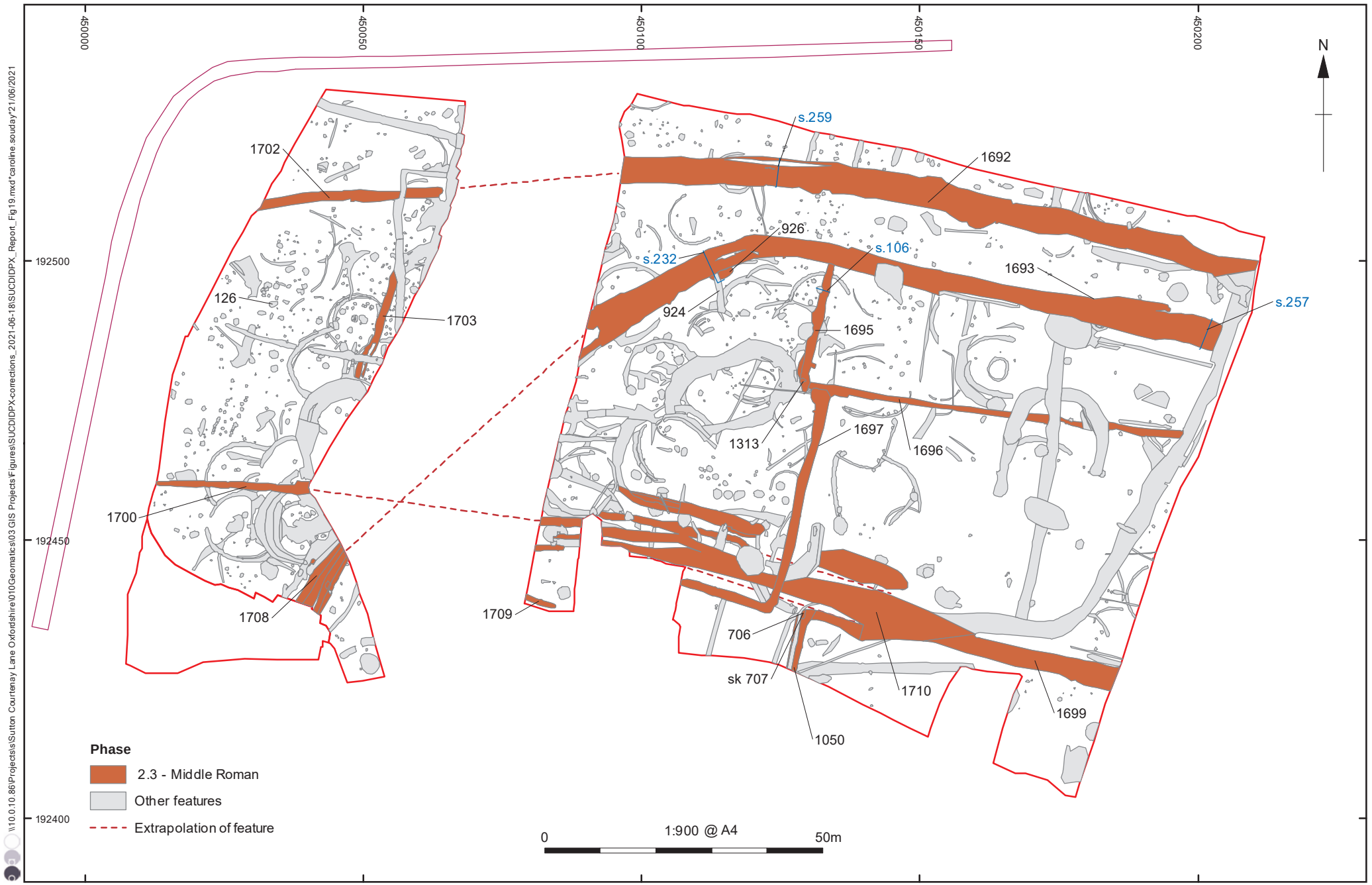


Figure 19: Middle Roman features

Figure 20: Enclosure ditch 1692, looking north-west (2m scale)

Figure 21: Enclosure ditch 1693 (1m and 2m scales)

Figure 22: SK 707, SK 709, SK 710, SK 711, SK 712, looking north-east (1m scale)

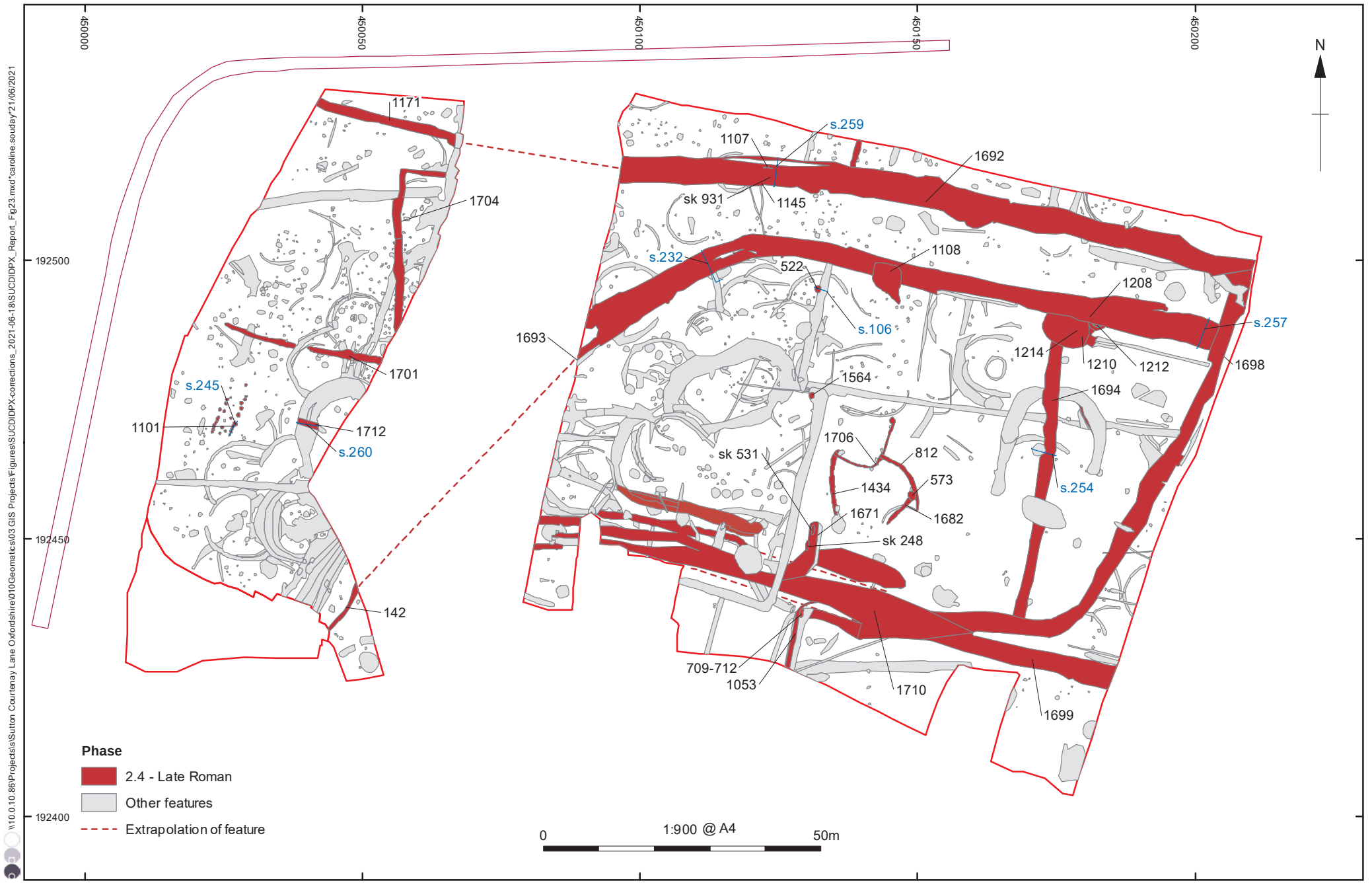


Figure 23: Late Roman features

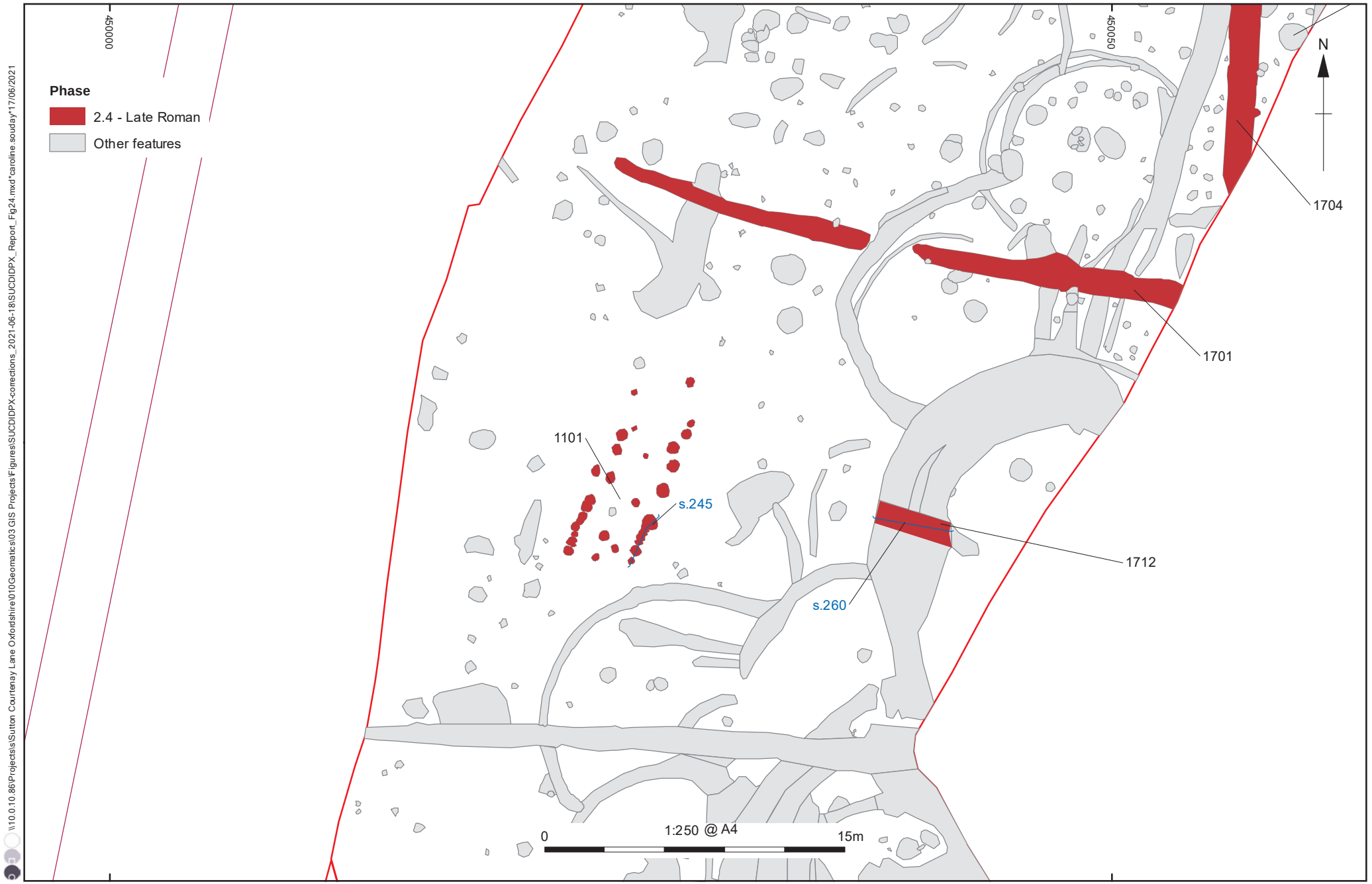


Figure 24: Late Roman features in the western excavated area

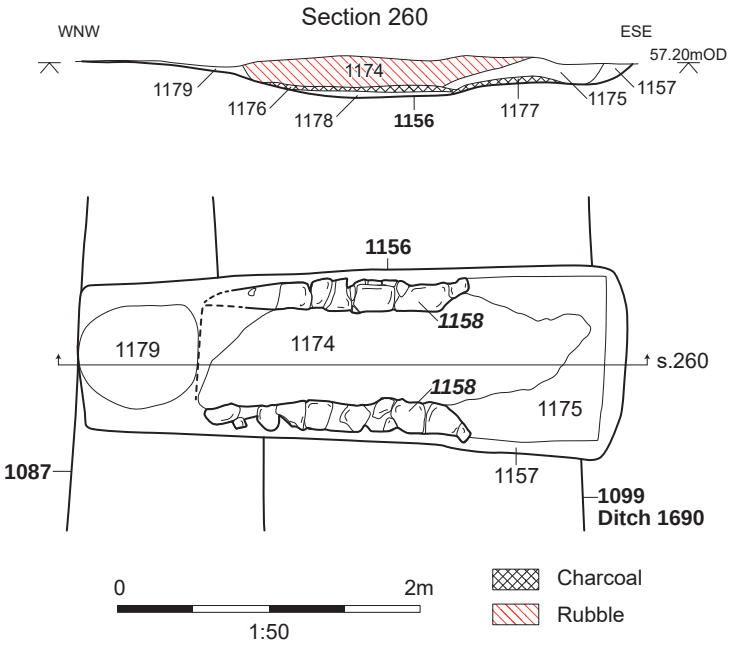


Figure 25: Corndryer 1712, photos looking west

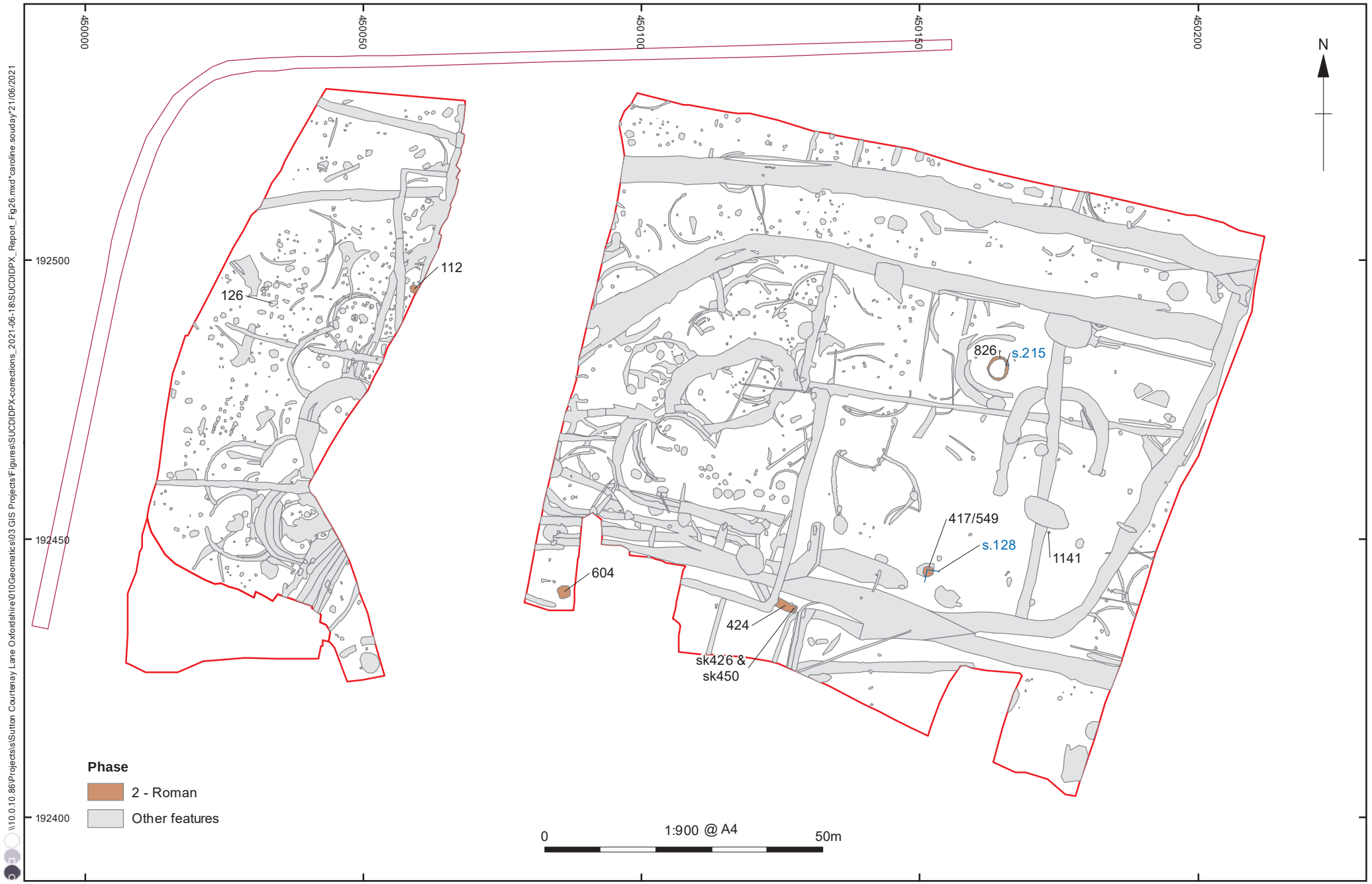


Figure 26: Other Roman features

Figure 27: Pit 126 pottery *in situ* (0.2m scale)

Figure 28: Pit 126, looking north-west (1m scale)

Figure 29: Cremation burial 1141 (0.3m scale)

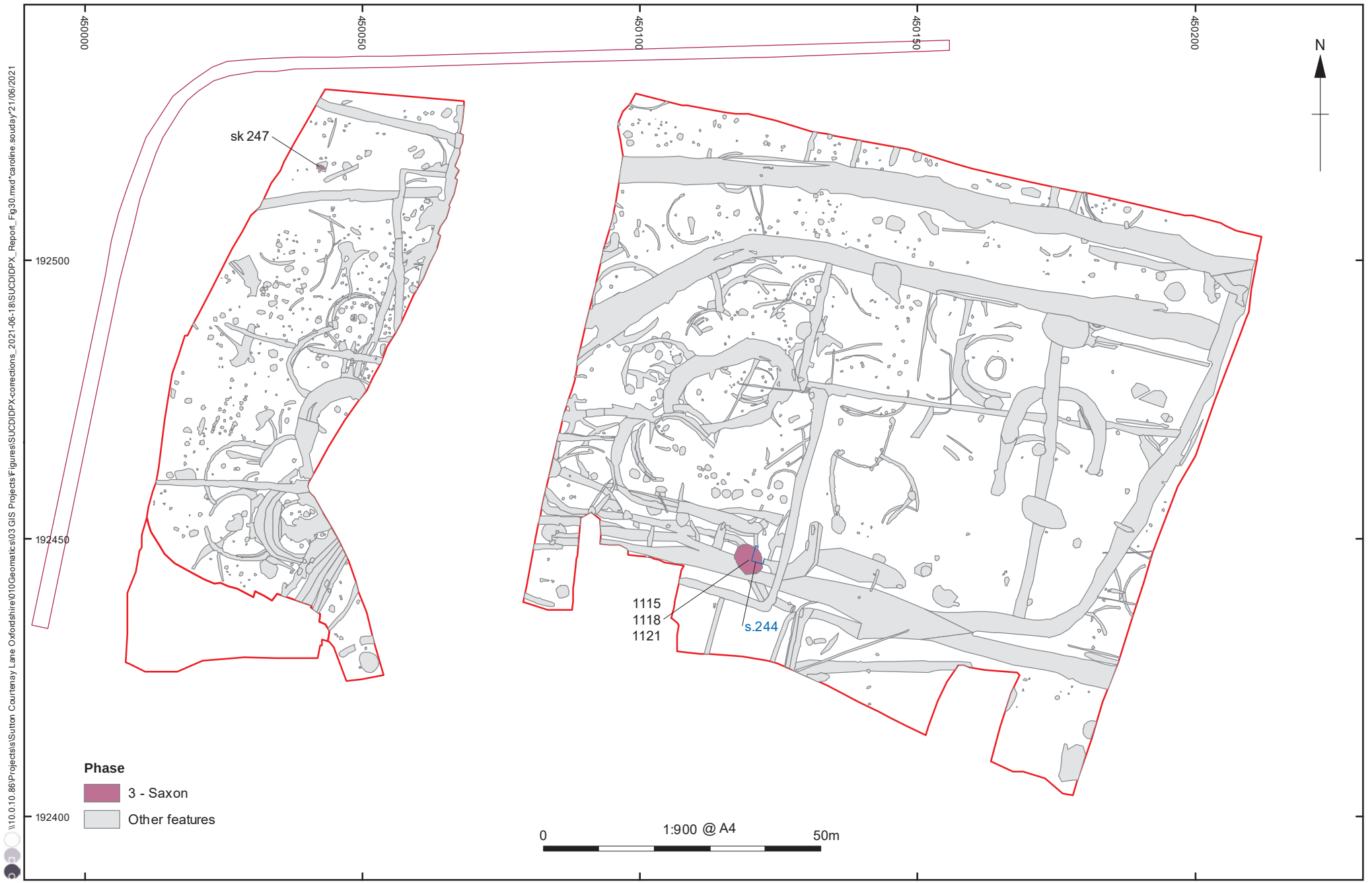


Figure 30: Early-middle Saxon features

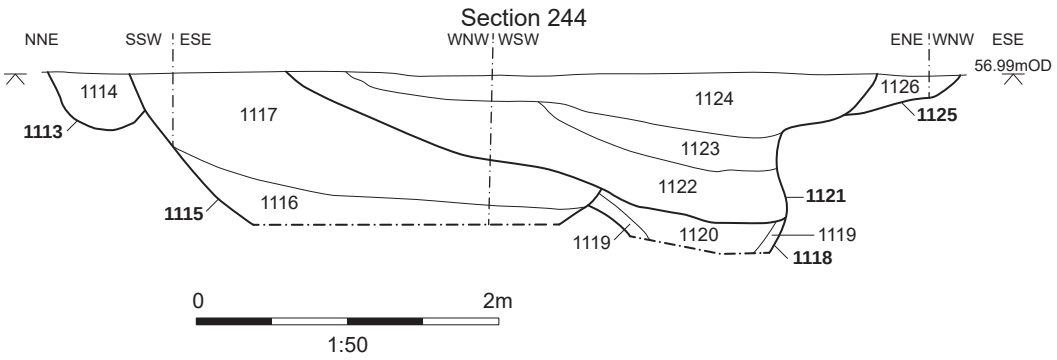


Figure 31: Section of pits 1115, 1118 and 1121, and photo of SK 247, looking north-west

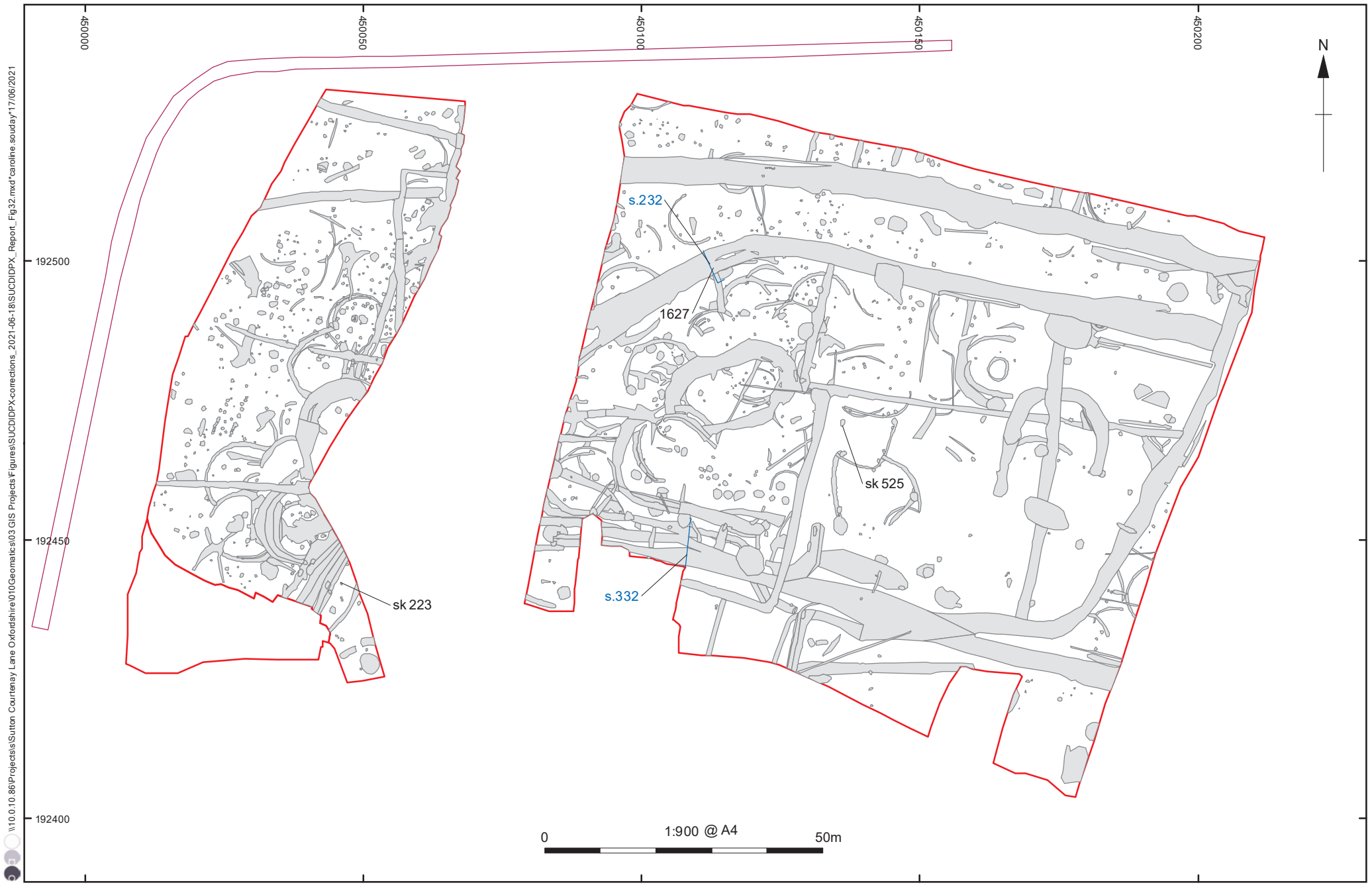
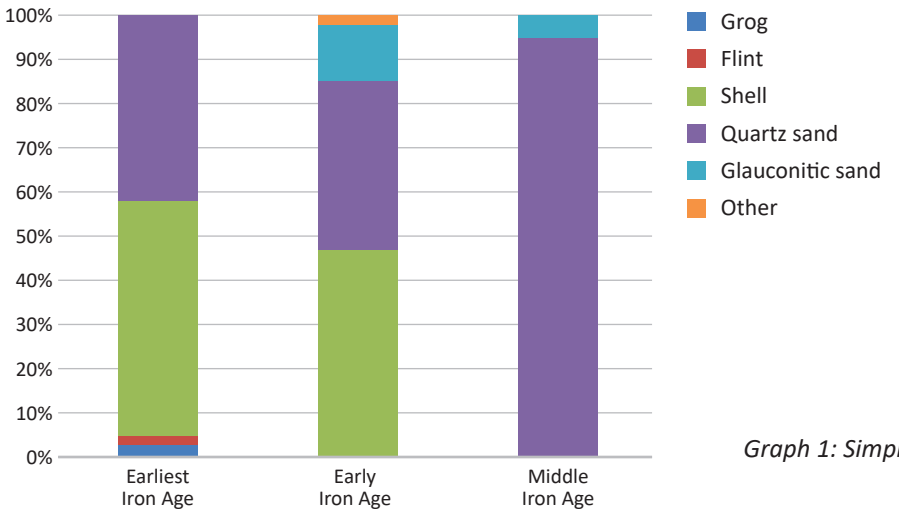
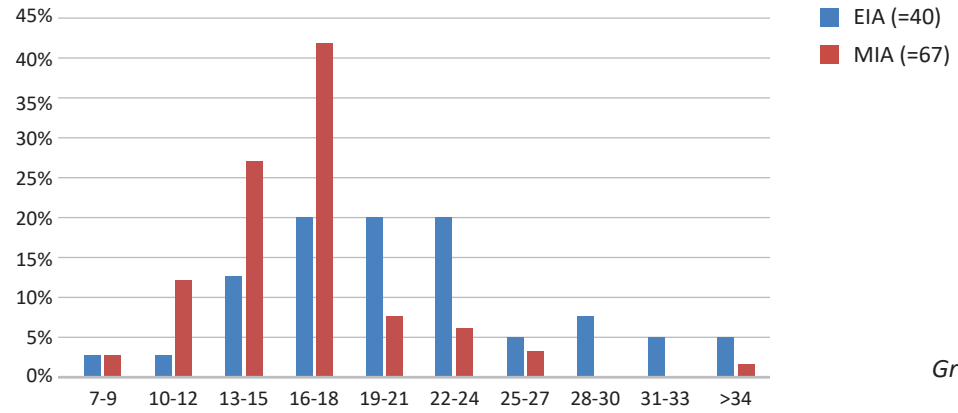


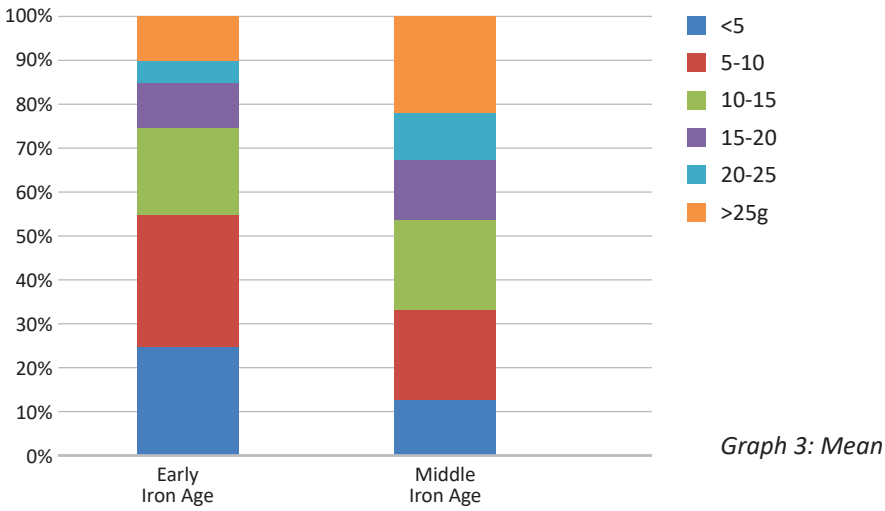
Figure 32: Undated features



Graph 1: Simplified fabric progression through the Iron Age, by weight



Graph 2: Rim diameters (cm)



Graph 3: Mean sherd weight by individual vessel

Figure 33: Prehistoric pottery data

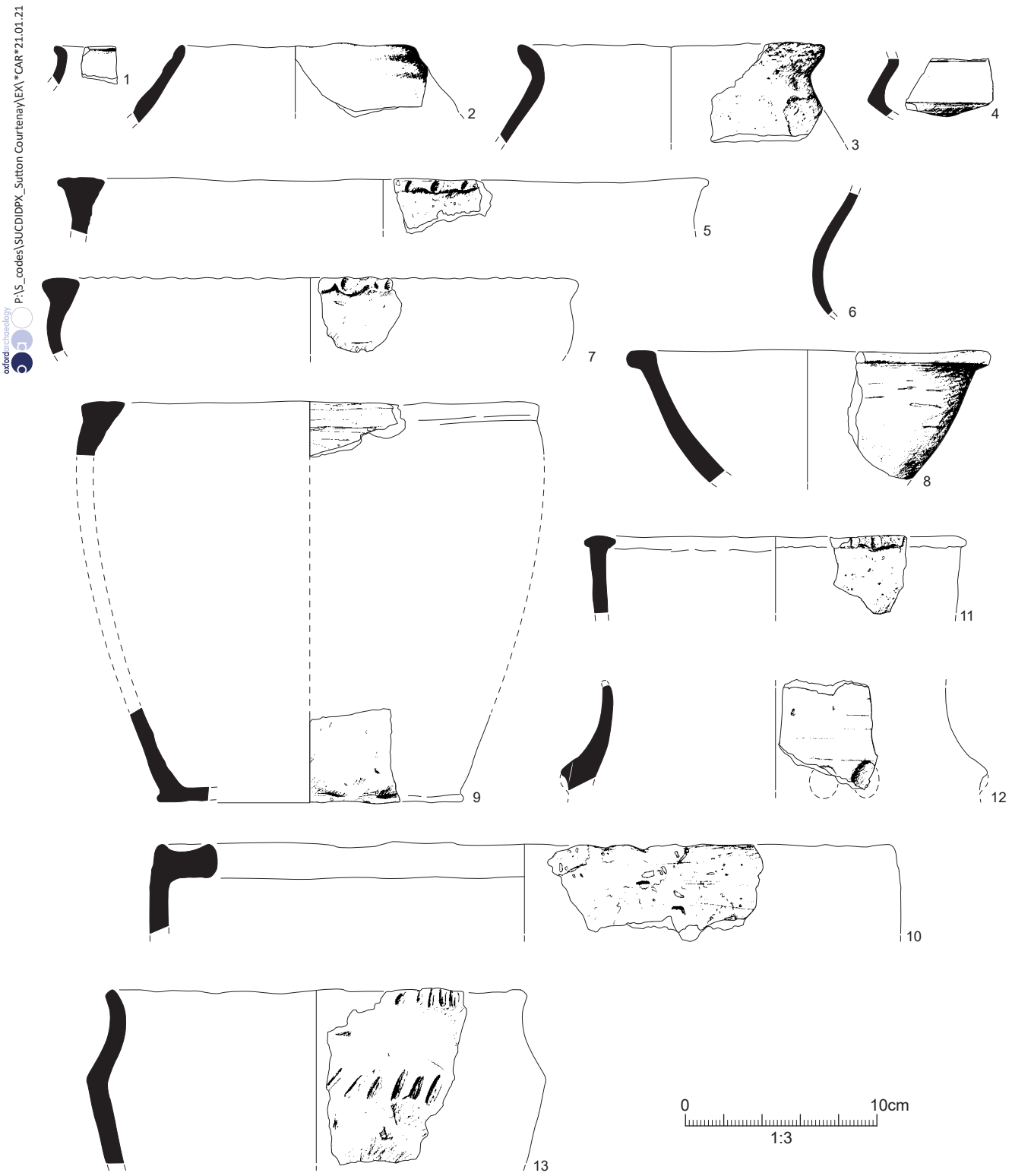


Figure 34: Prehistoric pottery 1/2

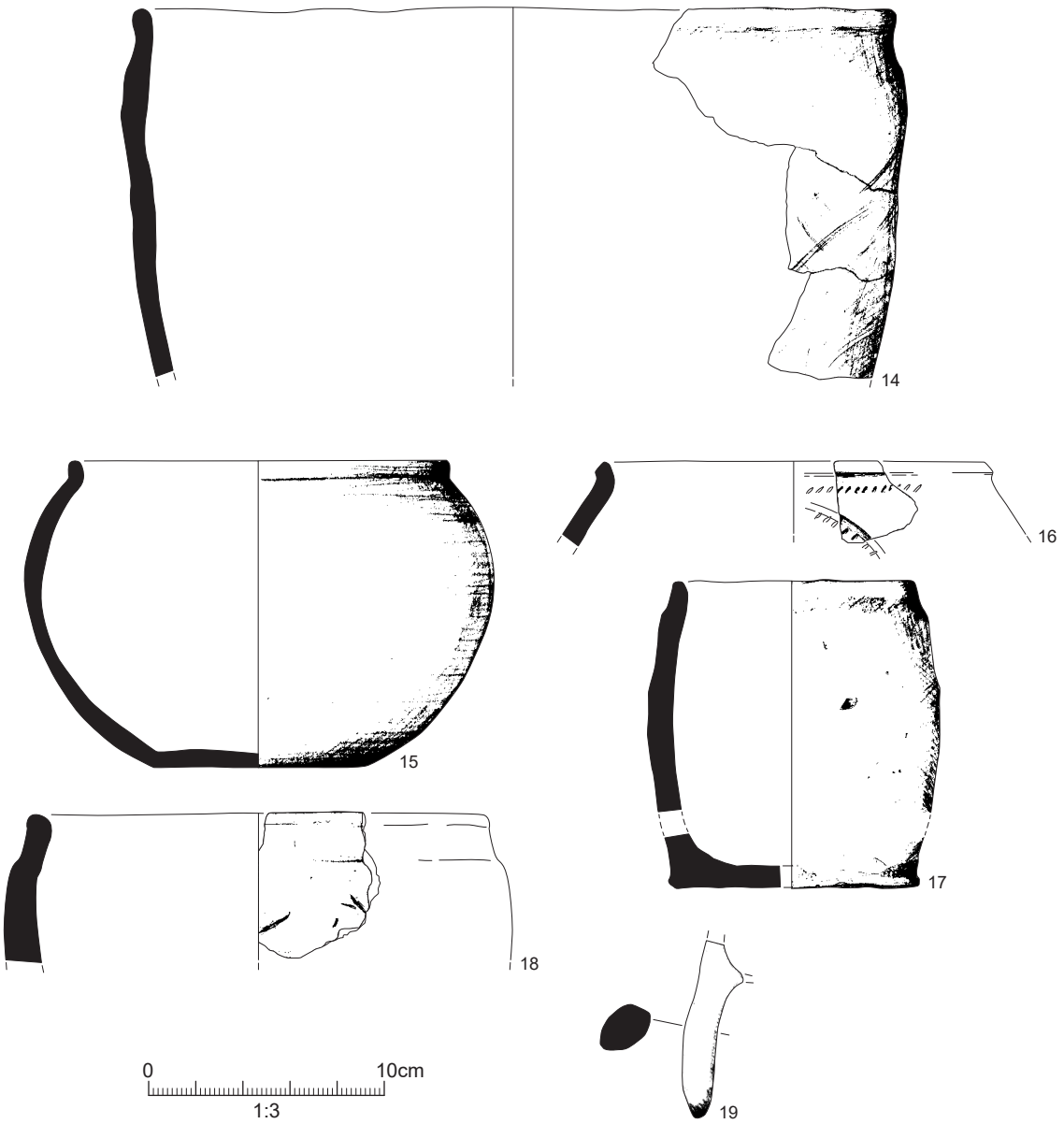


Figure 35: Prehistoric pottery 2/2

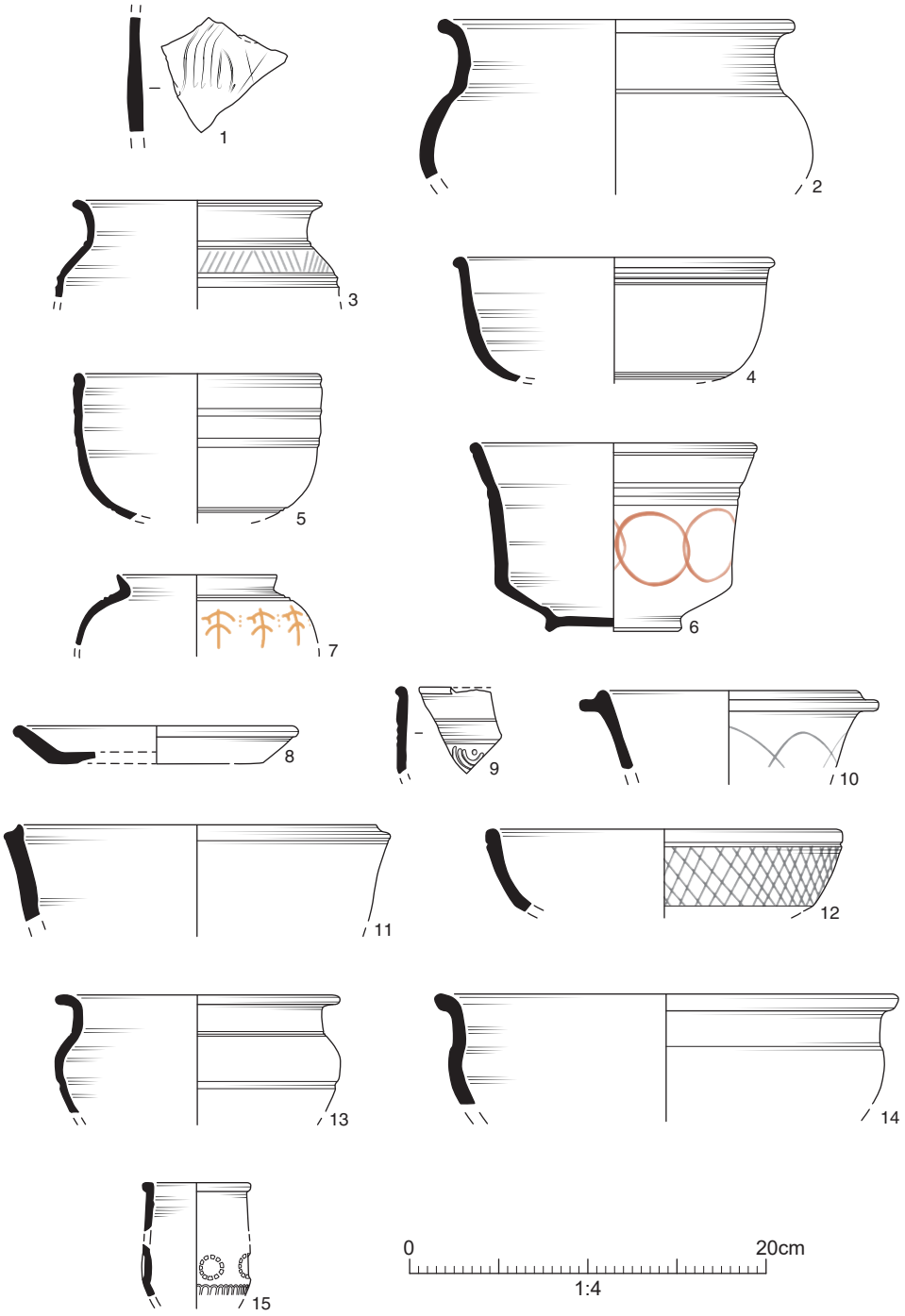


Figure 36: Roman pottery 1/2

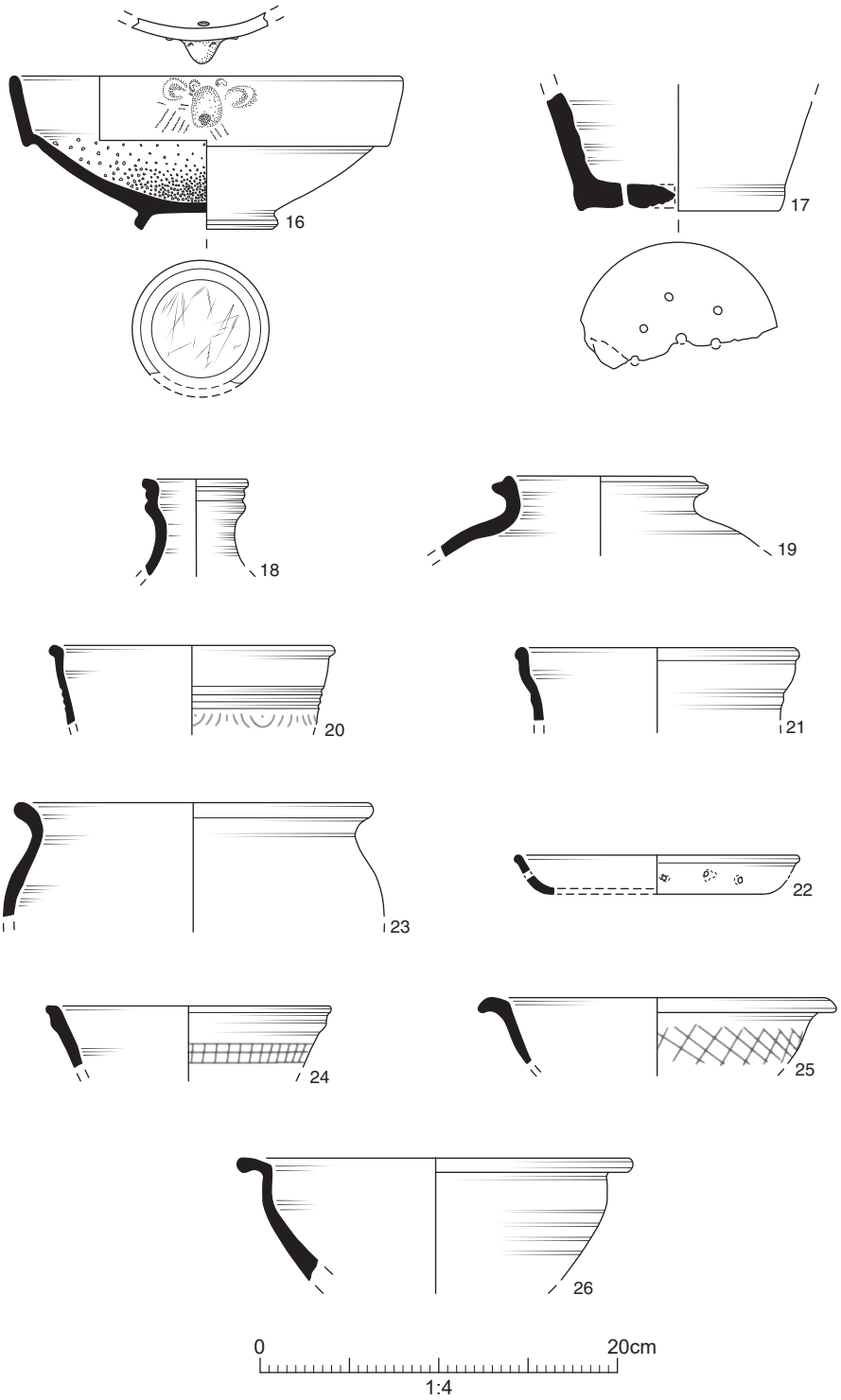


Figure 37: Roman pottery 2/2

1

2

3

4

5

0 2cm

2:1

Figure 38: Coins

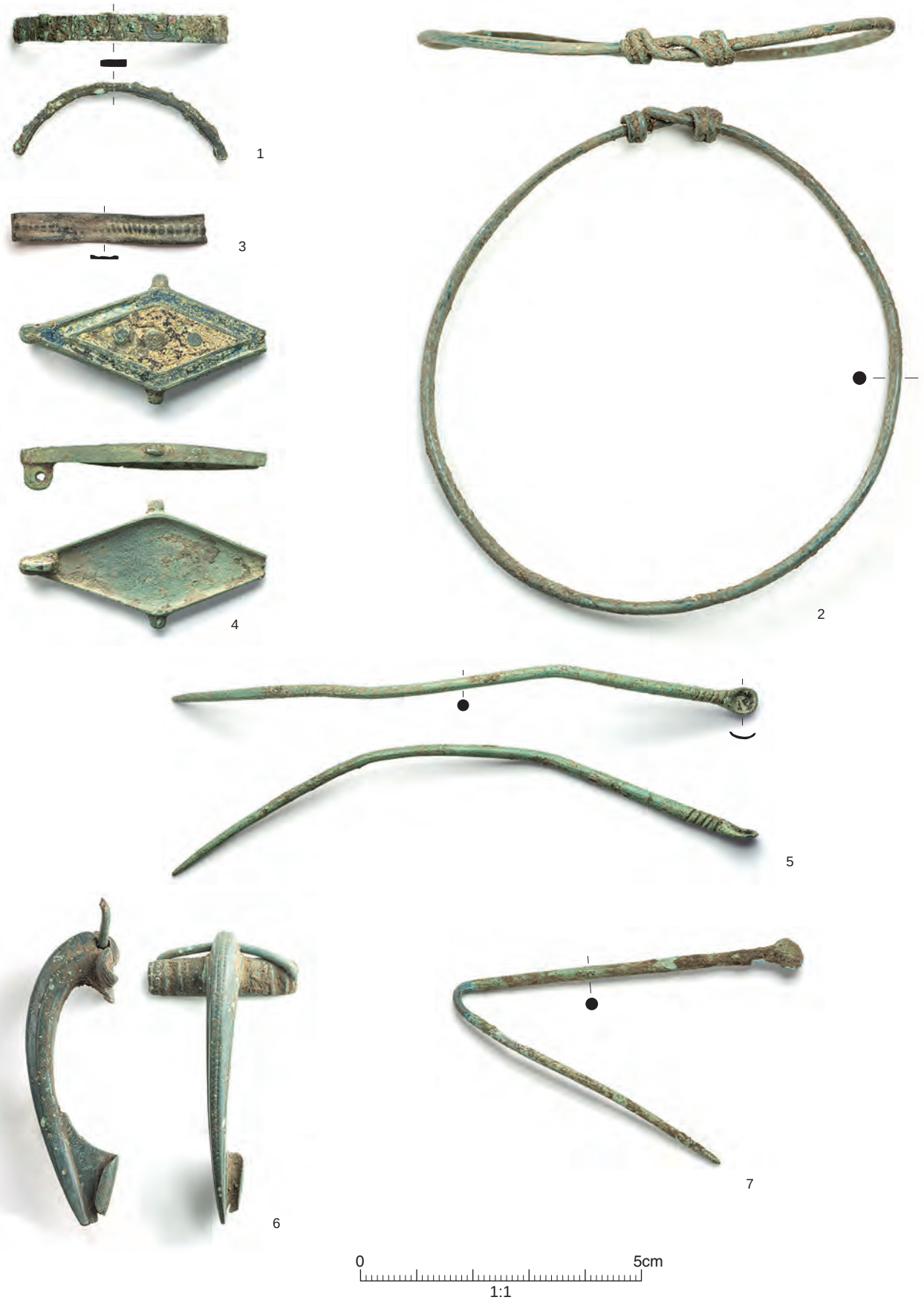
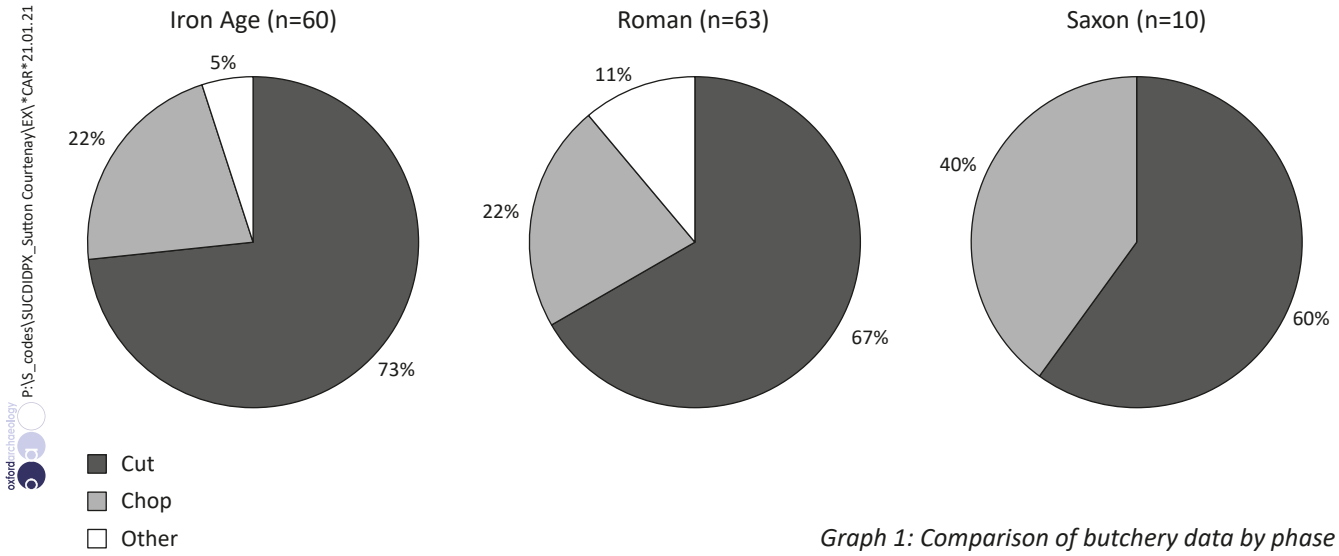
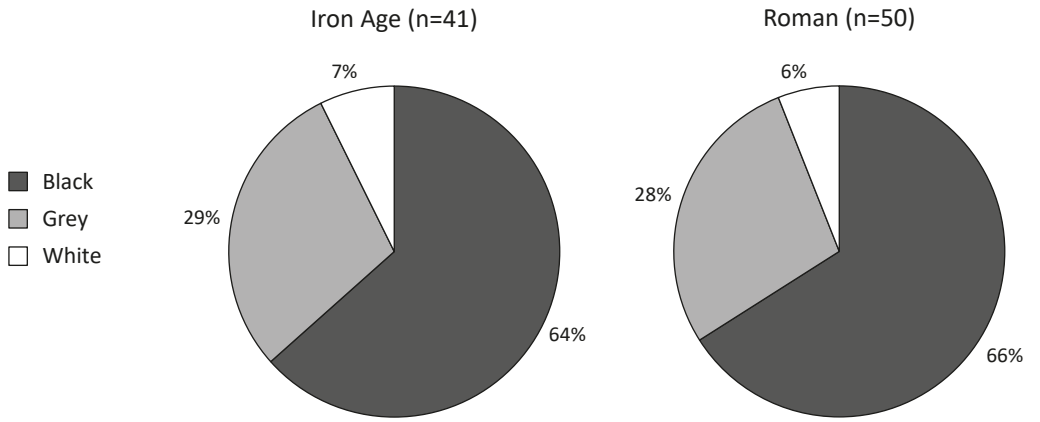


Figure 39: Small finds

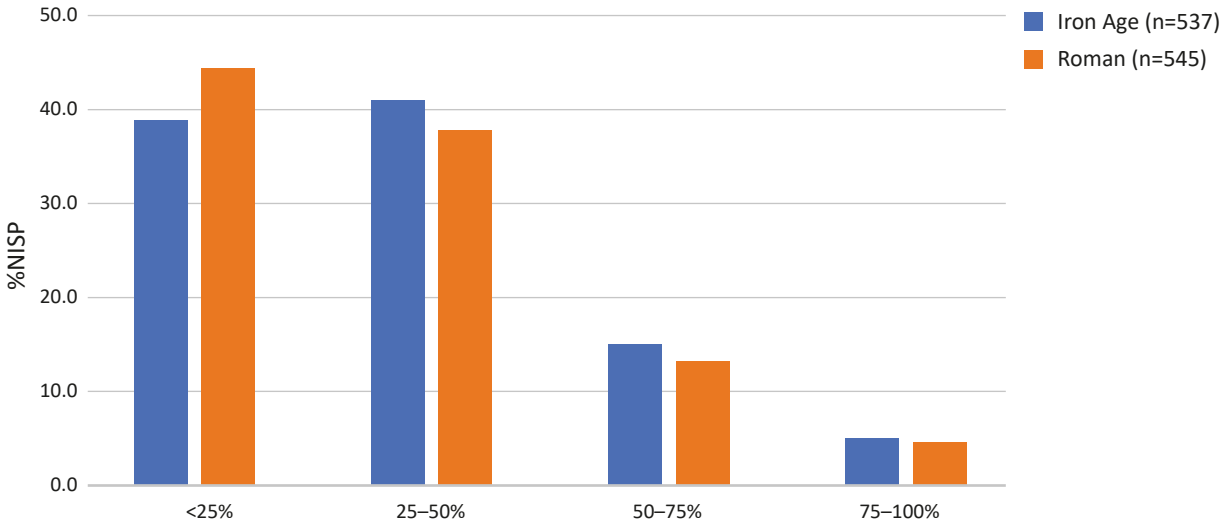
Figure 40: Bone combs



Graph 1: Comparison of butchery data by phase

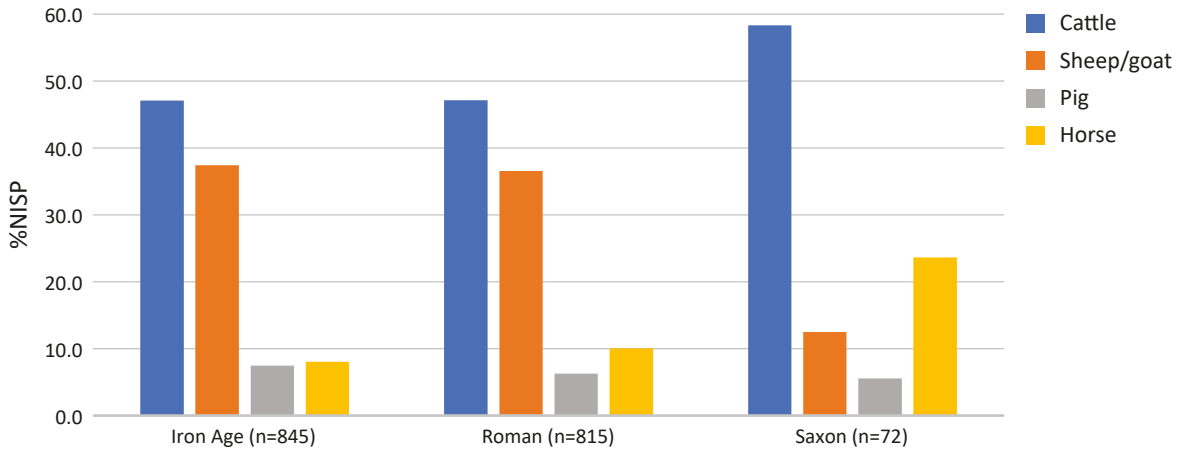


Graph 2: Comparison of burning data by phase

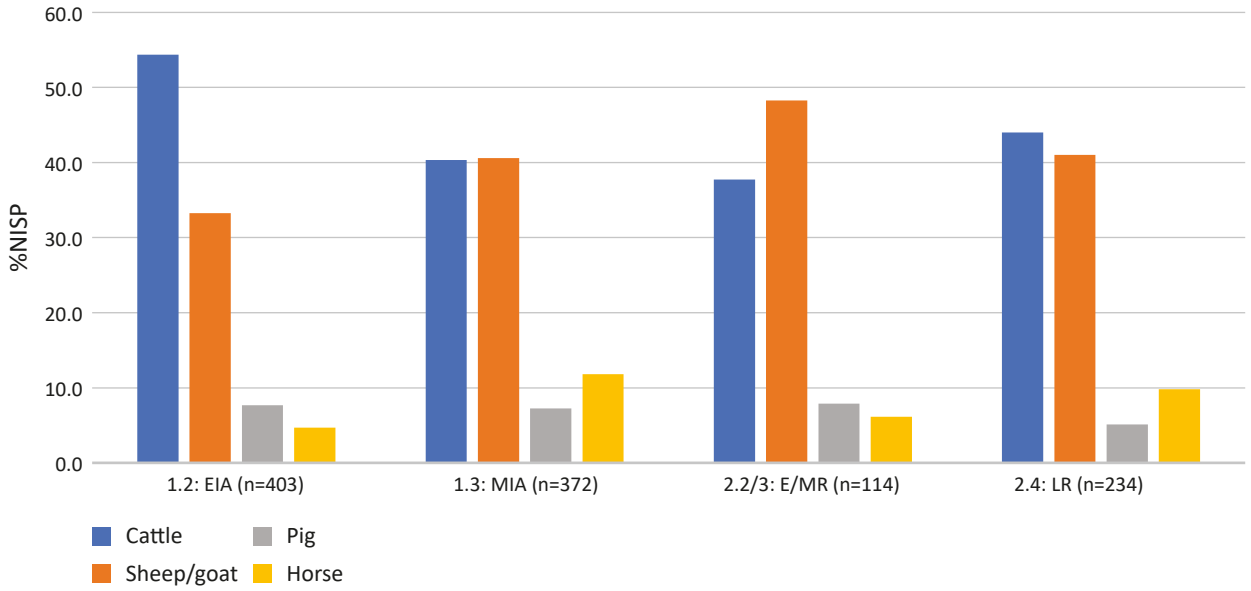


Graph 3: Completeness of limb elements and mandibles from large and medium mammal taxa recorded by Serjeantson's (1996) zones method

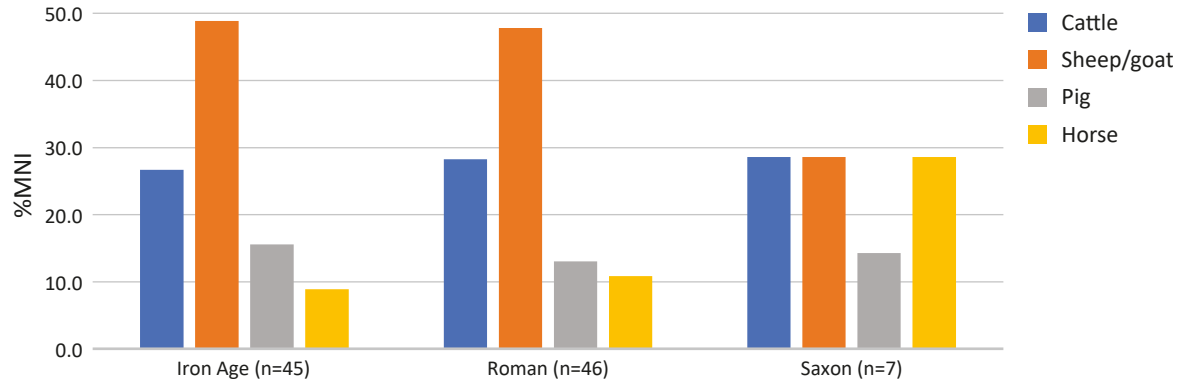
Figure 41a: Animal bone data



Graph 4: Relative frequency (NISP) of main livestock taxa by main period (sub-phases combined)

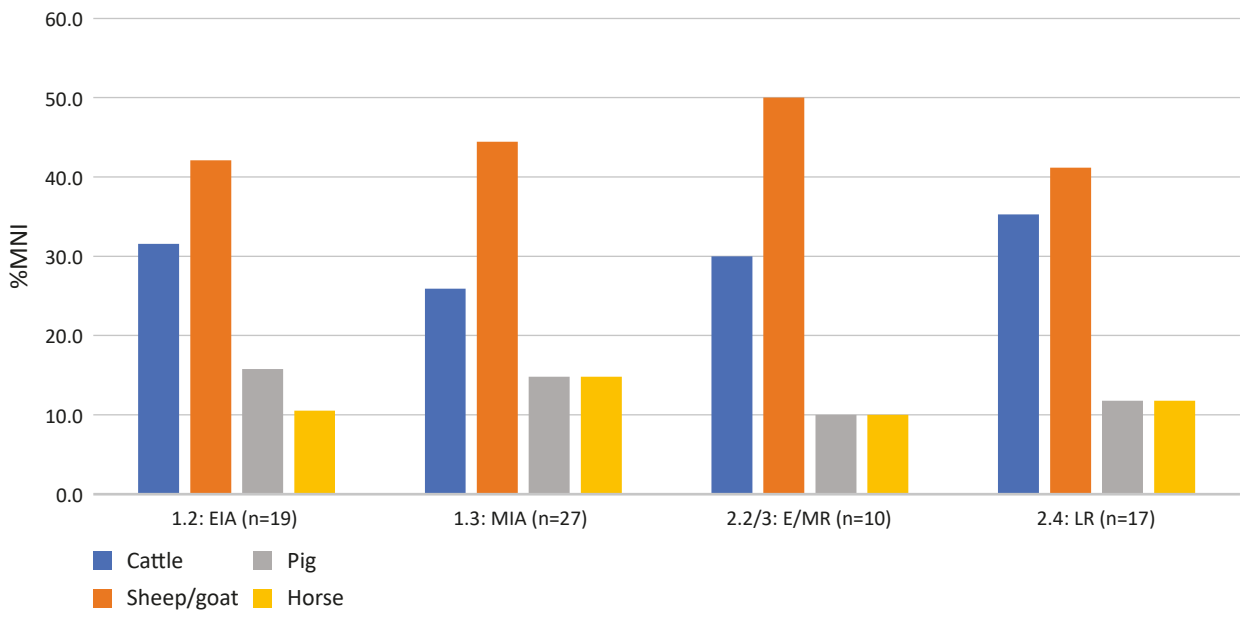


Graph 5: Relative frequency (NISP) of main livestock taxa by sub-phase

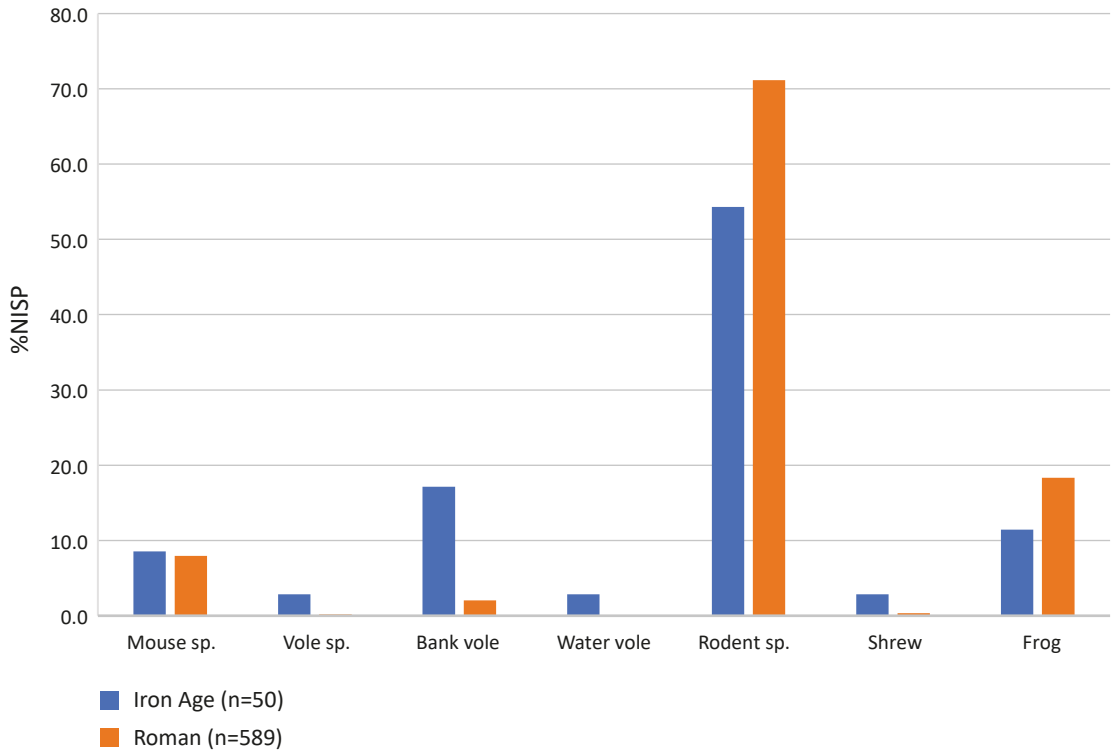


Graph 6: Relative frequency (MNI) of main livestock taxa by main period

Figure 41b: Animal bone data

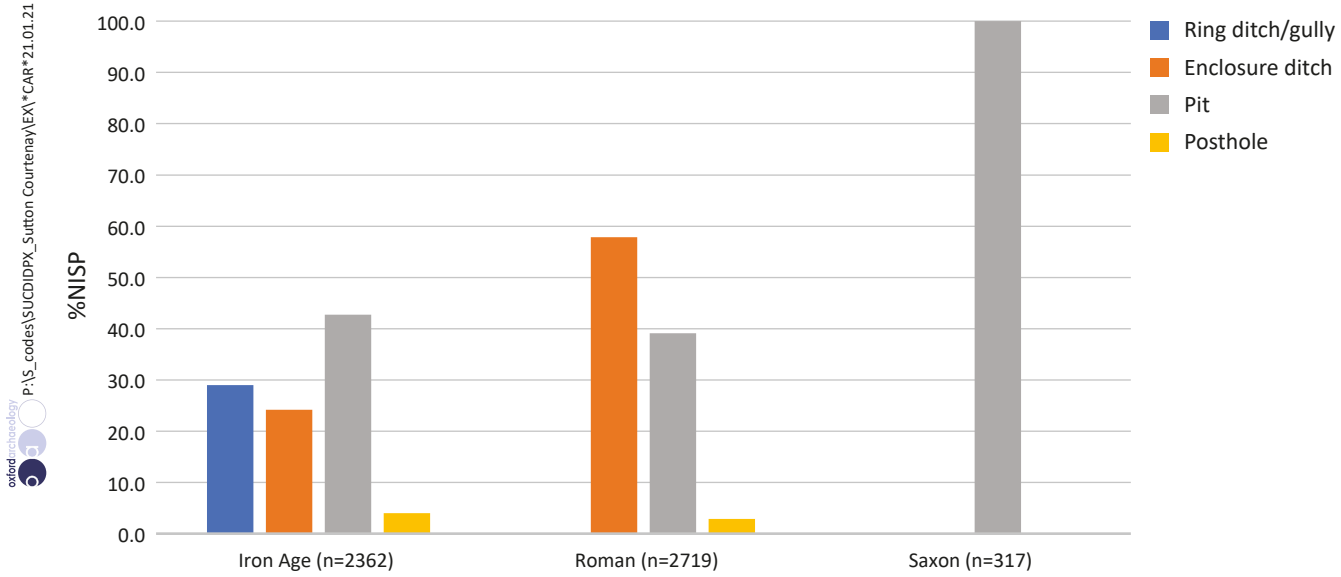


Graph 7: Relative frequency (MNI) of main livestock taxa by sub-phase

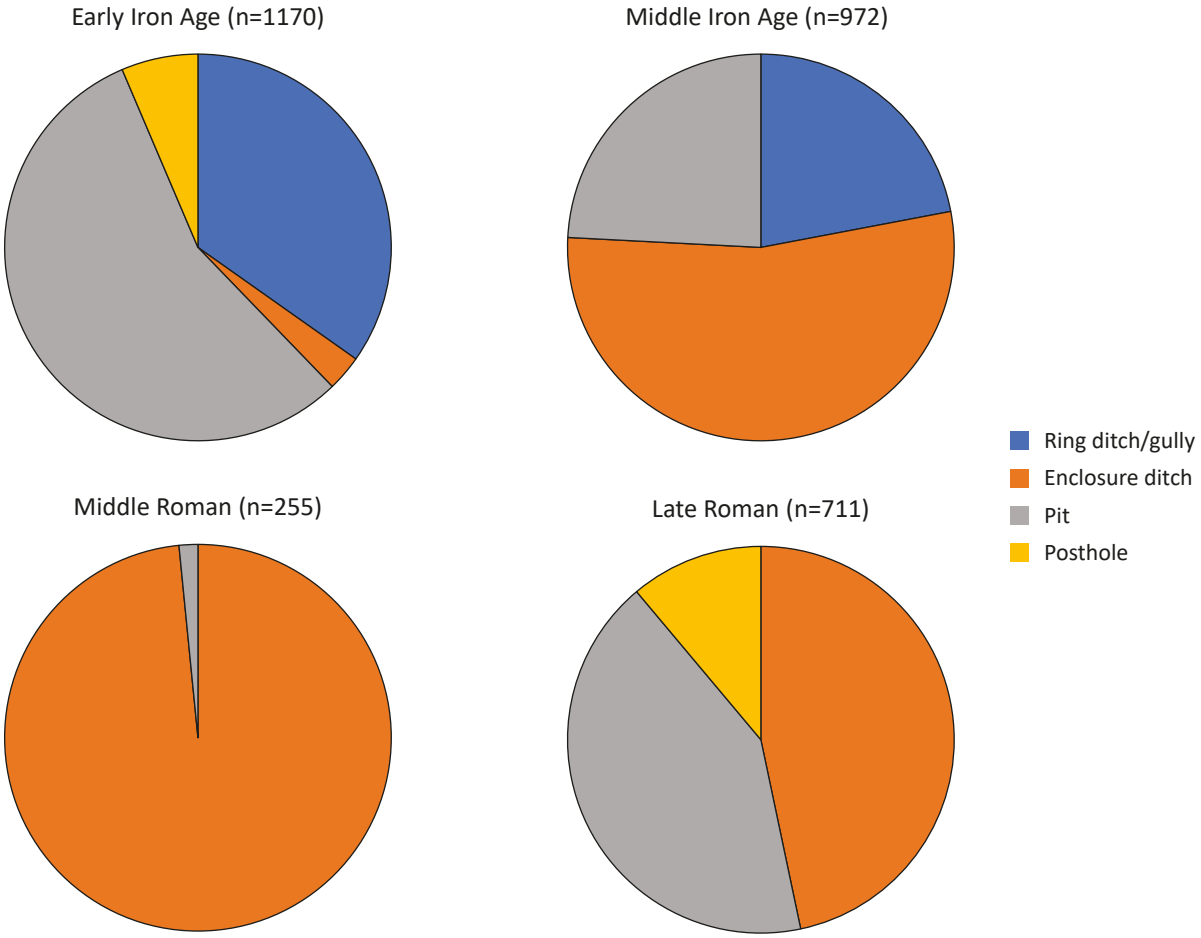


Graph 8: Relative frequency (NISP) of micro-mammal and amphibian bones by period

Figure 41c: Animal bone data

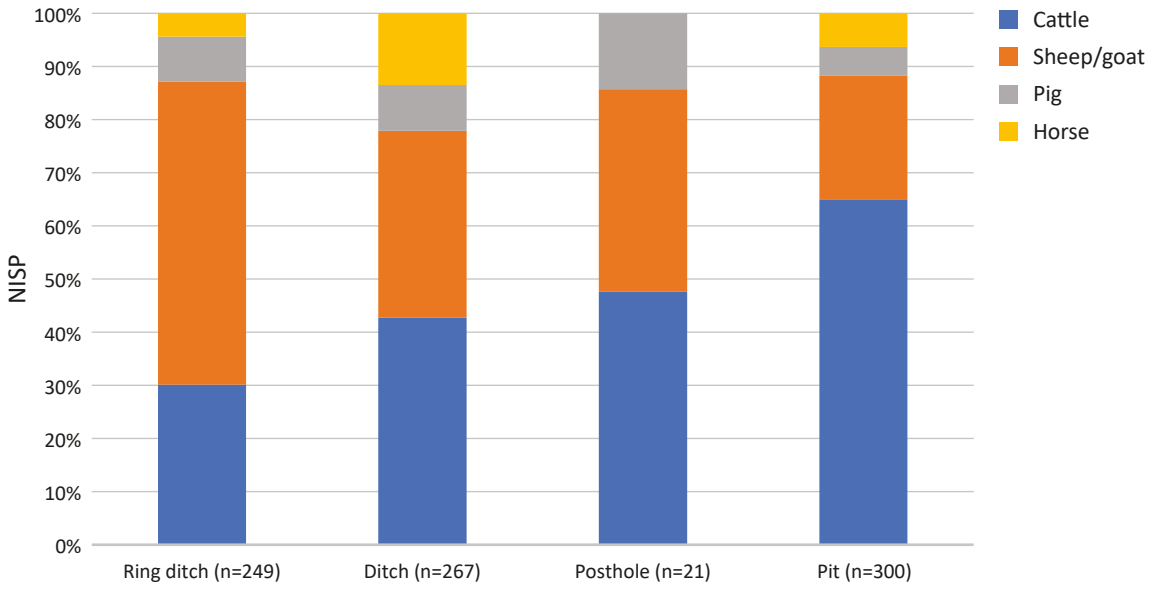


Graph 9: Percentages of animal bones from different feature types by period

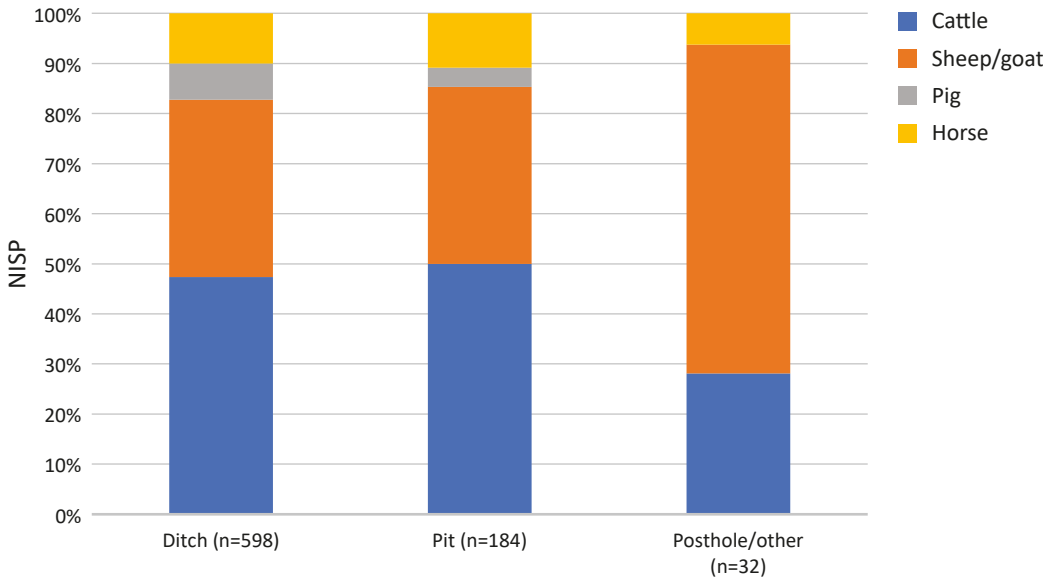


Graph 10: Percentages of animal bones from different feature types by sub-phase

Figure 41d: Animal bone data

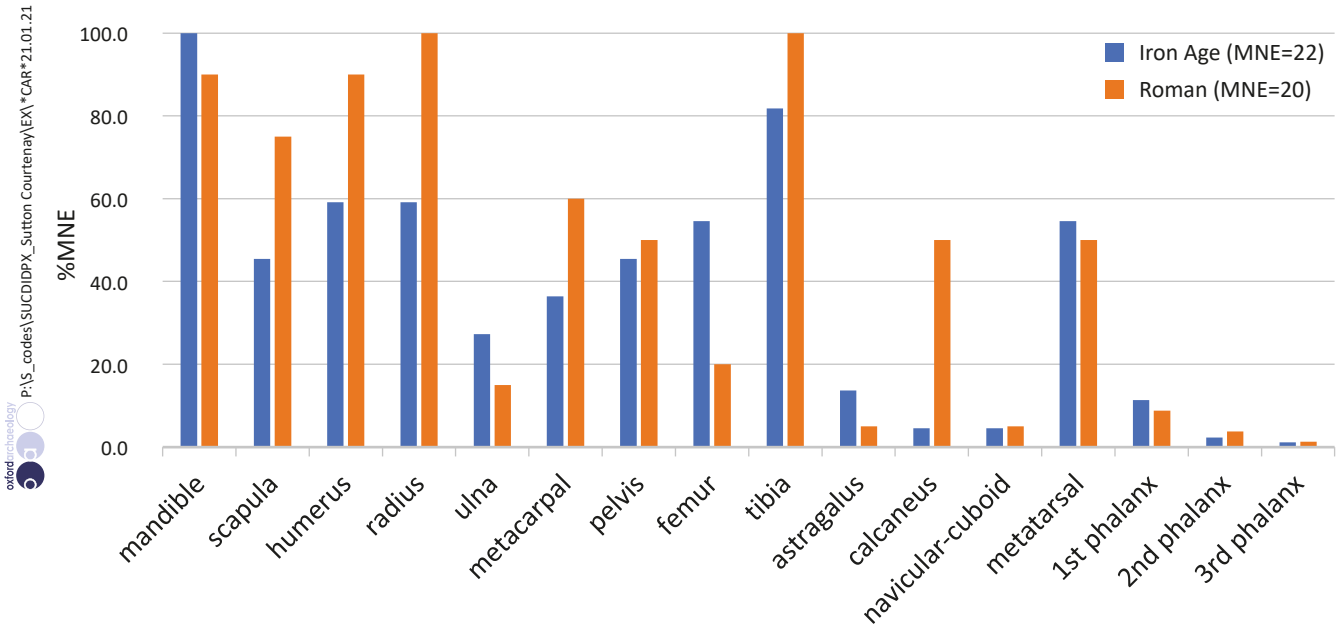


Graph 11: Distribution of bones from the main livestock taxa in Iron Age feature types

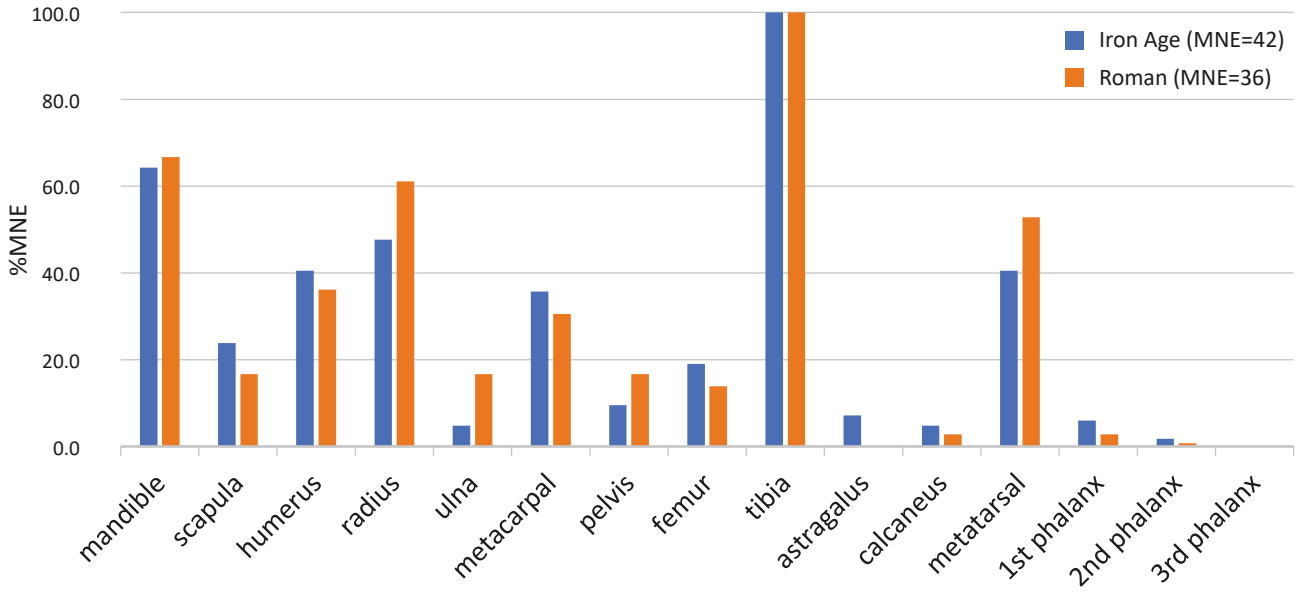


Graph 12: Distribution of bones from the main livestock taxa in Roman feature types

Figure 41e: Animal bone data

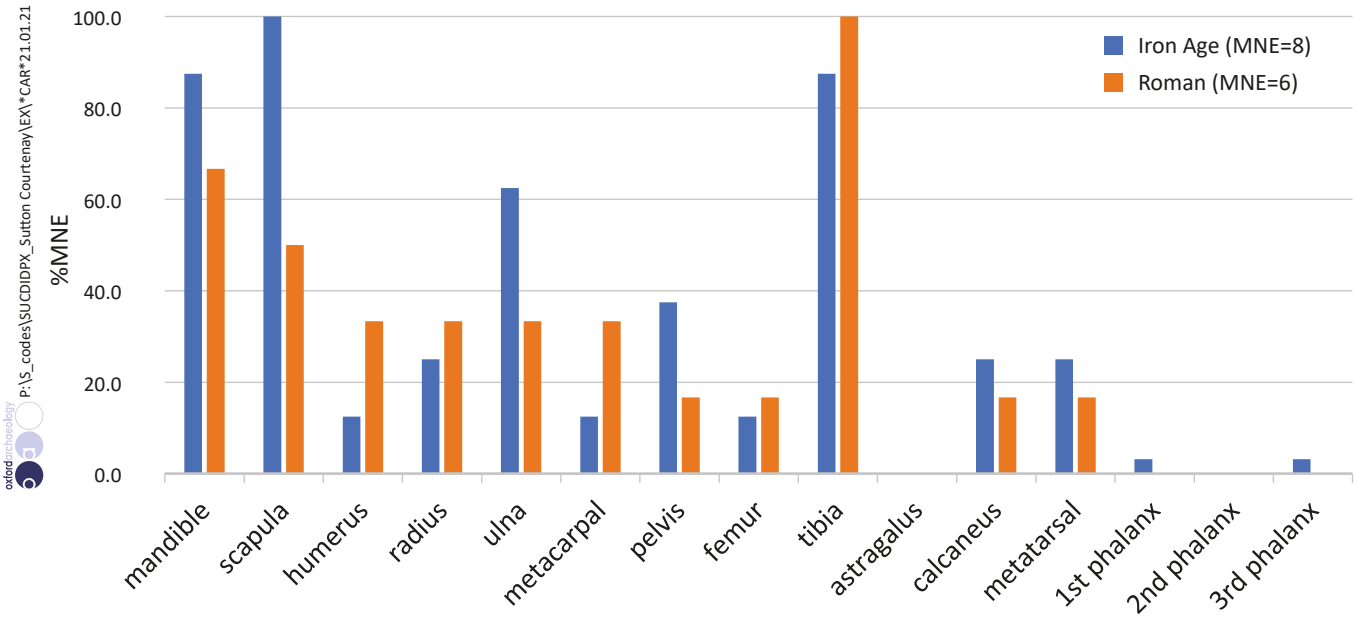


Graph 13: Cattle element representation by period

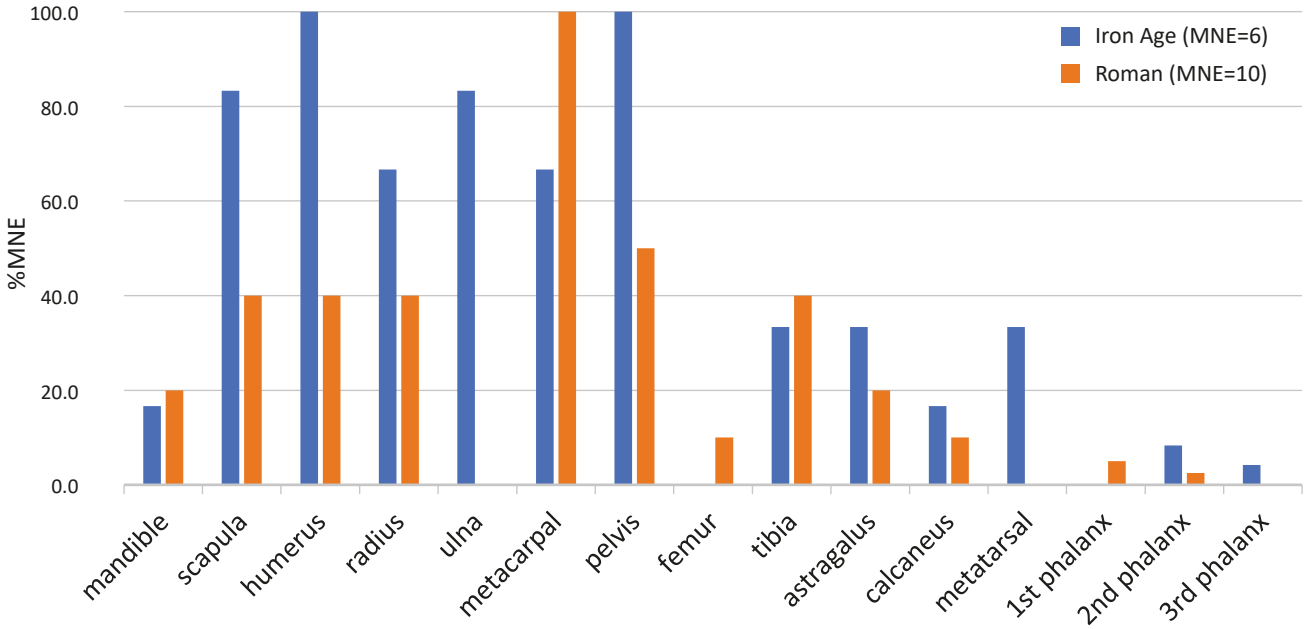


Graph 14: Sheep/goat element representation by period

Figure 41f: Animal bone data

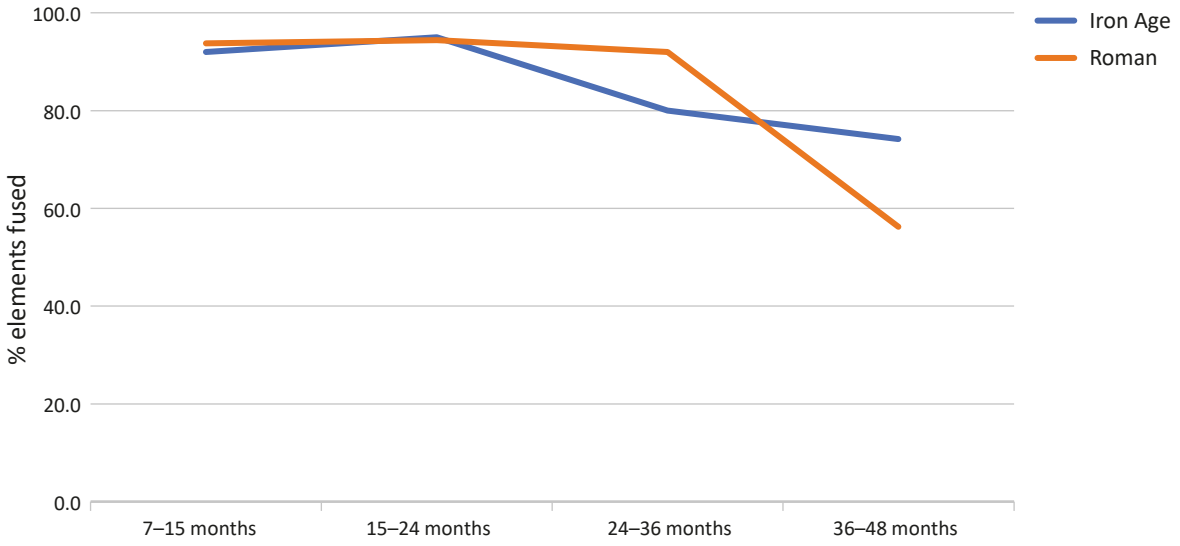


Graph 15: Pig element representation by period

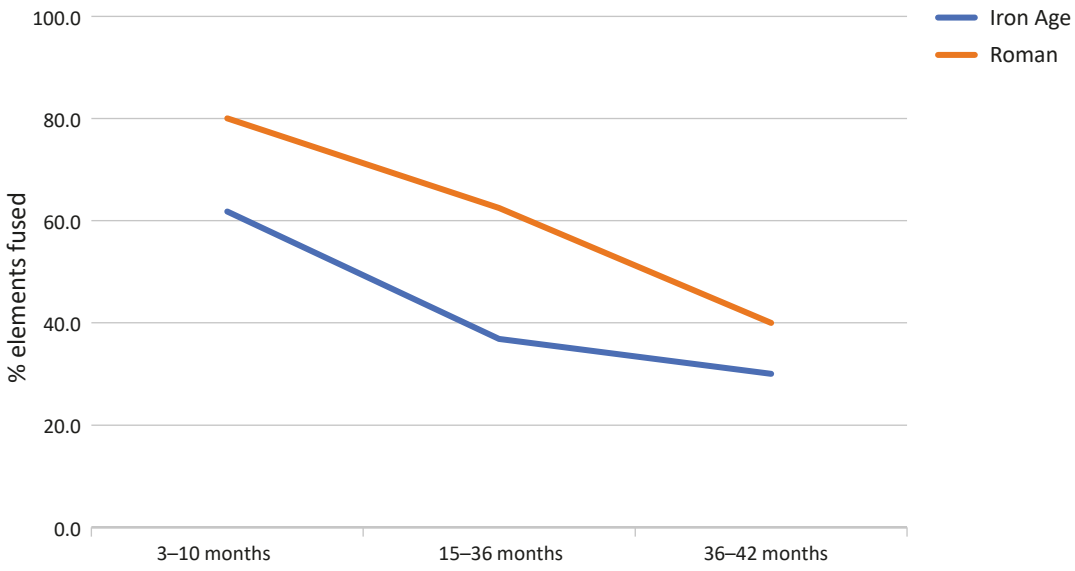


Graph 16: Horse element representation by period

Figure 41g: Animal bone data

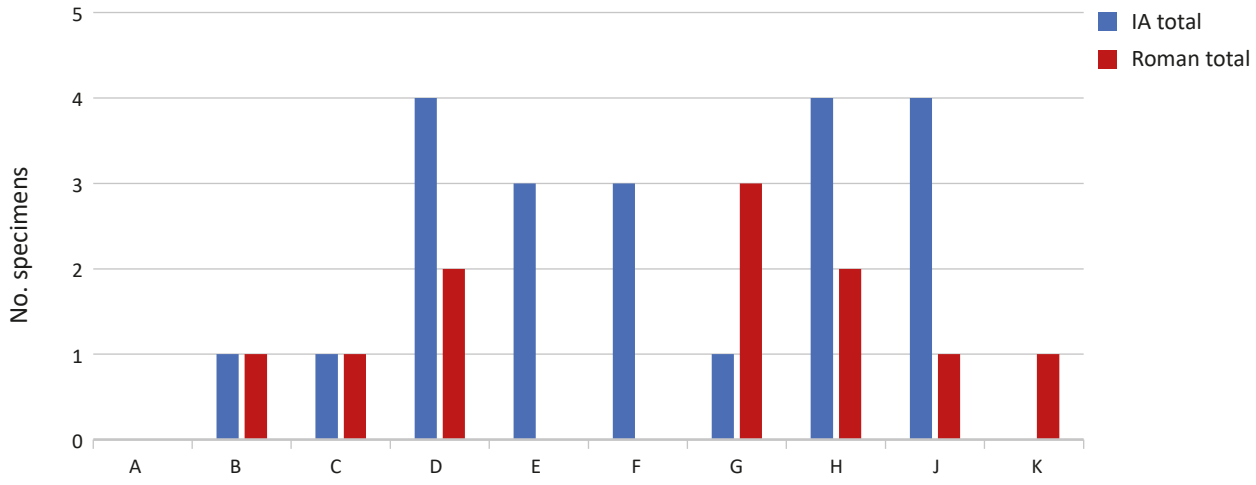


Graph 17: Cattle age-at-death according to epiphyseal fusion

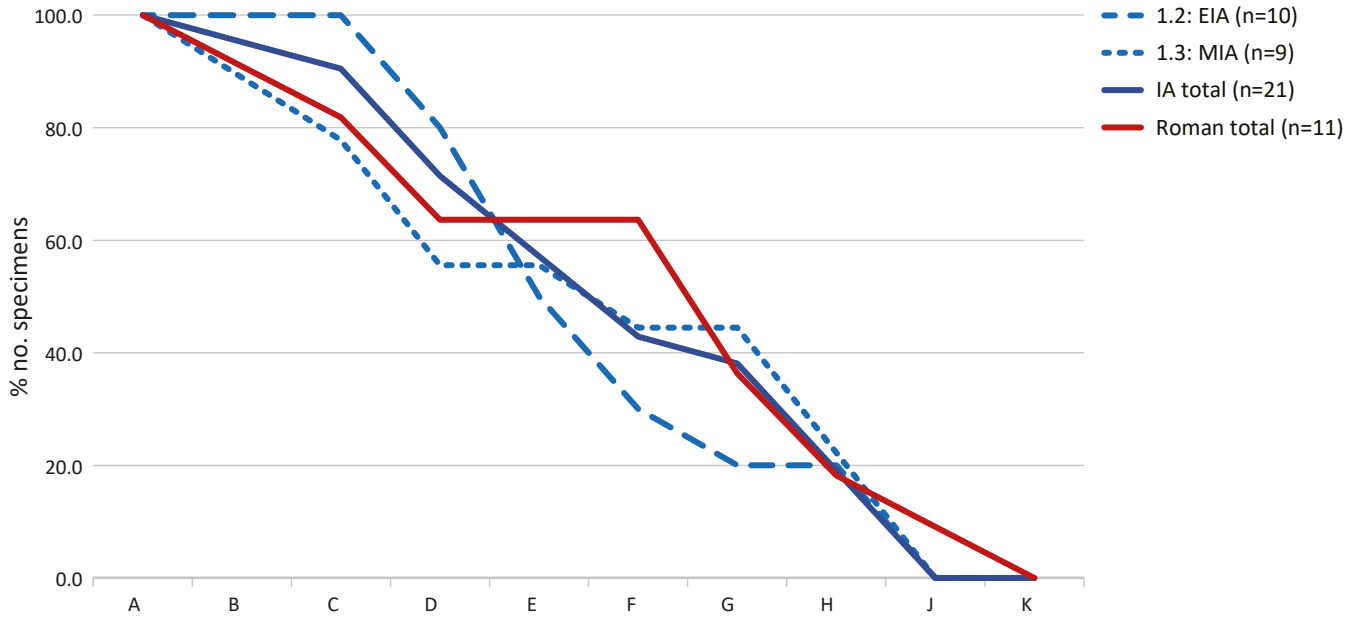


Graph 18: Sheep/goat age-at-death according to epiphyseal fusion

Figure 41h: Animal bone data

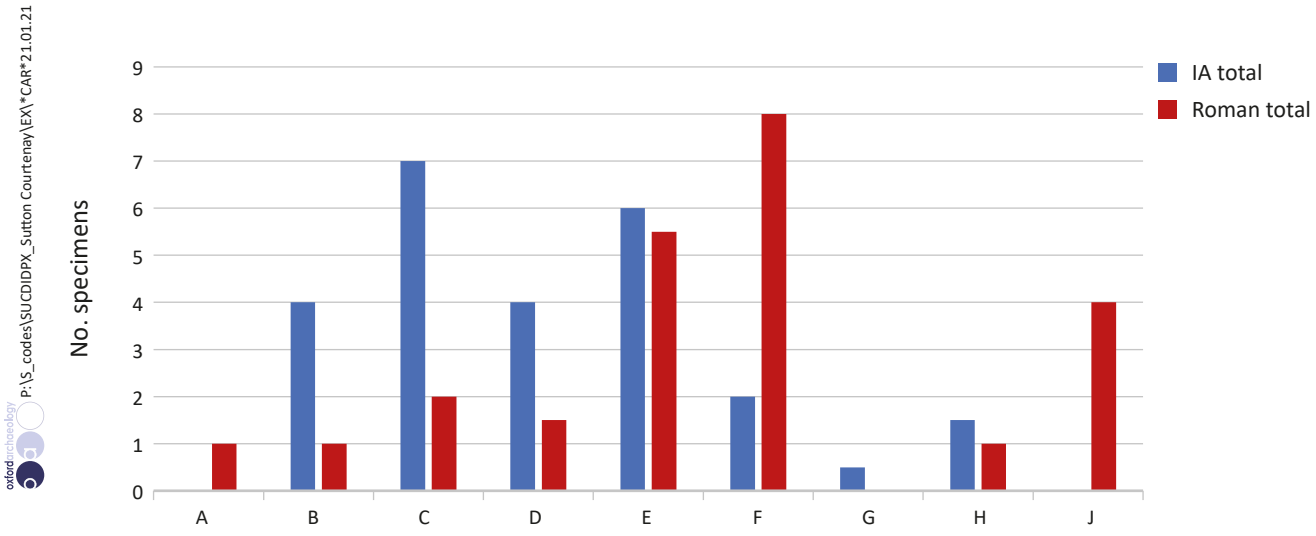


Graph 19: Cattle dental specimens by mandible-wear stage by period

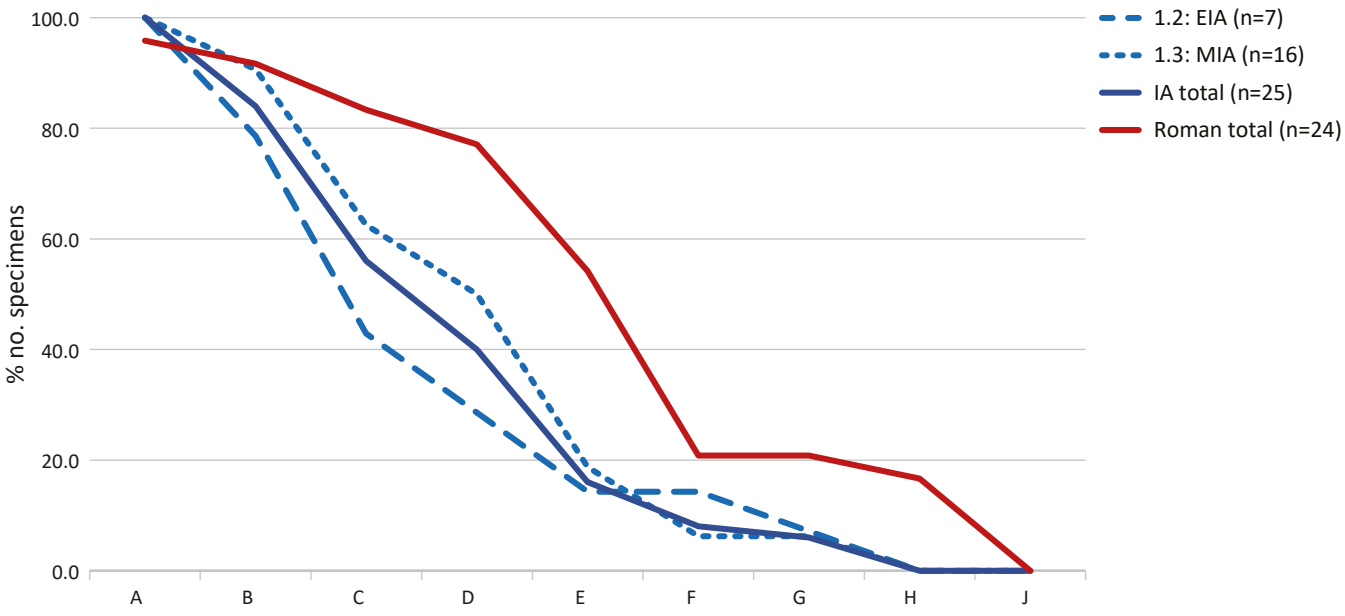


Graph 20: Cattle cull pattern according to mandible-wear stage by phase

Figure 41i: Animal bone data

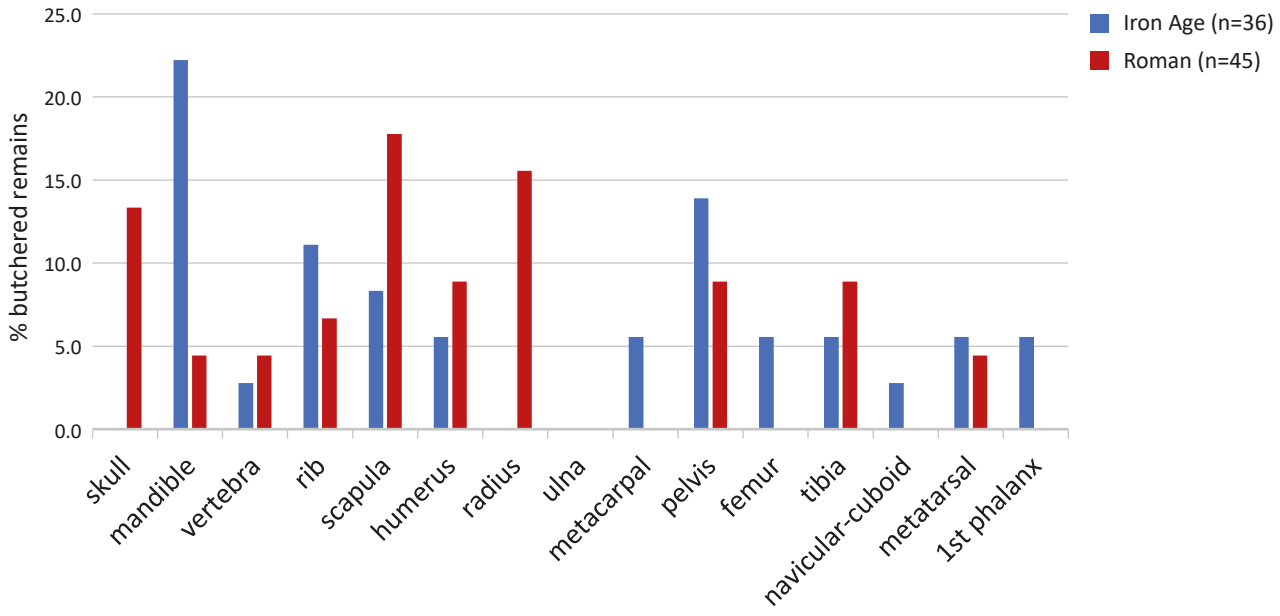


Graph 21: Sheep/goat dental specimens by mandible-wear stage by period

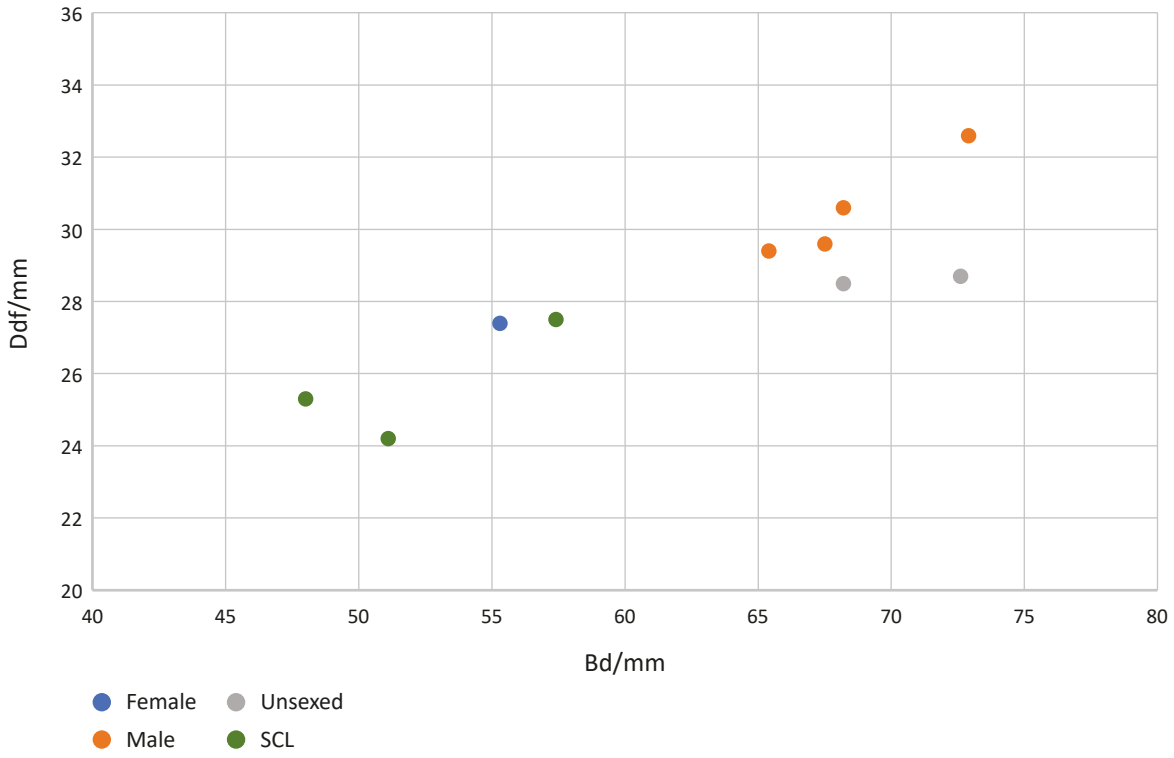


Graph 22: Sheep/goat cull pattern according to mandible-wear stage by phase

Figure 41j: Animal bone data

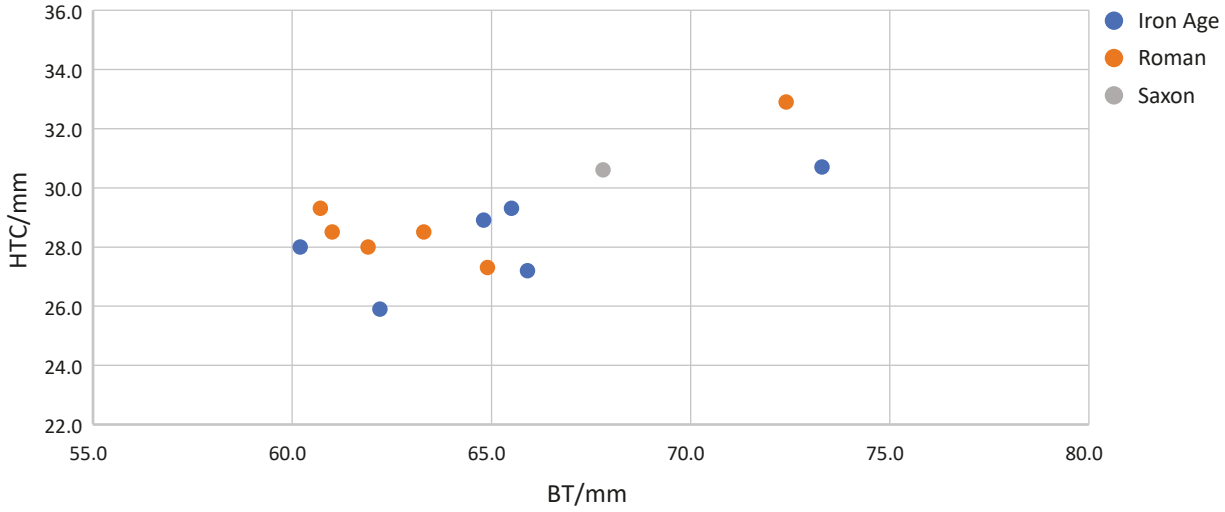


Graph 23: Percentages of butchered cattle elements by period

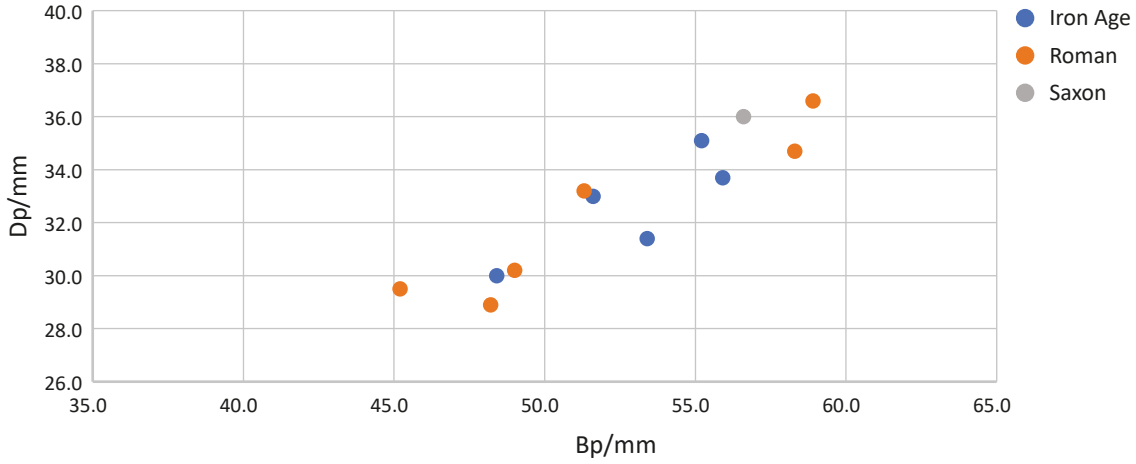


Graph 24: Comparison of Roman cattle distal metacarpal measurements from Sutton Courtenay Lane (green) and Grove Airfield (blue, orange and grey)

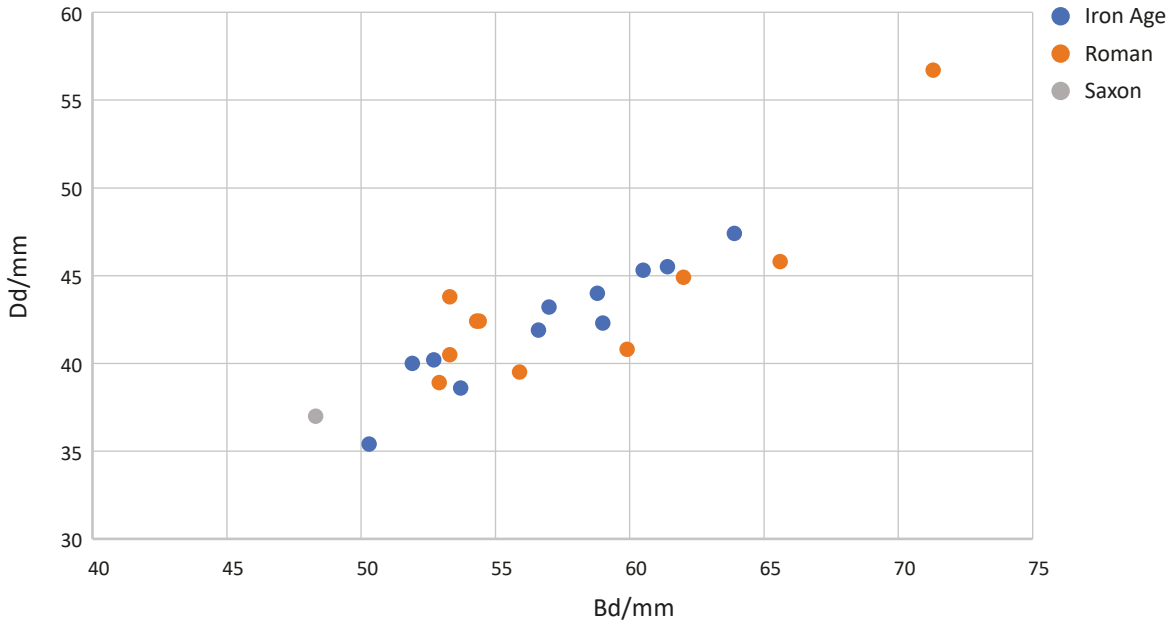
Figure 41k: Animal bone data



Graph 25: Measurements of cattle humeral trochleae by period

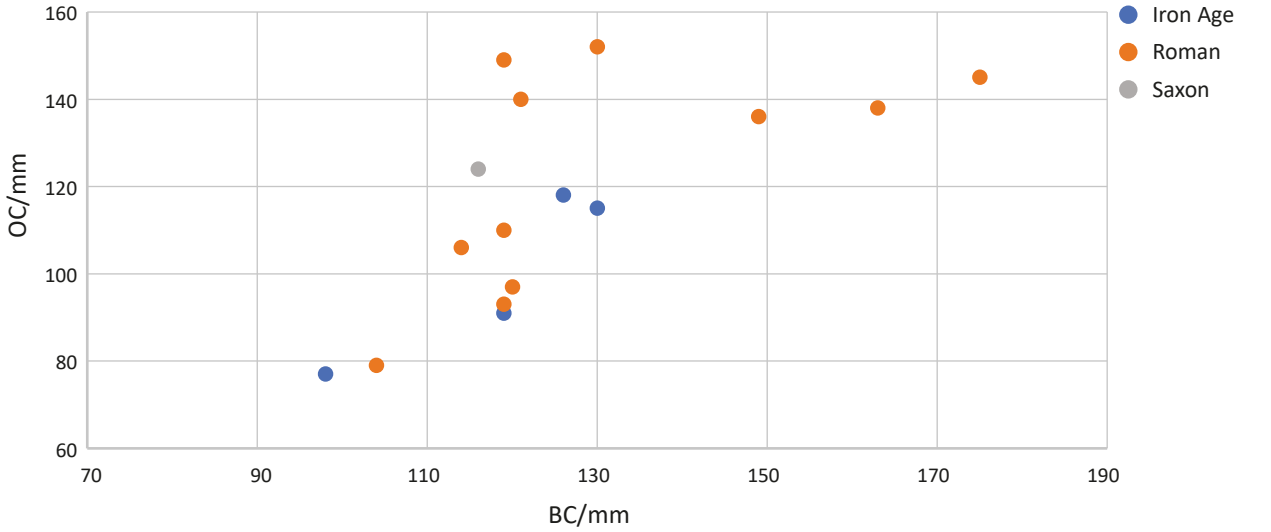


Graph 26: Measurements of cattle proximal metacarpals by period

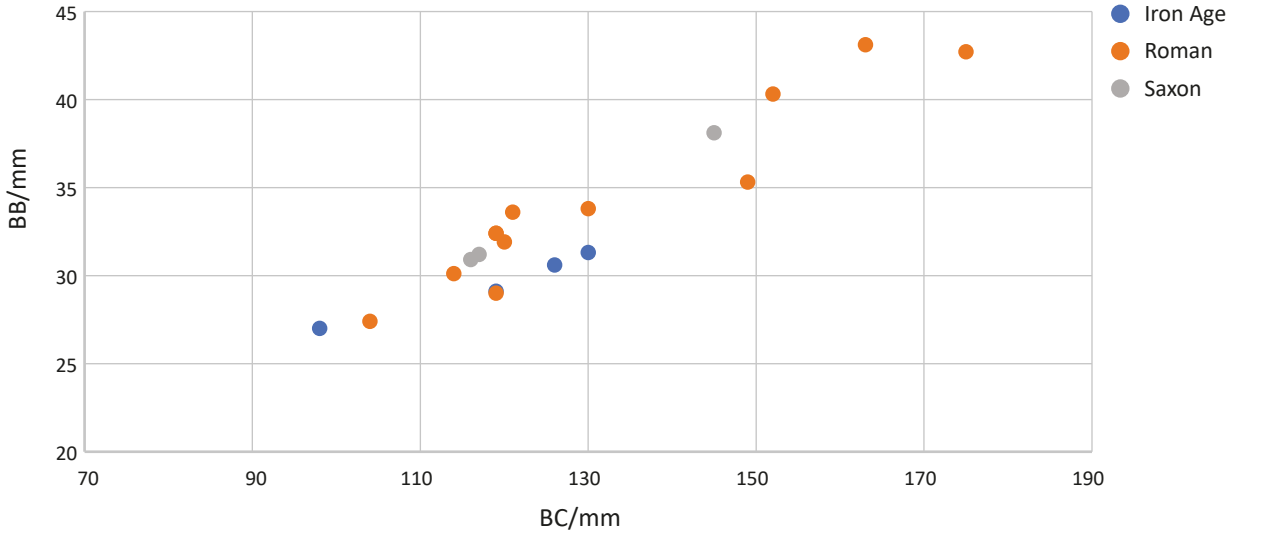


Graph 27: Measurements of cattle distal tibiae by period

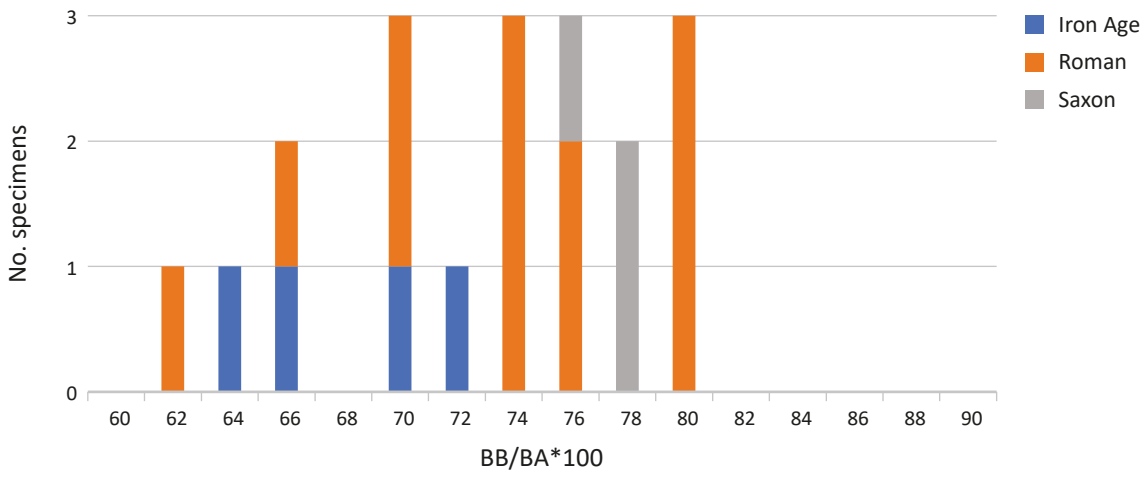
Figure 41l: Animal bone data



Graph 28: Measurements of cattle horncores (outer curve vs basal circumference) by period

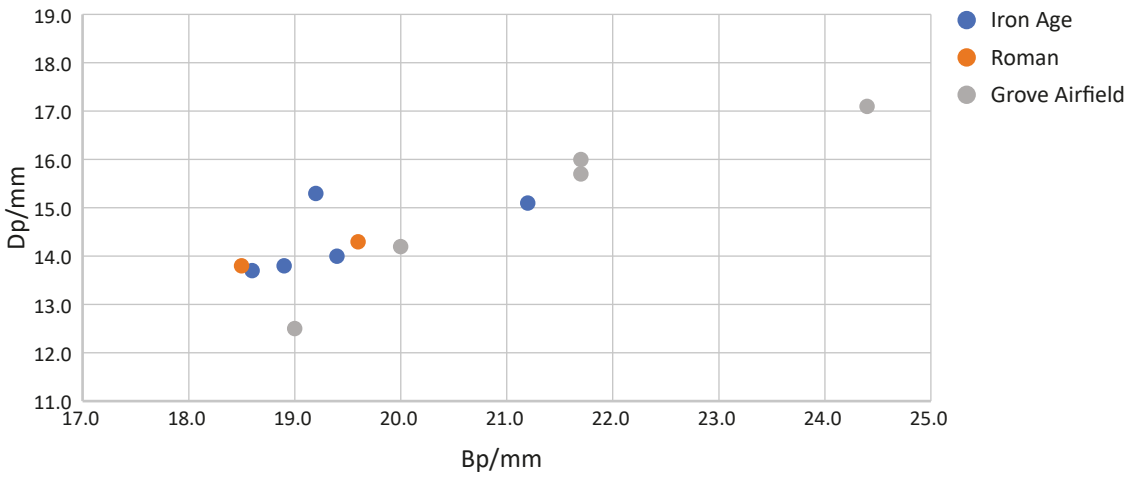


Graph 29: Measurements of cattle horncores (minimum basal diameter vs basal circumference) by period

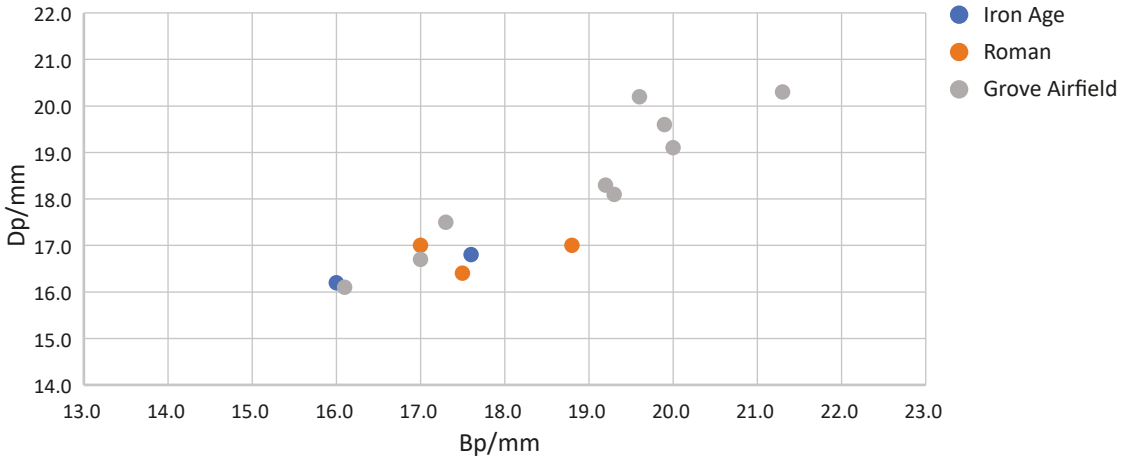


Graph 30: Distribution of cattle horncore shapes by period

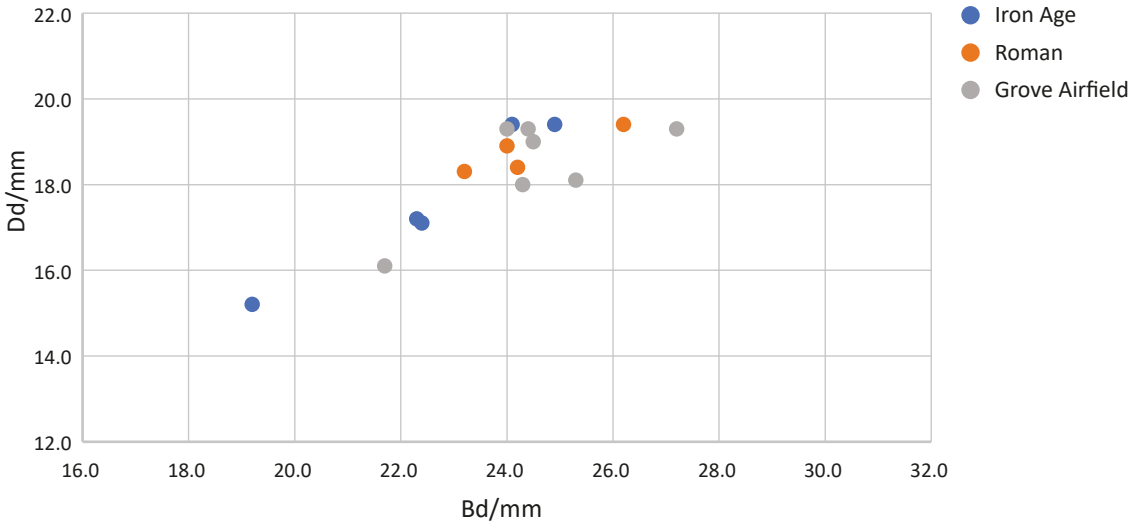
Figure 41m: Animal bone data



Graph 31: Comparison of sheep/goat proximal metacarpal measurements with Roman data from Grove Airfield

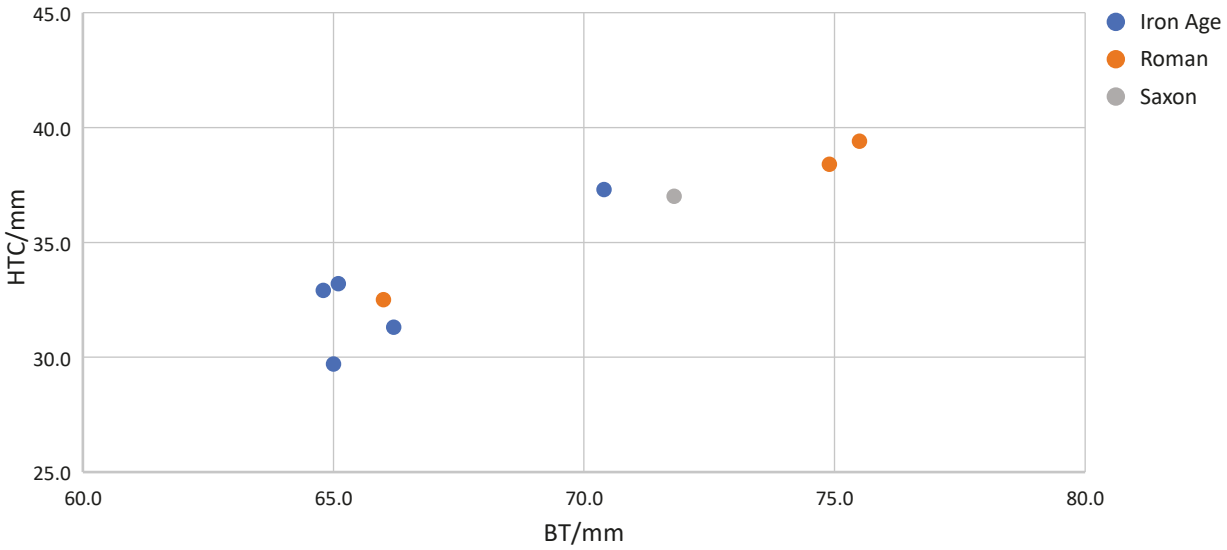


Graph 32: Comparison of sheep/goat proximal metatarsal measurements with Roman data from Grove Airfield

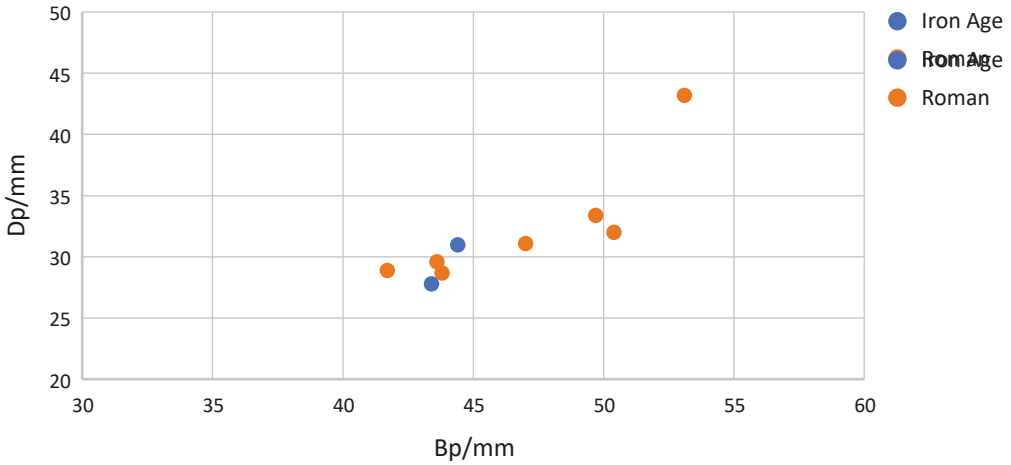


Graph 33: Comparison of sheep/goat distal tibiae measurements with Roman data from Grove Airfield

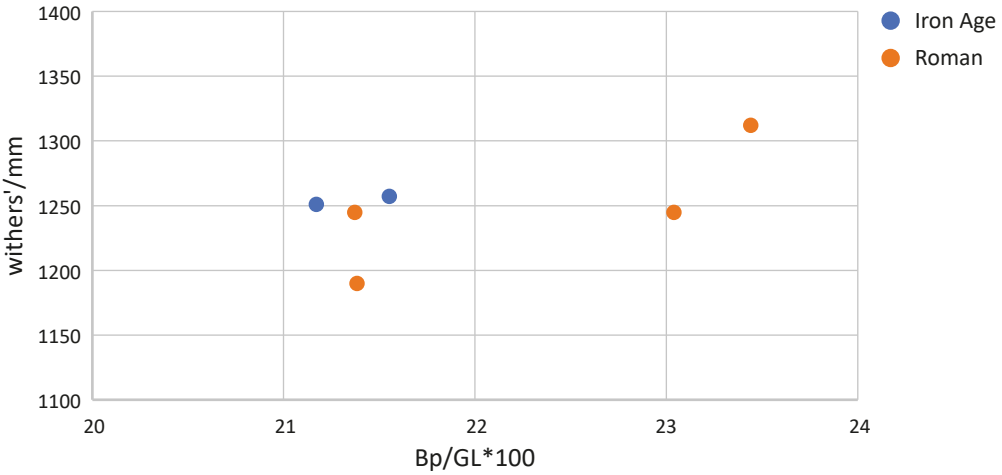
Figure 41n: Animal bone data



Graph 34: Measurements of horse humeral trochleae by period

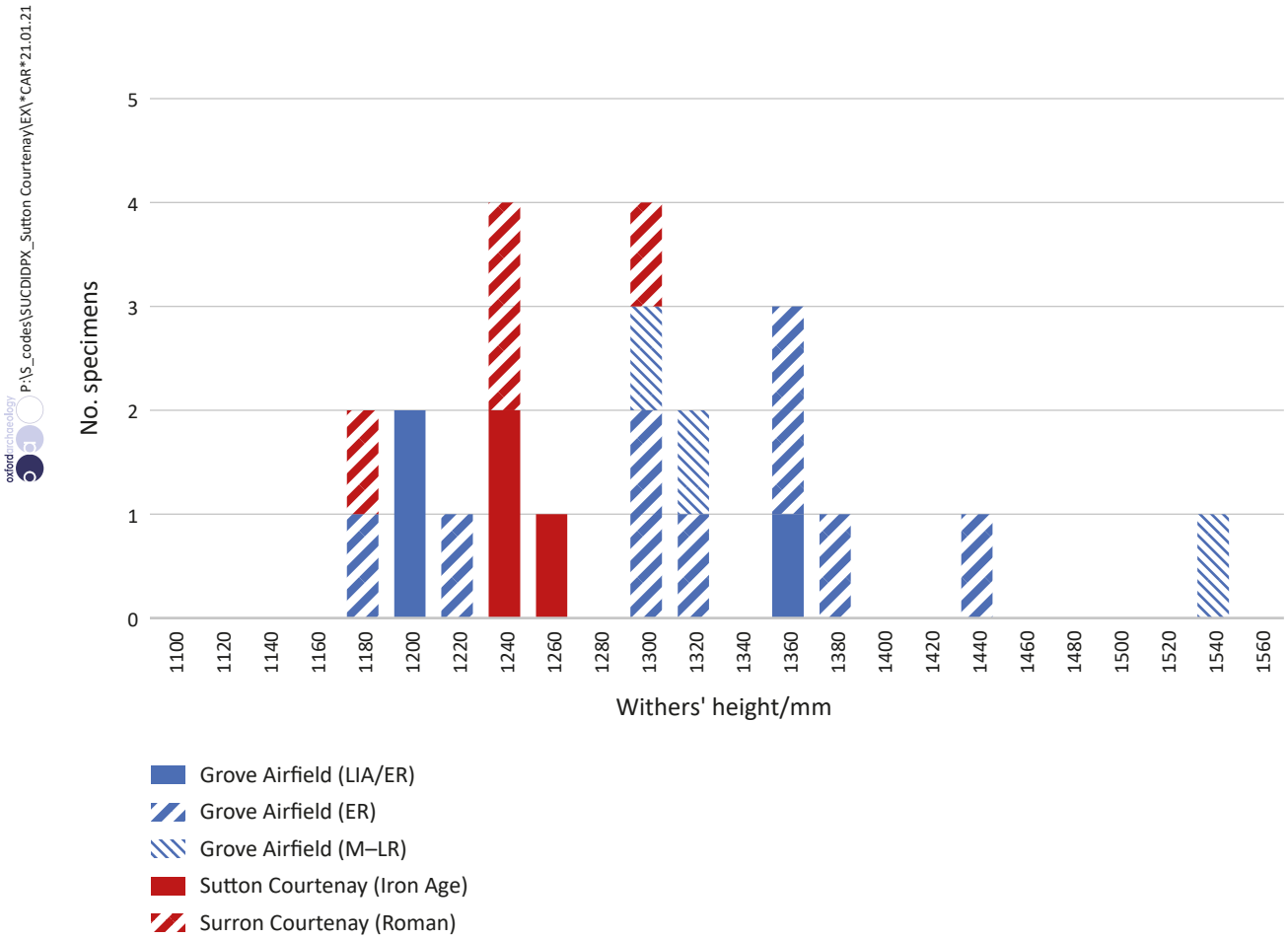


Graph 35: Measurements of horse proximal metacarpals by period



Graph 36: Comparison of horse metacarpal shape and withers' height

Figure 41o: Animal bone data



Graph 37: Comparison of horse withers' heights with data from Grove Airfield

Figure 41p: Animal bone data

Figure 42: Skeleton 1570 (25-36 year old female),
detail of peri-mortem blade wounds (A=humerus; B=radius; C=ribs; D=innominate)

Figure 43: Skeleton 707 (adult male),
destructive lesion on the end plate of the second lumbar vertebra

Figure 44: Skeleton 364 (18-25 year old male), peri-mortem trauma to the left mandible

Figure 45: Skull 931, lytic lesions, possibly projectile injuries

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